Copyright

Fujitsu Limited has made every effort to ensure the accuracy and completeness of this document. However, as ongoing development efforts are continually improving the capabilities of our products, we cannot guarantee the accuracy of the contents of this document. We disclaim liability for errors, omissions, or future changes.

LifeBook is a trademark of Fujitsu Limited.
Microsoft, Windows, MS, MS-DOS, and Windows NT are registered trademarks of the Microsoft Corporation of the United States in the United States and other countries.
Intel is a registered trademark of the Intel Corporation of the United States.
Celeron is a trademark of the Intel Corporation of the United States.
ATI is registered trademark of ATI Technologies INC.
Macrovision :-

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited. Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, 4,819,098 and 4,907,093 licensed for limited viewing uses only.

Dolby :-

Manufactured under license from Dolby Laboratories. "DOLBY", "PRO LOGIC," and the double-D symbol are trademarks of Dolby Laboratories. Copyrights 1992-1999 Dolby Laboratories, All rights reserved.

Phoenix is a registered trademark of Phoenix Technologies Corporation of the United States.
K56flex is a trademark of Rockwell International Corporation and Lucent Technologies Corporation.
Other product names are trademarks or registered trademarks of their respective companies.
Other products are copyrighted by their companies.
Copyright© 1981-1999 Microsoft Corporation, All rights reserved.
Copyright© 1999 Phoenix Technologies, Ltd., All rights reserved.
All other products are trademarks or registered trademarks of their respective companies.
Explanations of the adjustments for the track pad cursor control are taken in part from the ALPS GlidePoint Driver User's Guide, copyright by LCS/Telegraphics in 1996.

Operations are subject to the following two conditions: (1) This device may not be allowed to cause harmful interference, (2) This device must accept any interference received, including interference that may cause undesired operation.

Website : www.fujitsu-pc-asia.com

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions carefully. Save these instructions for future reference.
2. Follow all warnings and instructions marked on the product.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.
7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. This product is equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin. This will only plug into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.
9. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
10. If an extension cord is used with this product, make sure that the total ampere rating of the equipment plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total rating of all products plugged into the wall outlet does not exceed 15 amperes.
11. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points that could result in a fire or electric shock. Never spill liquid of any kind on the product.
12. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to qualified service personnel.
13. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    a. When the power cord or plug is damaged or frayed.
    b. If liquid has been spilled into the product.
    c. If the product has been exposed to rain or water.
    d. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal condition.
    e. If the product has been dropped or the cabinet has been damaged.
    f. If the product exhibits a distinct change in performance, indicating a need for service.
14. **CAUTION. When replacing the battery, be sure to install it with the polarities in the correct position. There is a danger of explosion if the battery is replaced with an incorrect type or is mistreated. Do not recharge, disassemble or dispose of in fire. Replace only with the same or equivalent type recommeded by the manufacturer. Dispose of the used battery according to the manufacturer's instructions.**
15. Use only the proper type of power supply cord set (provided in your accessories box) for this unit. It should be a detachable type: UL listed/CSA certified, BS1363,ASTA,SS145 certified, rated 10A 250V minimum, VDE approved or its equivalent. Maximum length is 15 feet (4.6 meters).

High Safety Required Use

This Product is designed, developed and manufactured as contemplated for general use, including without limitation, general office use, personal use, household use and ordinary industrial use, but is not designed,developed and manufactured as contemplated for use accompanying fatal risks or dangers that, unless extremely high safety is secured, could lead directly to death, personal injury,severe physical damage or other loss (hereinafter 'High Safety Required Use'), including without limitation, nuclear power reactioncore control in nuclear atomic facility, airplane automatic aircraft flight control, air traffic control, operation control in mass transport control system,medical instrument for life support system, missile launching control in weapon system. You shall not use this Product without securing the sufficient safety required for the High Safety Required Use.

Data Storage Media and Customer Responsibilities

The only effective protection for the data stored in a computer, such as on a hard disk, is for you, Purchaser to regularly back up the data. Fujitsu and its affiliates, suppliers, service providers and resellers shall not be responsible for any software programs, data or other information stored or used on any media or part of any Product returned to Fujitsu or its service providers for Warranty Service or other repair, including but not limited to the costs of recovering such programs, data or other information. It is solely your responsibility as the Purchaser to back up any software programs, data, or information stored on any storage media or any part of a Product returned for Warranty Service or repair to the designated service centers.

AUSTRALIAN WARNINGS

WARNING

FOR SAFETY REASONS, ONLY CONNECT EQUIPMENT WITH A TELECOMMUNICATIONS COMPLIANCE LABEL. THIS INCLUDES CUSTOMER EQUIPMENT PREVIOUSLY LABELLED PERMITTED OR CERTIFIED.

Connection of Non Certified/Approved peripherals may result in the equipment operating outside the Australian EMI Standards.

Modems connected to the Australian telecommunications network must be operated in accordance with the Labelling Notice. This modem has been specifically configured to ensure compliance with the ACA Standards. Do not adjust your modem or software outside the values indicated below. To do so would result in your modem being operated in a non-compliant manner.

Call Attempts/Retries:

Applications software shall be configured so that no more than 3 attempts are made to establish a connection to a given number (Note: if the modem can detect service tones, up to 10 attempts can be made). If the call sequence is unsuccessful, there shall be a delay of at least 30 minutes before attempting to call the number again.

Failure to set the modem, and any application software used with the modem, to the values shown above will result in the modem being operated in a non-compliant manner. Consequently, this would be in violation of the Labelling Notice for this equipment, and the Telecommunications Act 1997 prescribes penalties for the connection of non-compliant equipment.

NEW ZEALAND WARNINGS

The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.

This equipment is not capable under all operating conditions of correct operation at the higher speeds for which it is designed. 56 KBPS connections are likely to be restricted to lower bit rates when connected to some PSTN implementations. Telecom will accept no responsibility should difficulties arise in such circumstances.

Immediately disconnect this equipment should it become physically damaged, and arrange for its disposal or repair.

This equipment shall not be used in any manner, which could constitute a nuisance to other Telecom customers.

This equipment shall not be set to make automatic calls to the Telecom "111" Emergency Service.
This device is equipped with pulse dialing while the New Zealand standard is DTMF tone dialing. There is no guarantee that Telecom lines will always continue to support pulse dialing. It is strongly recommended that pulse dialing is not used.

Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. The associated equipment shall be set to operate within the following limits for compliance with Telecom's Specifications:

For repeat calls to the same number.

There shall be no more than 10 call attempts to the same number within any 30 minute period for any single manual call initiation, and

The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempt and the beginning of the next attempt.

For Automatic calls to different numbers.

The equipment shall go on-hook for a period of not less than 5 seconds between the end of one attempt and the beginning of the next attempt.

For Automatically answered Incoming Calls

Incoming calls shall be answered between 3 and 30 seconds from the start of the ringing.

For correct operation, the total of the RNs of all devices connected to a single line at anytime should not exceed 5. The RN of this Equipment is 0.5.

WARNING

Connection of Non Certified/Approved peripherals may result in the equipment operating outside the New Zealand EMI Standards.

Note: Modem setting in Windows 98 / Windows Me

The default modem setting in Windows 98 / Windows Me operating system is United States of America. If you are residing in Australia or New Zealand, please choose the appropriate country where you are located.

Dial type must be set to Tone Dialing if you are either in Australia or New Zealand.

Please see below instruction for quick modem setup.

A. If you are located in Australia

1. Go to Control panel, select modem icon.
2. Choose Australia in “What country/region are you in now?”
3. Select Phone system as “Tone Dialing”
4. Close

B. If you are located in New Zealand

1. Go to Control panel, select modem icon.
2. Choose New Zealand in “What country/region are you in now?”
3. Select Phone system as “Tone Dialing”
4. Close

Note: Modem setting in Windows XP

A. If you are located in Australia

1. Click Start select Control panel select "Phone and Modem Options".
2. Double click New Location.
3. Choose "Australia" in Country/region pull down menu bar.
4. Select Phone system as “Tone Dialing”.
5. Click OK and Apply.

B. If you are located in New Zealand

1. Click start select Control panel select "Phone and Modem Options".
2. Double click New Location.
3. Choose "New Zealand" in Country/region pull down menu bar.
4. Select Phone system as “Tone Dialing”.
5. Click OK and Apply.

Note:
The screens and illustrations shown in this examples may slightly vary depending on the operating environment that you have installed.

NOTATION IN THIS DOCUMENT

● **Warnings**

This manual uses a variety of icons as visual marks so that you can use this computer safely and correctly and avoid damage and danger to yourself and to others. These icons and their meanings are as follows. Please learn these icons before reading this manual. Learning these icons will be useful for understanding this manual.

Icon	Meaning
⚠ **WARNING**	Incorrect handling or ignoring this warning can cause a dangerous situation that could result in death or severe injury.
⚠ **CAUTION**	Incorrect handling or ignoring this warning can cause a dangerous situation that could result in moderate or minor injury or could result in equipment damage.

The symbols below are used together with the icons above to indicate what type of danger or damage is involved.

Symbol	Meaning
	The symbol indicates a w arning or caution. The symbol inside the indicates the concrete nature of the warning. (The example on the left is a caution for electric shock.)
	The circle and slash indicates prohibited behavior. The symbol inside the circle indicates the concrete nature of the prohibition. (The example on the left indicates that disassembly is prohibited.)
	The ● indicates instructions that must be followed. The symbol inside indicates the concrete nature of those instructions. (The example on the left tells you to unplug the power plug from the socket.)

● **Key notation and operation methods**

Explanations of key operations do not show all the characters on the keyboard. Instead they indicate just the keys necessary to the explanation as follows.

Examples: **[Ctrl]** key, **[Enter]** key, **[→]** key

When multiple keys are to be pressed at the same time, this is indicated by connecting them with **[+]**.

Examples: **[Ctrl]** + **[F3]** keys; **[Shift]** + **[↑]** key

● **Screen examples**

The screens shown in this manual are examples. Please understand that the file names and screens you use may be different.

● **Notation in text**

Here is what symbols in text mean.

Symbol	Meaning
Critical Points	Indicates a point necessary for correctly operating the hardware or software.
 **Column**	Gives the meaning and brief explaination of a term.
→	Indicates the page to see elsewhere in this manual.

● **Command input (key input)**

Within the text of this manual, command input (giving commands to the computer by pressing keys) is indicated as follows.

Example: dir c:
↑

In the position indicated in the example above by the ↑, the space left between the characters indicates that a space needs to be left in the entry by pressing the space bar (the long key with nothing written on it at the center of the front of the keyboard). Commands are written in this manual as lowercase latin letters, but uppercase letters may be used.

● **Product names**

The following product names are abbreviated as follows in this manual.

"Microsoft® Windows XP® operating system" is written as "Windows XP".
"Microsoft® Windows® 2000 operating system" is written as "Windows 2000".
"Microsoft® Millennium® Edition operating system" is written as "Windows Me".
"Microsoft® Windows® 98 operating system" is written as "Windows 98".
"Microsoft® MS-DOS® operating system Version 6.2/V" is written as "MS-DOS".
"Microsoft® Windows® operating system Version 3.1" is written as "Windows 3.1".
"Microsoft® Windows NT® Server network operating system Version 3.5" and "Microsoft® Windows NT® Workstation operating system Version 3.5" are both written as "Windows NT 3.5".
"Microsoft® Windows NT® Server network operating system Version 3.51" and "Microsoft® Windows NT® Workstation and NT Server Version 4.0" are both written as "Windows NT 4.0".
"Windows NT 3.51" and "Windows NT 4.0" are both written as Windows NT.
"Fujitsu LifeBook" is written as "this computer" or "the computer main unit".

Configuration of this Manual

SECTION 1

This section explains basic operations and basic items for using this computer, including the names of the parts and their functions, Flat Point Operations and battery operation.

SECTION 2

This section explains installation of options for this computer.

SECTION 3

This section explains what to do when trouble occurs with this computer and when messages are displayed. Read this section as the necessity arises.

CONTENTS

SECTION 1

SECTION 2

SECTION 3

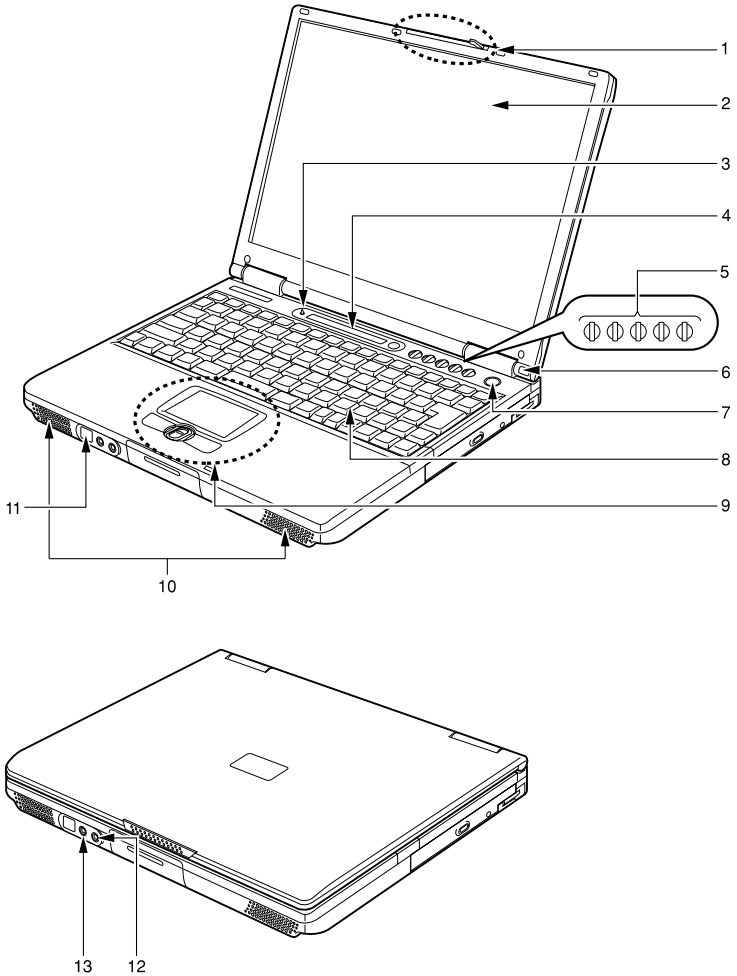
SECTION 1

This chapter gives the names of the parts and their functions.

SECTION 1

1. Names of the Parts and their Functions

Front of Computer



1. Latch
This latch locks so that the LCD display does not open accidentally.
To open the LCD display, slide the latch to the right to unlock it.

2. LCD display
This is the display screen for this computer.

Critical Point

● Characteristics of the LCD display

Please understand that the following performance is characteristic of the LCD display and does not indicate a problem with the display.

- This computer's TFT color LCD display uses high-level technology and comprises over 2.35 million pixels (dots) (for a resolution of 1024 x 768). Therefore, there may be a few dots that never light up or never go out.
- Due to the manufacturing process, there may be some difference in the colors among different units of this model and temperature change may result in a certain unevenness of the color on a single computer's screen.

3. **Closed Cover Switch**
   This switch puts the computer on standby and makes it resume and switches the LCD display backlight Off/On when the cover is closed/opened.
4. **Status display LCD**
   Shows the status of this computer.
5. **LifeBook Security/Application Panel**
   The LifeBook Security/Application Panel provide hardware security and one-touch application launch capability.
6. **Infrared Mouse Receiver**
   This IR Mouse Receiver allows you to use a Fujitsu IR mouse.
7. **Power button**
   This button switches On the power for this computer and puts the computer on standby and makes it resume.
8. **Keyboard**
   The keyboard is used to input text and give commands to the computer.
9. **Touch pad**
   Serves as the mouse. When you install the "Alps Pointing Device Driver" that comes with this computer, you can install the center scroll button. When you press the center scroll button, the screen scrolls up/down.

Critical Point

● You can not scroll with this scroll button in some applications.

10. **Speakers**
    Outputs the sound for this computer.

⚠ CAUTION

HEARING LOSS

Turn the volume on the computer all the way down by pressing the "Fn" + "F8" keys when connecting to the mic jack or headphone jack. Connecting with the volume up can damage audio equipment or cause irritating noise that has a negative impact on your hearing.

11. IEEE 1394 Port

The 1394 port allows you to connect devices that are compliant with IEEE standard 1394.

12. Microphone Jack

This is the jack for connecting any ordinary 3.5-mm miniplug microphone and recording (in monaural).

Note that certain types of ordinary microphones (dynamic microphones) will not work correctly with this jack. Please check before purchasing a microphone.

13. Headphone jack/Optical digital audio output terminal

This is the jack for connecting any ordinary 3.5-mm miniplug headphone. Note that some headphones have plugs shaped in such a way that they can not be used with this jack. Check this before purchasing a headphone. This terminal can also be used as an optical digital output terminal to connect the computer to the optical digital input terminal of an MD player, etc. (with a 3.5-mm fiber-optic mini plug).

⚠ CAUTION

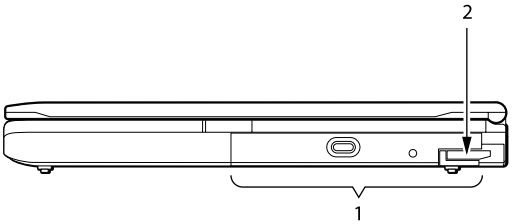
HEARING LOSS

Be careful not to turn the volume up too high when using headphones. Listening for prolonged periods to irritatingly loud volumes can damage your hearing.

HEARING LOSS

Do not leave on headphones while switching the power On or Off. The irritating noise that can result can damage your hearing.

Right Side of Computer



1. Mobile multi-bay

One of the following is installed, depending on the model.

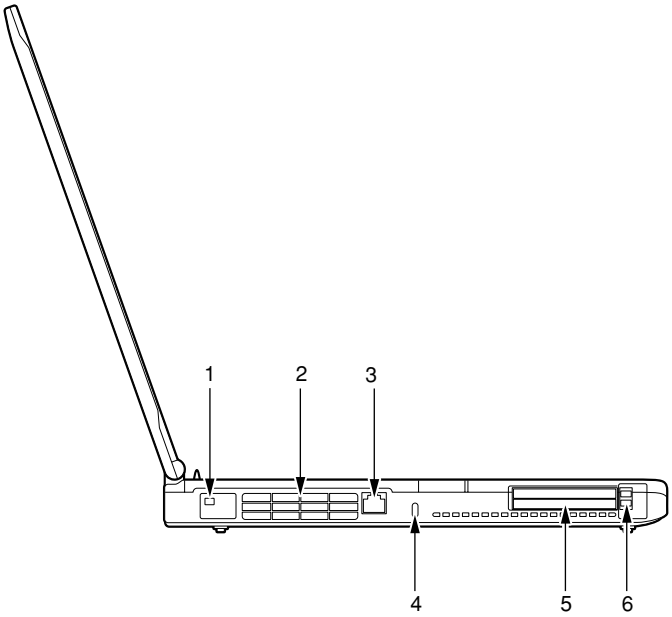
- Internal CD-ROM drive unit
- Internal CD-R/RW drive unit
- Internal DVD-ROM & CD-R/RW drive unit
- SuperDisk or 2nd Hard Disk. (Optional)
- Weight Saver. (Optional)

The unit installed in the multi-bay can be replaced.

2. Mobile multi-bay unit eject lever

To remove the unit installed in the mobile multi-bay, raise this lever.

Left Side of Computer



1. **Wireless LAN On/Off Switch**
   (On wireless LAN models only)
   The Wireless LAN On/Off Switch turns the wireless LAN device on and off.

2. **Fan Exhaust**
   The fan exhaust assists in the proper cooling of the system. This fan rotates if the temperature inside the computer reaches a certain level.

⚠ CAUTION

Breakdown
Do not block the cooling fan hole. If you do, heat can build up within the computer and cause breakdown.

3. **Modem connector (Modem (RJ-11) Telephone Jack)**
   Some models have a modem connector. The modem (RJ-11) telephone jack is for attaching a telephone line to the internal modem.

4. **Anti-theft Lock**
   This anti-theft lock allow you to attach an optional physical lock down device.

Critical Point

- This theft prevention lock supports the Kensington Microsaver Security System.
  Product name: Microsaver (security wire)

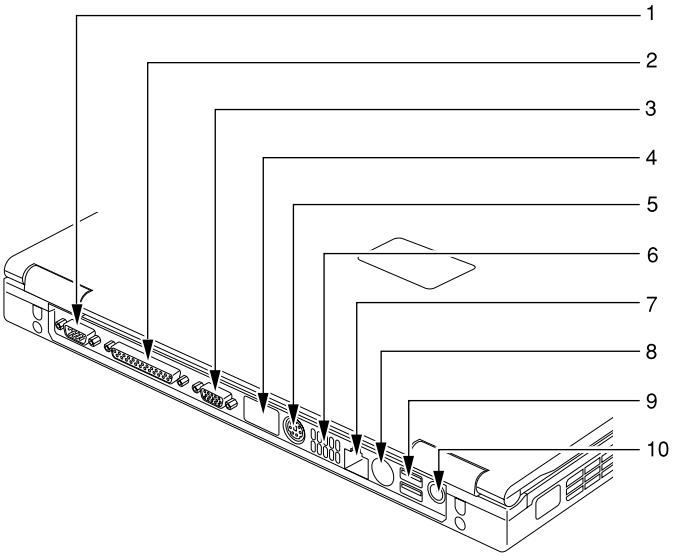
5. **PC card slots**
   These are the slots for loading PC cards. The bottom slot is Slot 1 and the top slot is Slot 2.

Critical Point

- Some OSs treat Slot 1 (bottom) as Slot 0 and Slot 2 (top) as Slot 1.

6. **PC card eject buttons**
   Press here to eject a PC card.

Rear Panel



1. **Serial connector**
   This is the connector for equipment with an RS-232C interface.
2. **Parallel connector**
   This is the connector for a printer or other device using a parallel interface.
3. **External display connector**
   This is the connector for a CRT display or other external display.
4. **Infrared communications port**
   This is the interface for infrared communications.

Critical Point

- The infrared communications port is used with “Wireless Link”.
- When using infrared communications, keep the AC adaptor and any external display device away from the infrared communications port. They can cause noise and malfunctions.

5. **PS/2 Port**
   This PS/2 port allows you to connect an external keyboard, numeric keypad or mouse.
6. **Air intake hole**
   This hole allows the cooling fan to take in air.

⚠ CAUTION

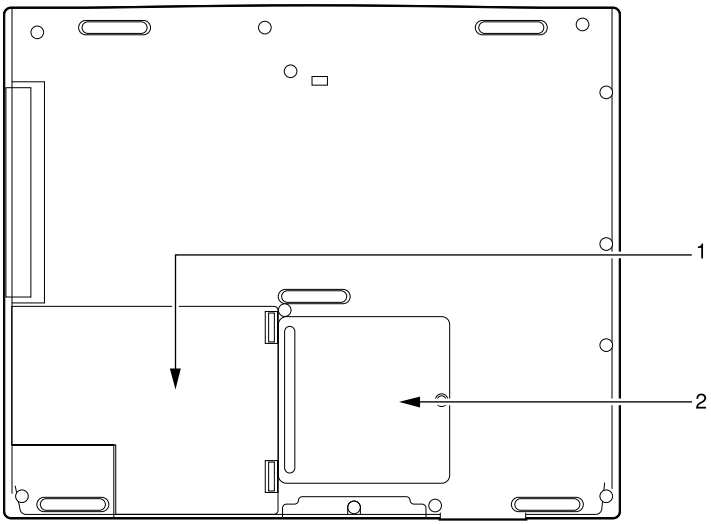
BREAKDOWN
Do not block the cooling fan hole. If you do, heat can build up within the computer and cause breakdown.

7. **LAN connector**
   A LAN cable can be connected here.
8. **S-Video Out Port**
   The S-Video port allows you to connect and used directly any S-Video device,such as a VCR or Television. (This port have 7 pins but you can use the 4 pins S-Video cable to connect.)
9. **USB connectors**
   You can connect USB peripheral equipment, such as USB printers, to these these connectors.
10. **DC-IN connector**
    This is the connector for the AC adaptor.

IMPORTANT

- When connecting peripheral equipment to this computer, always check that the connector is facing the correct direction and push straight in.

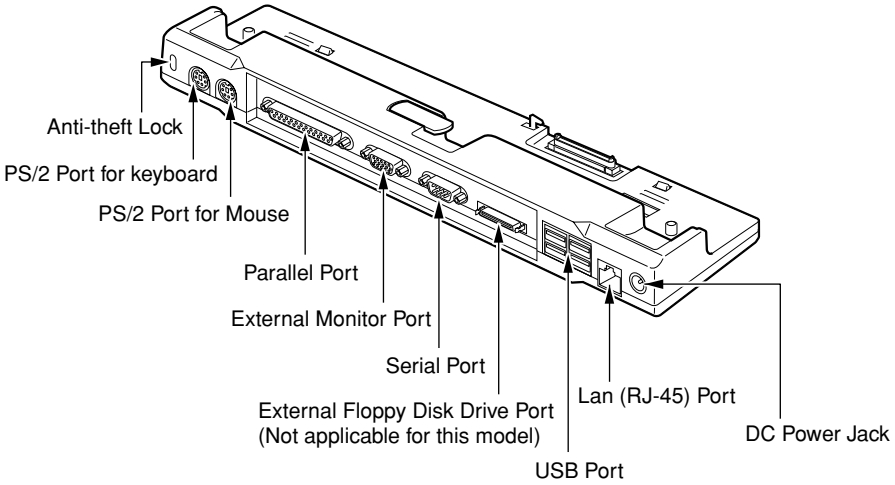
Bottom of Computer

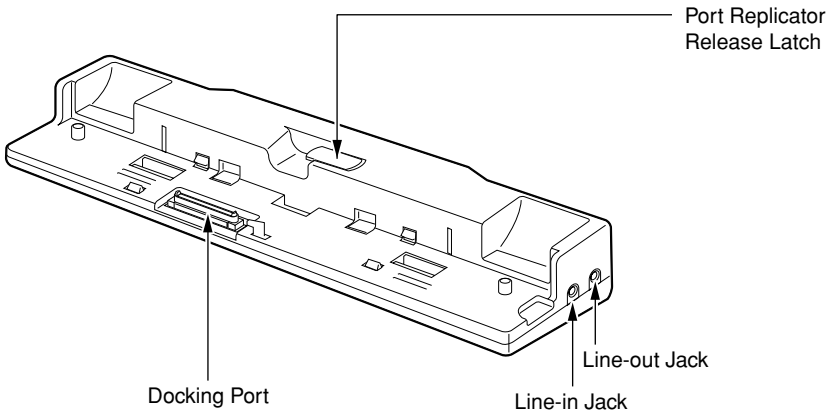


1. **Internal battery pack**
   This is the internal battery pack.

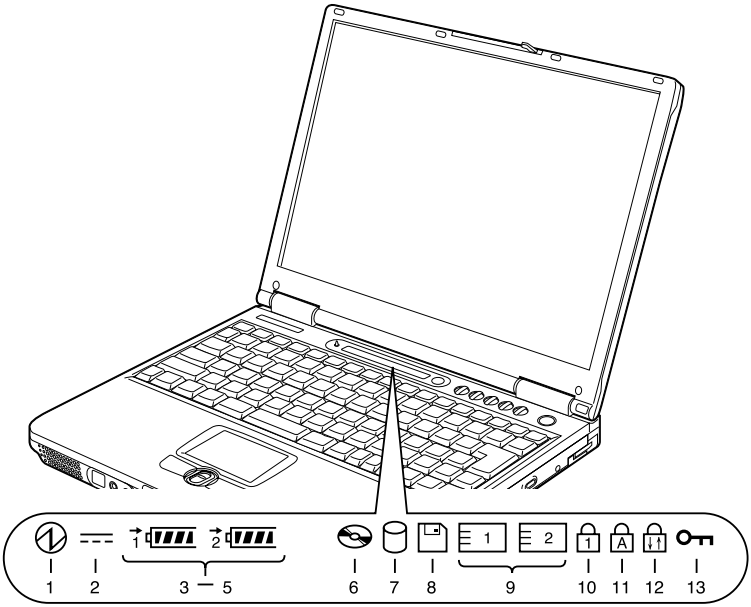
2. **Expansion RAM module slot**
   This is the slot for installing memory in this computer.

Port Replicator





2. Status LCDs



Critical Point

- When the power is switched off, the status LCDs go out except for the charging indicator.

1. **SUS/RES indicator ( )**
   When this computer is running, this icon lights up and when the computer is on standby, this lamp flashes.
2. **AC Adapter indicator ( )**
   Lights up to show that the computer is running on power from the AC adaptor.
3. **Battery mounting display (1, 2)**
   Lights up when a battery is installed. 1 is the internal battery and 2 is an expansion battery in the mobile multi-bay.
4. **Battery charge display ( )**
   Lights up when the battery is being charged. If the charging stops to let the battery cool off because it is too hot, this display flashes.
5. **Battery remaining capacity display ( )**
   Indicates the amount of battery capacity remaining.
   “Hardware” – “Checking the remaining battery capacity”.

6. **CD access display ( )**
   Lights up when the CD is being accessed.

7. **Hard disk access display ( )**
   Lights up when the internal hard disk is being accessed.

8. **Diskette access display ( )**
   Lights up when a diskette or superdisk is being accessed.

IMPORTANT

- The diskette access display in the status display LCDs does not light up if the mobile multi-bay FDD unit is installed and accessed. To check whether or not that unit is being accessed, check its own access lamp. Always make sure that the access lamp is out before removing a diskette.

9. **PC card access display (1, 2)**
   Lights up when a PC card is being accessed. The bottom slot is Slot 1 and the top slot is Slot 2.

10. **Num Lock display ( )**
    Lights up when the keyboard is in numeric lock mode. Switch numeric lock mode On/Off by pressing the “Num Lk” key.

11. **Caps Lock display ( )**
    Lights up when the caps lock is on. (This is the state in which keys pressed are input as uppercase letters.)
    Switch the Caps Lock on/off by pressing “Caps Lock”.

12. **Scroll Lock display ( )**
    Lights up when the screen is locked so that it does not scroll. Switch the scroll lock On/Off by pressing the “Fn” + “Num Lk” keys at the same time.
    How the display operates during a scroll lock depends on the application.

13. **Security display ( )**
    When a password is set with the accompanying “Security Button”, this lights up when the password is required. If the security display lights up when this computer’s power is switched On or when it resumes operation, input the password.

Critical Point

- Never press the Power button while the hard disk access or diskette access display is lit! Doing so can destroy data on the hard disk or diskette or superdisk.
- Some OSs treat Slot 1 (bottom) as Slot 0 and Slot 2 (top) as Slot 1.

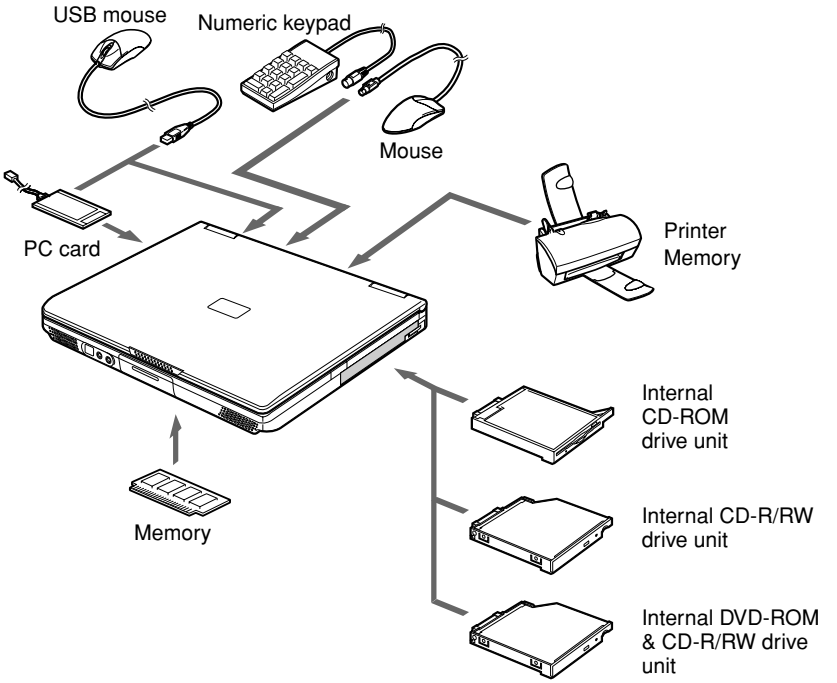
SECTION 2

This chapter covers basic handling of peripheral equipment installed in this computer and that can be installed on this computer.

SECTION 2

1. Before Installing Peripheral Equipment

Peripheral Equipment That Can Be Used



Cautions for Handling

Please note these cautions before installing peripheral equipment.

- **Some peripheral equipment requires setup on the computer**

  Some peripheral equipment can not be operated by just connecting it to the computer. Such peripheral equipment requires that settings be made on the computer after the peripheral equipment is connected. For example, when you use a printer or PC card, after you install it, you must install the driver. There is also equipment that requires no settings, for example memory. When connecting peripheral equipment, read this manual carefully so that you can connect the peripheral equipment correctly.

- **Read the manual for the peripheral equipment too**

  The installation methods given in this manual are just examples. Always read the manual for the peripheral equipment together with this manual.

- **Use original Fujitsu peripheral equipment**

  The “System Configuration Diagram” shows the original Fujitsu peripheral equipment available for this computer. Correct operation of products from other companies can not be assured. When using peripheral equipment from other companies, we recommend that you inquire with the manufacturer of the peripheral equipment.

  Questions concerning peripheral equipment from another company can best be answered by that company.

- **Use peripheral equipment that supports ACPI**

  This computer is set to ACPI mode. If you use peripheral equipment that does not support ACPI mode, the power conservation and other functions may not operate correctly.

  Also, this computer does not support low-level standby (ACPI S1). If any peripheral equipment that you use only supports low-level standby, do not put this computer on standby or hibernate when using such peripheral equipment.

- **Cautions for Installation/Removal**

  When installing peripheral equipment other than a PS/2 mouse, complete the operation system setup first. If you install such peripheral equipment before setting up the operating system, the operating system may not be set up correctly. For details on operating system setup, see the “User’s Manual”.

IMPORTANT

- When connecting peripheral equipment to this computer, always check that the connector is facing the correct direction and push straight in.
- When installing multiple pieces of peripheral equipment, install and complete the settings for one piece of peripheral equipment at a time.

2. Battery

Charging the Battery

1. **Connect the AC adaptor.**
   When you connect the AC adaptor, charging starts and the status LCD battery charging display ( ) and the remaining capacity display (➡) light up.

2. **Check that the battery charging display in the status LCDs goes out before disconnecting the AC adaptor. {You may continue to run the computer on AC power as long as you wish.}**

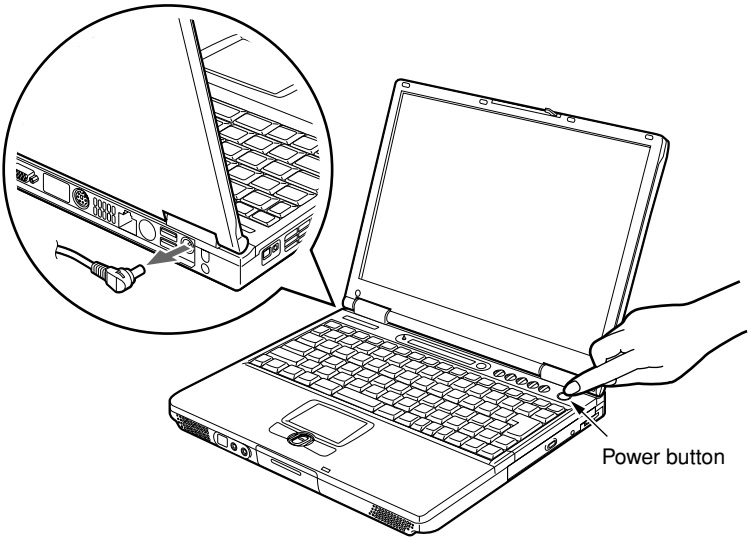
Critical Point

- When using the computer for the first time after purchase, when the battery has not been charged for a month or more, and when the remaining battery capacity is low, charge the battery before using the computer.
- Charge the battery fully. The charging is complete when the battery charging display (➡) goes out and the remaining battery capacity at the left end stops flashing and stays lit. Charge the battery fully ( ), allowing enough time for the battery to be charged fully ( ).
- When the remaining battery capacity is over 90%, even if you connect the AC adaptor, the battery is not recharged. It is recharged when the remaining capacity is 89% or less.
- When the power is switched off, a while after the charging is completed, all the LCDs go out.
- The charging capacity of the battery is lower when the ambient temperature is too high or too low.
- In such cases as recharging immediately after running this computer on the battery, the battery can heat up so much that the battery protection function is triggered and charging is stopped. (The ➡ LCD flashes.) The charging starts after the battery temperature has dropped.
- If an expansion battery is installed in the mobile multi-bay, it is charged in parallel with the internal battery.

Running This Computer on the Battery

This section explains how to run this computer on the battery.

1. **Disconnect the AC adaptor and press the Power button.**
   ⏻ lights up.



Critical Point

- The battery life is shorter at low temperatures.
- When you have used the battery many times, its capacity to hold a charge becomes less and the battery operating time becomes shorter. When the battery operating time becomes extremely short, replace the battery.
- If an expansion battery is installed in the mobile multi-bay, it is used (discharged) in parallel with the internal battery.

Checking the Remaining Battery Capacity

You can check the remaining battery capacity while the power is on and during charging with the battery charge/remaining capacity display among the status LCDs.

- **Remaining battery capacity display**

Indicates remaining battery capacity between about 76% and 100%.

Indicates remaining battery capacity between about 50% and 75%.

Indicates remaining battery capacity between about 26% and 50%.

Indicates remaining battery capacity between about 13% and 25%. (During recharging, indicates remaining battery capacity between 0% and about 25%.)

Indicates that the battery is low. (Remaining battery capacity of about 12% or less) ▮ flashes.

Indicates that the battery is drained. (0% remaining capacity)

Critical Point

- Due to the characteristics of the lithium ion battery and the usage environment (temperature conditions, number of times the battery has been charged and discharged, etc.), the remaining battery capacity display () sometimes differs from the actual remaining battery capacity.
- When the remaining battery capacity is over 90%, even if you connect the AC adaptor, the battery is not recharged. It is recharged when the remaining capacity is 89% or less.
- The 1 on the battery mounting display () indicates the internal battery.

- **Battery Fault Display**

This indicates that the battery can not be charged properly.

Critical Point

- If  flashes, shut down the computer, switch off the power, then remove the battery and reinstall it. If still flashes, there is a fault with the battery. Replace it.

Low Battery State

This section explains the low battery state and what to do about it.

- **Low Battery State Display**

  The Battery charge/remaining capacity display flashes () and the warning alarm sounds.

Critical Point

- When you switch the speaker Off, you cannot hear the alarm.
  Pressing the "Fn" + "F3" keys at the same time switches the speaker On/Off. The system beeps when the speaker is switched On but does not when it is switched Off.
- The alarm sound is set with the Windows power-conservation functions.

- **Handling the Low Battery State**

1. **Connect the AC adaptor.**
   When you connect the AC adaptor, the battery is charged.

Critical Point

- If you continue to use this computer with the low battery, the data being worked on or being saved may be lost. Connect the AC adaptor quickly. If it is not possible to connect the AC adaptor, save any data you are working on, close any applications you are running, then switch off the power.
- Reading from and writing to the hard disk uses large amounts of power. When storing data to the hard disk with the battery low, connect the AC adaptor.
- If you leave the computer running with the battery low, the computer will go on standby automatically. However, the computer will complete all data reading/writing for the hard disk or other media before going on standby.
- This computer is set to go on standby automatically when the remaining battery capacity reaches approximately 3%. To change this setting, deselect the check box for the appropriate following item.
- Control Panel → "Power Option Properties" → window "Alarm" Tab → "Critical battery alarm" → "Activate critical battery alarm when power level reaches:"
  Note that if you change this setting, the power will be cut off the instant the battery runs out. Therefore, data being stored or being worked on may be lost and operation of the computer may become unstable.

Cautions for Handling

⚠ WARNING

ELECTRIC SHOCK

This battery is an extremely delicate product. Do not drop it or otherwise subject it to strong mechanical shock when installing or removing it. Also, for the sake of safety, do not use a battery that has been subject to strong mechanical shock.

- Do not disassemble this battery.
  Disassembling this battery and touching the inside can result in electrical shock and fire.
- Discharge
  - After the battery has been charged, even if it is not used, it slowly discharges naturally, so we recommend charging the battery immediately before use.
  - When you will be leaving this computer unused for a prolonged period of time (more than a month or so), remove the battery and store it in a cool location. Leaving the battery installed for a prolonged period when the computer is not being used can result in over-discharge and shorten the battery service life.
- Service life
  - Even if this computer is left unused for a prolonged period of time, the battery wears out and deteriorates. Run this computer on the battery once per month to check the state of the battery.
  - The battery wears out and deteriorates faster when left at high temperatures.
  - This battery is a consumable part, so after it has been used for a long time, its capacity to hold a charge falls. When its capacity has fallen drastically, replace the battery.
  - When the battery operating time becomes extremely short, the battery has reached the end of its service life.
  - When the battery has reached the end of its service life, remove it from the computer. Leaving a used up battery installed in the computer can result in electrical shock and fire.
- Disposal
  When disposing of the battery, cover the battery pack connectors with insulating tape in order to prevent shorts.
- Battery operating time
  - The battery operating time is affected by the ambient temperature. The battery operating time may be shorter at low temperature.
- Use the AC adaptor in the following cases.
  - When using the hard disk, CD, DVD, or other drive frequently
  - When using the LAN or modem frequently
  - When restoring this computer to its factory state
- Pay attention to the remaining battery capacity in the following cases.
  - When using the wireless LAN or other wireless equipment

Replacing the Battery Pack

Store all programs and data to the hard disk or other medium before replacing the internal battery pack. This section explains how to replace the internal battery pack.

⚠ WARNING

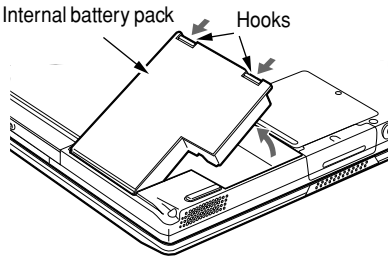
ELECTRIC SHOCK

When replacing the battery pack, always switch off the power for the computer and disconnect the AC adaptor. Never touch the computer or battery pack connectors. Doing so can result in electrical shock and breakdown.

1. **Switch off the power for the computer and disconnect the AC adaptor.**

2. **Close the LCD display and turn the computer upside down.**

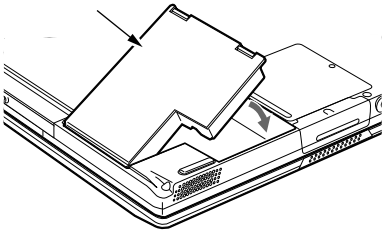
3. **Remove the internal battery pack.**
   While pressing the two battery hooks, remove the internal battery pack.



4. Install the new internal battery pack.

Insert the new internal battery pack diagonally from above and press it securely into place.

Internal battery pack



IMPORTANT

- Cover the connectors on the removed battery pack with insulating tape in order to prevent shorts. Do not mix the removed battery pack with ordinary batteries. This battery pack (lithium ion battery) is a valuable resource. Please recycle it.

3. PC Cards

Cautions on Handling

⚠ CAUTION

BREAKDOWN

- A PC card comprises parts that are extremely vulnerable to static electricity and can even be destroyed by the amount of static electricity that can build up on a human body. Before handling the PC card, touch your hands to something metal and discharge any static electricity.
  In order to prevent damage, please observe the following points carefully when using PC cards.
- Do not leave PC cards in locations with high temperatures or that are subject to direct sunlight.
- Do not subject PC cards to strong mechanical shock.
- Do not place heavy objects on top of PC cards.
- Be careful not to let coffee or any other liquid get on a PC card.
- When storing a PC card, always place it in its special case.

Critical Point

- Some communication PC cards can only be used one at a time. You can check this in the manual that comes with the PC card.
- Some LAN cards may not work with this computer. Also, some modem cards may not work with the modem-equipped models of this computer.
- This computer only supports PC cards running at 3.3 V or 5 V. It does not support PC cards that run at 12 V.

Loading PC Cards

This section explains how to load a PC card.

⚠ WARNING

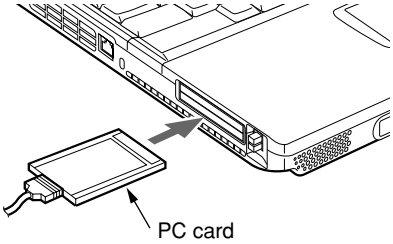
INJURY

- Do not stick your fingers in the PC card slot while loading a PC card. This can cause injury.

Critical Point

- Regardless of the operating system, there are some PC cards that require that the power be cut off before they are loaded and some PC cards that require installation of the device driver. Check this in the manual for the PC card.
- For Windows 2000, the PC card slot numbers displayed on the operating system screen differ from the PC card slot numbers on the status display LCD.

1. **Set the PC card in place.**
   Insert the PC card into the PC card slot with the product name facing upward.



2. **If this is the first time that this PC card has been loaded in this computer, install any required drivers.**
   Some PC cards require the drivers be installed. Check the manual for the PC card and install any required drivers.

Critical Point

- Handle any section where a cord connects to the PC card very carefully. Do not place anything on this connector section or bump it. Rough handling of the connector section can break the PC card.

Removing PC Cards

This section explains the method for removing PC cards for each operating system.

Critical Point

- When removing a PC card that has a cord, do not hold on the PC card cord. Doing so can break the PC card.
- When removing a PC card, use the following procedure. Failure to follow this procedure can cause breakdown.
- Some PC cards require that the power be switched off before they are removed. Check this in the manual for the PC card.

● **Windows XP**

⚠ CAUTION

HIGH TEMPERATURE

- A PC card can be quite hot immediately after it is used. When removing a PC card, after Step 3, wait a while before removing the card. Failure to do so can result in burns.

Injury

- Do not stick your fingers in the PC card slot while removing a PC card. This can cause injury.

1. **Click the "Safe removal of hardware" icon on the taskbar.**

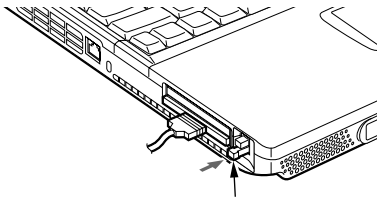
Critical Point

- Do not double-click the "Safe removal of hardware" icon on the taskbar, click "Stop" on the "Safe removal of hardware" window displayed, then remove the PC card. Doing so can make operation of the computer unstable.

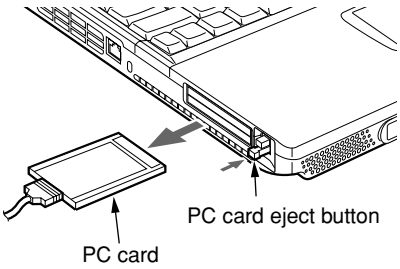
2. **Click "Safely remove XXXXX".**
   The name of the PC card you are using is displayed at "XXXXX".

3. **Check that the "It is safe to remove this hardware" message is displayed.**

4. **Press the PC card eject button.**
   When you gently press the PC card eject button once, the button pops out slightly.



5. **Remove the PC card.**
   Remove the PC card by pressing the PC card eject button that has popped out slightly.



● **Windows 2000**

⚠ CAUTION

HIGH TEMPERATURE

- A PC card can be quite hot immediately after it is used. When removing a PC card, after Step 3, wait a while before removing the card. Failure to do so can result in burns.

Injury

- Do not stick your fingers in the PC card slot while removing a PC card. This can cause injury.

1. **Click the "Remove hardware" icon on the taskbar.**

2. **Click "Stop XXXXX".**
   The name of the PC card you are using is displayed at "XXXXX".

3. **Click "OK".**

4. **Remove the PC card.**
   Use the procedure in Steps 4-5 for Windows XP.

4. Memory

Installing/Removing Memory

This section explains how to install/remove memory on this computer.

⚠ WARNING

ELECTRIC SHOCK
Always switch off the power and disconnect the AC adaptor before installing/removing memory.
Failure to do so can cause electrical shock.

CHOKING
The cover, cap, screws, etc. removed when installing/removing memory are small and small children could choke on them. Be careful to keep such small parts somewhere that small children can not reach.
If any such part were to be swallowed by a child, seek immediate medical assistance.

⚠ CAUTION

BREAKDOWN
When installing/removing memory, hold the memory by its edge so that you do not touch any terminal or IC. Also, do not touch any parts or terminals within the computer. Oils from your fingers can cause contact defects.

BREAKDOWN
Memory is extremely vulnerable to static electricity and can even be destroyed by the amount of static electricity that can build up on human body. Before handling memory, touch your hands to something metal and discharge any static electricity.

BREAKDOWN
Always switch off the power before installing/removing memory. If you install/remove memory with the computer on standby or hibernating, data can be lost and the computer and memory can be damaged.

IMPORTANT

- When removing screws from this computer, use the No. 1 Phillips screwdriver that matches the size of the screws (M2). Using a different size screwdriver can strip the head of the screw.
- Only install memory whose usage is supported by this computer.

Critical Point

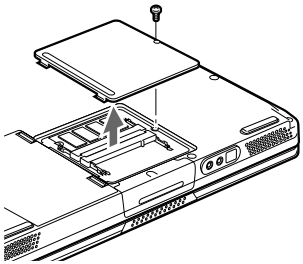
- When installing memory and checking the memory capacity, look at the “Memory Slot” item in the BIOS setup “Information” menu. The capacity of the installed memory is displayed, for example “128MB DDR SDRAM”. If the memory is installed correctly, but this computer does not start up, the memory is broken or defective. Contact the “Contact point for inquiries concerning Fujitsu personal products” or whoever you purchased the memory from.
- Be careful not to drop any of the removed screws or other parts into the computer. This can cause a breakdown.
- To increase the memory, it is necessary to remove the memory already installed in the computer and replace it.

- **Installing Memory**

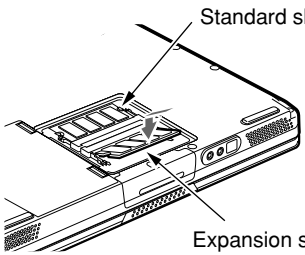
1. **Switch off the power for the computer and disconnect the AC adaptor.**

2. **Remove the internal battery pack.**
   Steps 1-3 of “Replacing the Battery Pack”.

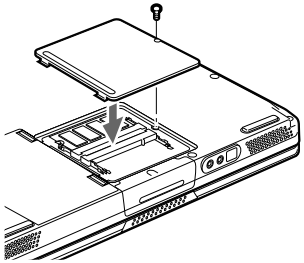
3. **Remove the cover.**
   Remove the screw on the bottom of the computer, then remove the cover.



4. **Install the memory.**
   Line up the notch on the memory with the projection on the connector, insert securely at an angle from above, then flip down into place until the memory audibly clicks into place.



5. Install the cover.
Install the screws removed in Step 3.



6. Install the internal battery pack.
Step 4 of “Replacing the Battery Pack”.

IMPORTANT

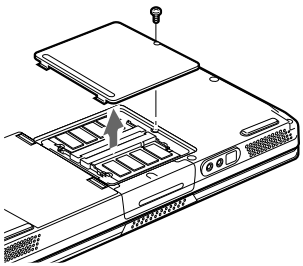
- If the memory is not installed correctly, when you switch on the power, the “Expansion memory error” message may be displayed or nothing at all may be displayed on the screen. If that happens, switch off the power and re-install the memory.

● **Removing Memory**

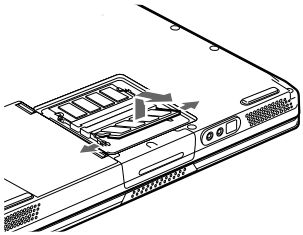
1. Switch off the power for the computer and disconnect the AC adaptor.

2. Remove the internal battery pack.
Steps 1-3 of “Replacing the Battery Pack” .

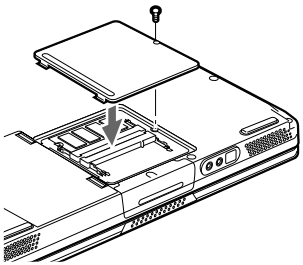
3. Remove the cover.
Remove the screw on the bottom of the computer, then remove the cover.



4. **Remove the memory.**
   Open the hooks holding the memory on both sides, then take the memory out of its slot.



5. **Install the cover.**
   Install the cover removed in Step 3.



6. **Install the internal battery pack.**
   Step 4 of “Replacing the Battery Pack”.

5. Mobile Multi-Bay

Cautions on Handling

- The internal CD-ROM drive unit, internal CD-R/RW drive unit, internal DVD-ROM & CD-R/RW drive unit, internal superdisk unit, and internal FDD drive unit (provisional) are extremely delicate units that rotate the disk at high speed. When any of these disks is being accessed, do not carry the computer around or subject it to mechanical shock or vibration. Doing so can destroy the unit or lose data.
- If the internal superdisk drive unit is handled in certain ways, the data on the disk may be lost. Always back up critical data.
- Avoid storing the computer and mobile multi-bay unit in extremely hot or cold locations and locations subject to severe temperature changes.
- Avoid storing the computer and mobile multi-bay unit in locations subject to direct sunlight and near heaters.
- Avoid storing the computer and mobile multi-bay unit in locations subject to mechanical shock and vibration.
- Avoid storing the computer and mobile multi-bay unit in humid and dusty locations.
- Never use a multi-bay unit that liquid, metal object, or other foreign object has gotten into. If any kind of foreign object gets into a mobile multi-bay unit, contact the “Contact point for inquiries concerning Fujitsu personal products” or whoever you purchased the unit from.
- Wipe off any soiling with a soft, dry cloth or with a soft cloth dipped in water or neutral cleaning agent diluted with water. Never use benzene, paint thinner, or any volatile chemical.
- Never disassemble or take apart a mobile multi-bay unit.
- Avoid using or storing a mobile multi-bay unit near any magnets or equipment that generates magnetic fields.

Replacing a Mobile Multi-Bay Unit

This section explains how to replace the mobile multi-bay unit.

IMPORTANT

- Do not use this computer with the mobile multi-bay empty. Doing so can cause breakdown.
- Only lift up the mobile multi-bay removal lever when removing the mobile multi-bay unit. Raising the lever unlocks the mobile multi-bay unit. If you lift the lever up by mistake, switch off the power for the computer, remove the mobile multi-bay unit, then reinstall it.

Critical Point

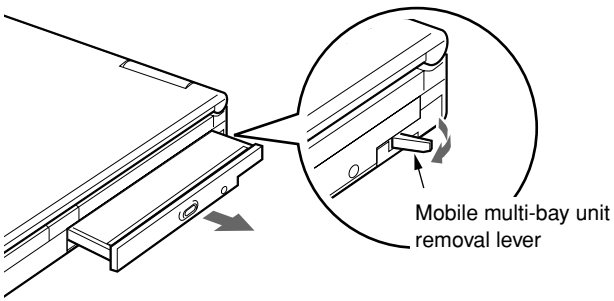
- When booting from a diskette in the internal floppy disk drive unit (provisional) or the internal superdisk drive unit, change the BIOS setup.
  - "Main" – "Floppy disk A": Do not use.
  - "Details" – "USB settings" – "Legacy USB support": Use.
- If the power is on, before removing the expansion internal battery unit, check that the remaining capacity of the internal battery is adequate. If the remaining capacity of the internal battery is not adequate, connect the AC adapter.
- If the "Safe removal of hardware" or "Hardware removal" icon is displayed on the taskbar, execute the procedure from Step 1; if the icon is not displayed, execute the procedure from Step 4.
- For Windows 2000, switch off the power for the computer before removing the internal super drive unit.

1. **Click the "Safe removal of hardware" or "Hardware removal" icon on the taskbar.**

2. **Click "Safely remove XXX" or "Stop XXX".**

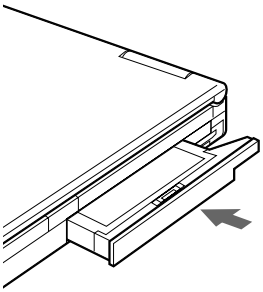
3. **For Windows 2000, click "OK".**

4. **Remove the unit.**
   Raise the mobile multi-bay unit removal lever (1), then remove the mobile multi-bay unit (2).



5. Install the new unit.

With its connector facing into the computer, push the unit firmly all the way into the bay.



Critical Point

- Immediately after the mobile multi-bay unit has been replaced, the drive display may disappear from the “My Computer” window. After a short while, it will reappear and the newly installed unit can now be used.

SECTION 2

6. About the Integrated Wireless Lan (For selected model)

Before Using This Device

Thank you for purchasing a Fujitsu LifeBook with an Integrated Wireless LAN. This manual describes the basic operating procedures for the Wireless LAN (referred to as the "device" in this manual) and how to set up a wireless LAN network. Before using this device, read this manual carefully to ensure correct operation of the device. Keep this manual in a safe place for reference while using the device.

● Characteristics of the Device

This device consists of a wireless LAN card that is attached to the computer via a mini-PCI slot. The main characteristics are as follows:

- It uses the power saving communications system in the 2.4 GHz band, and does not require any license for radio communication.
- It uses Direct Sequence Spread Spectrum (DS-SS), which is resistant to noise.
- The Wireless LAN Mini-PCI module complies with Wi-Fi, and is able to communicate at the maximum transfer rate of 11 Mbps.
- The maximum communication range is approximately 80 feet (25 meters) inside a building. The range may be shorter depending upon the installation factors, such as walls and columns.
- Unauthorized access can be prevented with the use of SSID and encryption key.

Wireless Lan Modes

● Using This Device

AdHoc Mode

The "AdHoc Mode" refers to the network connecting two computers using wireless LAN cards. This connection is called an "AdHoc network."

Using an AdHoc network, you can obtain a network connection easily and at a low cost.

In the AdHoc mode, you can use the function supported by Microsoft Network, such as File and Print Sharing to exchange files and share a printer or other peripheral devices.

To use the AdHoc Mode, you must set the same SSID and the same encryption key for all the computers that are connected. All connected computers can communicate.

● Infrastructure Mode

If a number of computers are connected simultaneously in the AdHoc mode, the transfer rate may be reduced, communications may become unstable, or the network connection could fail. This is because all wireless LAN cards are using the same radio frequency in the network.

To improve this situation, you can use a wireless LAN access point, which is sold separately. The wireless LAN network is in the "Infrastructure mode" when it uses an access point, and such a connection is called the "Infrastructure Network."

By using an access point, you can set and use a different communication channel for each network group. Each channel is given a different radio frequency, and it eliminates the collision of communications and provides a more stable communications environment.

Infrastructure mode is most suitable when you are configuring multiple wireless LAN networks on the same floor. To connect a wireless LAN network to a wired LAN, you need an access point.

● How to Handle This Device

The Integrated Wireless LAN device is already installed in your LifeBook computer. Under normal circumstances, it should not be necessary for you to remove or re-install it. The LAN has been configured to support the operating system with which your system shipped.

Connecting Windows® 98/2000 Systems

This chapter describes how to set the wireless LAN connection for computers running Windows 98 or Windows 2000.

Critical Point

- When you receive your LifeBook, the integrated wireless LAN device and drivers have already been installed. This procedure outlines the steps for setting the device parameters.

Workflow

The proper setup of the wireless LAN requires several steps which must be performed in the proper order. Following is a general outline of the steps that must be performed. Each step is detailed later in this procedure.

1. Setting parameters
   - Setting the profile
   - Setting the encryption
2. Network settings
   - Setting the protocol and checking the network
   - Setting file and printer sharing
   - Checking the connection

Setting Parameters

1 Click [Start] → [Settings] → [Control Panel].

2 Double-click the [PRISM Settings] icon. The [PRISM Wireless Settings] appears.

3 Set the profile as specified in Table 1. Ask your network administrators to check the setting.

4 When you finish your entry, click [Apply].

Item	Description
Profile	Enter the system file name in which the parameter information is to be saved.
Mode	*Ad Hoc Network*: Click the down arrow and select “802.11 AdHoc”. *Infrastructure Network*: Click the down arrow and select “Infrastructure”.
SSID	Enter the network name to which you want to connect.
Transmit Rate	Obtain the information from your network administrator. If you do not have a network administrator, select “Fully Automatic”.
Power Save Enabled	Not supported.
AdHoc Channel	*AdHoc Network*: Select the same channel, 1-13, for all connected computers. If there is more than one wireless LAN nearby (such as on the same floor), we recommend that the channels for each LAN be 5 numbers apart (e.g., if there are two other LANs nearby, the channels used should be 1, 6, and 11). *Infrastructure Network*: Not an option.

Table 1: Profile Parameters

5 Click the [Encryption] tab.

6 Set the encryption items in accordance with Table 2.

- AdHoc Network: Specify the same value for all the computers for which the encryption key is used for connection.
- Infrastructure Network: Specify the identical encryption keys to the encryption keys set for the access point. For instructions on how to check the encryption keys set for the access point, refer to the access point manual.

Critical Point

- Make sure that you specify the encryption keys. If you do not specify the keys, any computer with a wireless LAN card can be connected. This presents a risk that your data may be stolen or destroyed.

Item	Description
Encryption (WEP)	Click the down arrow and select an encryption option. • *Disable*: Disables the encryption. In this case, "Create keys with Passphrase" and subsequent items are greyed out, and you cannot enter anything. • *64 bit*: The encryption is set. Select either "Create keys with Passphrase", "Create keys manually", or "ASCII Input", and enter the encryption keys. • *128 bit*: The encryption is set. Select either "Create keys with Passphrase", "Create keys manually", or "ASCII Input", and enter the encryption keys.
Create Keys with Passphrase	Not supported.
Passphrase	Not supported.
Create Keys Manually (Hexadecimal Input)	Select this to use hexadecimal character codes to set the encryption keys (Keys 1 - 4). Enter a 10-digit value when you have selected [64 bit] for the encryption. Enter a 26-digit value when you have selected [128 bit] for the encryption.
ASCII Input	Select to use the ASCII codes to set encryption keys (Keys 1 - 4). Select this if network does not contain other wireless LAN cards that are set with encryption key using character codes. Enter a 5-digit value when you have selected [64 bit] for the encryption. Enter a 13-digit value when you have selected [128 bit] for the encryption. You can use the following characters: 0 - 9, A - Z, a - z, _ (underscore). For example, to set "ABC12" for the encryption key, enter "ABC12."
Default Key	Click the down arrow, and select a key from Keys 1 - 4.

Table 2: Encryption Key Setup

7 When you finish your entry, click [Apply].

8 Click [OK]. [PRISM Wireless Settings] closes.
You have completed the parameter settings.

Critical Point

- When you are using ADSL (PPPoE) with the infrastructure network to connect to the Internet, you need to change the MTU size set for the computer. To change the MTU size, refer to the manual that comes with the access point.

SECTION 2

Network Connection: Windows 98

The section describes how to set the network connection if your computer running Windows 98.

Network Settings

In this section, you set “TCP/IP Settings,” and complete “Checking Computer Name and Workgroup” required for the network connection.

● **TCP/IP Settings**

1 Click [Start] → [Settings] → [Control Panel].

2 Double-click the [Network] icon. [Network] appears.

3 Perform the following steps.
- Click [TCP/IP].
- Click [Properties].

Critical Point

● If you have more than one [TCP/IP...] entry, select [TCP/IP Æ Intersil PRISM Wireless LAN PCI Card]. [TCP/IP Properties] appears.

4 Set an IP address. (When you are done, ask your network administrator to check the setting).
- AdHoc Network: Select [IP address], and enter a value for [IP address] and [Subnet Mask].
- Infrastructure Network: Select [Obtain an IP address automatically].

5 Click [OK]. [Network] appears again.
In the next step, you will check the computer name and workgroup.

● **Checking the Computer Name and Workgroup**

1 Click the [Identification] tab on the [Network] window.

Critical Point

● If this tab is not found on the [Network] window, click [Start] Æ [Settings] Æ [Control Panel], and double-click the [Network] icon.

2 Check the entry for [Computer name] and [Workgroup]. Ask your network administrator and check the setting, if you have a network administrator.

Item	Description
Computer Name	A name to identify the computer on the network. You can specify any name for any computer. Use up to 15 single-byte characters. For easiest identification, use the model name or user name.
Workgroup	The name of the network group. Use up to 15 single-byte characters. • *AdHoc Network*: Specify the same name to all computers within the same network. • *Infrastructure Network*: Specify a workgroup name to connect to.
Computer Description	Additional description for the computer. This is not necessary.

Table 3: Computer Name and Workgroup

Critical Point

- Including a period or other special characters may prevent you from connecting to the network.

3 Click [OK]. When a message appears prompting you to restart the computer, click [Yes].

- **Sharing**

In this section, you set sharing of the drive, folder, and printer.
You need to set this only when you are sharing files or a printer with other computers on the network.
When you share a drive, folder, or printer, you can use these from any computer on the network.

- **Setting File and Printer Sharing for Networks**

1 Click [Start] → [Settings] → [Control Panel].

2 Double-click the [Network] icon. The [Network] window appears.

3 Click [File and Print Sharing...]. [File and Print Sharing] appears.

4 Click and check one or both of the options.

5 Click [OK]. [File and Printer Sharing for Microsoft Networks] is added under [The following network].

● **Sharing Files**
The following example shows how to set sharing the “Work” folder on the c drive.

1 Double-click [My Computer] → [C: drive] on the desktop.

2 Right-click the “Work” folder, then click [Sharing] from the menu that appears. The [Work Properties] window appears.

3 Click [Sharing], and select items, as specified in Table 4.

Item	Description
Share Name	Specify a share name for the drive or folder that you want to share.
Access Type	Limits the read/write permission for the drive to be shared. • Read-Only Password: Specifies read-only for the drive to be shared. • Full Access Password: Allows read and write for the drive to be shared. • Depends On Password: Identifies either Read-Only or Full, depending upon the password.
Passwords	A password used for [Access Type]. • Read-Only Password: Specify a password to allow read. • Full Access Password: Specify a password to allow read and write.

Table 4: Password Setup

4 Click [OK]. The folder is set for sharing, and the “Work” folder icon changes.

● **Printer Sharing**

1 Click [Start] → [Settings] → [Printers]. [Printers] appears, showing the printers that are connected.

2 Right click the printer that you want to share, and then click [Sharing] from the menu that appears.

3 Click [Sharing], and select necessary items.

Item	Description
Not Shared	Disables printer sharing.
Shared as	Enables printer sharing.
Share Name	Specifies a share name for the printer to be shared.
Comment	Enter a description of the printer to be shared.
Passwords	Specify passwords. If you specify a password, you need to enter it when using the printer.

Table 5: Printer Sharing

4 Click [OK]. The folder is set for sharing, and the "Work" folder icon changes.

● **Checking the Connection**

After the network setting is completed, access the shared drive on another computer to check the connectivity of the wireless LAN network.

● **Accessing Another Computer**

1 Double-click the [Network Neighborhood] on the desktop. The computers that are connected to the network are displayed.

2 Double-click the computer that you want to access. The drive that you set with "Sharing" is displayed. The drive is not displayed unless it is set for sharing, even if it exists.

3 Double-click the drive that you want to access. The drive is displayed showing its contents and made available to you. If you have a question or problem, refer to "Troubleshooting".

● **Checking the Connectivity**

1 Click [Start] → [Settings] → [Control Panel].

2 Double-click the [PRISM Settings] icon. [PRISM Wireless Settings] appears.

3 Check the connectivity on the [Link] tab. The current condition of connection is displayed.

Item	Description
State	Shows the current condition of connection. The MAC address of the other computer that you are connected to is displayed, when the connection is successfully made. If you are connected to more than one computer, the computer that has the best connectivity is displayed.
Current Channel	Shows the current channel used for the connection.
Current Tx Rate	Shows the current transfer rate in Mbits/sec.
[Radio Off]/ [Radio On]	Click [Radio Off] to disconnect. Click [Radio On] to connect to network.
Rescan	Click to search for others to connect to.
Throughput (Bytes/sec)	Shows the actual transfer rate of the transfer data for send (Tx) and receive (Rx).
Link Quality	Shows [Excellent], [Good], [Fair], [Poor], or [Not Connected], depending on the link quality. This is not shown for the AdHoc connection.
Signal Strength	Shows [Excellent], [Good], [Fair], [Poor], or [Not Connected], depending on the signal strength. This is not shown for the AdHoc connection.

Table 6: Connectivity Condition

Network Connection: Windows 2000

The section describes how to set the network connection for a computer with Windows 2000.

● **Network Settings**

In this section, you set “TCP/IP Settings,” and complete

2 Double-click the [Network and Dial-up Connections] icon. The [Network and Dial-up Connections] window appears.

3 Right click the [Local Area Connection], then click [Properties] from the menu that appears. The [Local Area Connection Properties] window appears.

Critical Point

● More than one network adapter is installed in your system if more than one [Local Area Connection] entry is displayed. In this case, select the [Local Area Connection] entry with [Intersil PRISM Wireless LAN PCI Card] displayed under [Device Name].

4 Perform the following steps.

- Click [Internet Protocol (TCP/IP)].
- Click [Properties]. The [Internet Protocol (TCP/IP) Properties] window appears.

5 Set an IP address as indicated in Table 7. Ask your network administrator to check the setting.

Item	Description
For AdHoc Network	Set the IP address and subnet mask: Click [Use the following IP address], and enter a value for [IP address] and [Subnet mask].
For Infrastructure Network	Select [Obtain an IP address automatically]: For the DNS server, select [Obtain DNS server address automatically]. For the IP address, DNS server, and default gateway, follow the network administrator's instructions, if any.

Table 7: Setting an IP Address

6 Click [OK]. The [Local Area Connection Properties] window appears again.

7 Click [OK]. When a message appears prompting you to restart the computer, click [Yes].

● **Checking the full computer name and workgroup**

1 Click [Start] → [Settings] → [Control Panel].

4 Check [Full computer name] and [Workgroup]. Ask your network administrator and check the setting.

Item	Description
Full Computer Name	A name to identify the computer on the network. You can specify any name to each computer. For easier identification, use the model name or user name.
Workgroup	A name for the network group: • *AdHoc Network*: Specify the same name to all computers within the same network. • *Infrastructure Network*: Specify a workgroup name to connect to. To change the setting, click [Properties], and follow the instructions on the screen. [System Properties] appears again.

Table 8: Checking computer name and workgroup

5 Click [OK]. When a message appears prompting you to restart the computer, click [Yes].

Sharing

In this section, you set sharing of the drive, folder, and printer.

You only need to set this when you are sharing files or a printer with other computers on the network.

When you share a drive, folder, or printer, you can use them from any computer on the network.

● **Setting [File and Printer Sharing for Microsoft Networks]**

1 Click [Start] → [Settings] → [Control Panel].

2 Double-click the [Network and Dial-up Connections] icon. The [Network and Dial-up Connections] windows appears.

3 Right click the [Local Area Connection], then click [Properties] from the menu that appears. [Local Area Connection Properties] appears.

Critical Point

● More than one network adapter is installed in your system if more than one [Local Area Connection] entry.

4 If [File and Printer Sharing for Microsoft Networks] is displayed in the list, make sure that it is checked. If it is not checked, check it and click [OK]. You do not have to perform the following steps. Go to the next section, entitled "Sharing Files."
If [File and Printer Sharing for Microsoft Networks] is not found in the list, click [Install], and perform Step 5 and subsequent steps. When you click [Install], the [Select Network Component Type] window appears.

5 Perform the following steps.
- Click [Service].
- Click [Add]. The [Select Network Service] window appears.

6 Perform the following steps.
- Click [File and Printer Sharing for Microsoft Networks].
- Click [OK]. You will go back to [Local Area Connection Properties], and [File and Printer Sharing for Microsoft Networks] is added to the list.

7 Click [OK].

Critical Point

● If you have changed the setting, [Close] is shown instead. Click [Close].

● **Sharing Files**

The following example shows how to set sharing the " Work" folder on the c: drive.

1 On the desktop, double-click [My Computer] → C: drive.

2 Right-click the " Work" folder, then click [Sharing] from the menu. The [Work Properties] window appears.

3 Click [Share this folder] and set necessary items, as indicated in the following table.

Item	Description
Share Name	You can specify a share name for the drive or folder that you want to share.
Comment	You can enter the description for the drive or folder that you want to share.
User limit	Specifies the limit for the number of sharing users.

Table 9: Sharing Files

4 Click [OK]. The folder is set shared, and the " Work" folder icon changes.

● **Printer Sharing**

1 Click [Start] → [Settings] → [Printers]. The Printers window appears, showing the printers that are connected.

2 Right click the printer that you want to share, then click [Sharing] from the menu that appears.

3 Click [Sharing], and select necessary items.

Item	Description
Not Shared	Disables printer sharing.
Shared As	Enables printer sharing.
Share Name	Specifies a share name of the printer to be shared.
Comment	Enter the description of the printer to be shared.
Passwords	If you specify a password, you need to enter it when using the printer.

Table 10: Printer Sharing

4 Click [OK]. The printer sharing is set, and the icon changes.

Checking the Connection

After the network setting is completed, access the shared drive on another computer to check the connectivity of the wireless LAN network.

● **Accessing Another Computer**

1 **Double-click the [My Network Places] icon on the desktop. [My Network Places] appears.**

2 **Double-click [Computers near me]. The computers that are connected to the network are displayed.**

3 **Double-click the computer that you want to access. The drive that you set with "Sharing" are displayed.**

4 **Double-click the drive that you want to access. The drive is displayed showing its contents and made available to you.**

● **Checking the Connectivity**

1 **Click [Start] → [Settings] → [Control Panel].**

2 **Double-click the [PRISM Settings] icon.**

3 **Check the connectivity on the [Link] tab. The current condition of connection is displayed.**

Item	Description
State	Shows the current condition of connection. The MAC address of the other computer to which you are connected is displayed when the connection is successful. If you are connected to more than one computer, the computer that has the best connectivity is displayed.
Current Channel	Shows the current channel used for the connection.
Current Tx Rate	Shows the current transfer rate in Mbits/sec.
[Radio Off]/ [Radio On]	Click [Radio Off] to disconnect. Click [Radio On] to connect to the network.
[Rescan] button	Click this button to search for others to connect to.
Throughput (Bytes/sec)	Shows the actual transfer rate of the data transfer for send (Tx) and receive (Rx).
Link Quality	Shows either [Excellent], [Good], [Fair], [Poor], or [Not Connected], depending on the link quality. Not shown for AdHoc connection.
Signal Strength	Shows either [Excellent], [Good], [Fair], [Poor], or [Not Connected], depending on the signal strength. Not shown for AdHoc connection.

Table 11: Checking the Connectivity

Connecting Windows XP Systems

This chapter describes how to set up the wireless LAN connection for computers that are running Windows XP.

Critical Point

- When you receive your LifeBook, the integrated wireless LAN device and drivers have already been installed. This procedure outlines the steps for setting the device parameters.

Workflow

The proper setup of the wireless LAN connection requires that several steps be performed in the proper order. Following is a general outline of the steps to be performed. Each step is detailed later in this procedure.

1 Setting parameters
- Setting the profile
- Setting the encryption

2 Network settings
- Setting the protocol and checking the network
- Setting file and printer sharing
- Checking the connection

Setting Parameters

1 Click [Start] → [Control Panel].

2 Click [Network and Internet connection].

3 Click [Network connection]. A list of networks that are currently installed is displayed.

4 Right click [Intersil PRISM Wireless LAN PCI Card] in the list, and click [Properties] from the menu that is displayed. [Wireless Network Connection 2 Properties] appears.

5 Click the [Wireless Networks] tab. The [Wireless Networks] tab appears.

6 Perform the following steps.
- Make sure that [Use Windows to configure my wireless network settings] is checked.
- Click [Add] under [Preferred networks]. [Wireless Network Properties] appears.

7 Set parameters.
- For the AdHoc network, specify the same value to all the computers, for which the encryption key is used for connection.
- For the infrastructure network, specify the encryption key (network key) with the same value to the encryption key of the access point. For how to check the encryption keys set for the access point, refer to the manual supplied with the access point.

Critical Point

- Be sure to specify the encryption keys. If you do not specify the keys, any computer with a wireless LAN card can be connected. This presents a risk that other users may steal or destroy your data.

Item	Description
Network Name SSID	Enter the network name to which you want to connect. This is a required item. For the network name, ask your LAN administrator. *AdHoc network*: Set the same name for all of the computers that are to be connected. Infrastructure network: Specify the same name as that specified on the access point that is to be connected. For access point instructions, refer to the manual that comes with the access point.
Key Format	Click the down arrow and select the input for the Network key. *ASCII characters* Select this when using ASCII characters for the Network Key. Characters that can be used follow: 0-9, A-Z, a-z, and _ (underscore) *Example*: To set the key to “ABC12” , input “ABC12” . *Hexa-decimal characters* Select this when using hexadecimal characters for the Network Key. Use this if there is a wireless LAN card in the network that has the Network Key set to a character code. In ‘Network Key’, input the same value as the other wireless LAN card.

Table 12: Setting parameters

8 When you finish your entry, click [OK]. [Wireless Network Connection 2 Properties] appears again.

9 Make sure the network name you specified for the.....

Network Connection

The section describes how to set the network connection for a computer running Windows XP.

● Network Settings

In this section, you set “ TCP/IP Settings,” and complete “Checking Computer Name and Workgroup” required for the network connection.

TCP/IP Settings

1 On [Wireless Network Connection Properties], click [General].

Critical Point

- If [Wireless Network Connection 2 Properties] is not displayed, click [Start] Æ [Settings] Æ [Control Panel], and double-click the [Network Connection] icon.
  Right click the [Wireless Network Connection], and then click [Properties] from the menu that appears.

2 Perform the following steps.

- Click [Internet Protocol (TCP/IP)].
- Click [Properties]. [Internet Protocol (TCP/IP) Properties] appears.

3 Set an IP address. Ask your network administrator and check the setting.

Item	Description
AdHoc Network	Set the IP address and subnet mask. Click [Use the following IP address]. Enter a value for [IP address] and [Subnet mask].
For Infrastructure Network	Select [Obtain an IP address automatically]. For the DNS server, select [Obtain DNS server address automatically]. For the IP address, DNS server, and default gateway, follow the network administrator's instructions, if any.

Table 13: Setting an IP address

5 Click [OK].

Critical Point

- If you have changed the setting, [Close] is shown...

- **Checking the Full Computer Name and Workgroup**

1 Click [Start] → [Control Panel]. Make sure the Classic View is selected.

2 Double-click the [System] icon. [System Properties] appears.

3 Click the [Computer Name] tab.

4 Check [Full computer name] and [Workgroup]. Ask your network administrator and check the setting.

Item	Description
Computer Name	A name to identify the computer on the network. You can specify any name to each computer. Use up to 15 single-byte characters. For easier identification, use the model name or user name.
Workgroup	A name of the network group. Use up to 15 single-byte characters. *AdHoc Network*: Specify the same name to all computers within the same network. *Infrastructure Network*: Specify workgroup name to connect to.

Table 14: Setting computer name and workgroup

To change the setting, click [Change], and follow the instructions on the screen. [System Properties] appears again.

5 Click [OK]. When a message appears prompting you to restart the computer, click [Yes].

Sharing

In this section, you set sharing of the drive, folder, and printer.

You need to set this only when you are sharing files or a printer with other computers on the network.

When you share a drive, folder, or printer, you can use these from any computer on the network.

● **Setting [File and Printer Sharing for Microsoft Networks]**

1 Click [Start] → [Control Panel]. Make sure the Classic View is selected.

2 Double-click the [Network Connection] icon. Make sure that it is checked. If it is not checked, check it, and click [OK]. You do not have to perform the following steps. Go to the next section, "Sharing Files."

If [File and Printer Sharing for Microsoft Networks] is not found in the list, click [Install], and perform Step 5 and the subsequent steps. When you click [Install], [Select Network Component Type] appears.

5 Perform the following steps.
- Click [Service].
- Click [Add]. [Select Network Service] appears.

6 Perform the following steps.
- Click [File and Printer Sharing for Microsoft Networks].
- Click [OK]. You will go back to [Wireless Network Connection 2 Properties], and [File and Printer Sharing for Microsoft Networks] is added to the list.

7 Click [Close].

● **Sharing Files**

The following example shows how to set sharing the " Work" folder on the c: drive.

1 Click [Start] → [My Computer].

2 Double-click the [Local Disk (c:)] icon.

3 Right click the " Work" folder, and then click [Sharing and Security] from the menu that appears. [Work Properties] appears.

4 Click [If you understand the security risks but want to share files without running the wizard, click here].

Critical Point

● If you have already clicked [If you understand the security risks but want to share files without running the wizard, click here], this window does not appear.

In the [Work Properties] window, the description under [Network Sharing and security] changes.

5 Check [Share this folder on the network].
Uncheck [Allow network users to change my files], if the shared folder is for read only.

6 Click [OK]. The folder is set shared, and the "Work" folder icon changes.

● **Printer Sharing**

2 Right-click the printer to be shared, and click [Sharing] from the menu that appears. The properties of the printer to be shared will be displayed. Set printer sharing.
On the display, the printer sharing setting is recommended by the Network Setup Wizard, but for the wireless LAN network, security is maintained by network name (SSID) or network key. The following steps allow you to set up printer sharing without using the Network Setup Wizard.

3 Click OK. If you understand the security risks but want to share printers without running the wizard, click here. 'Enable Printer Sharing' will be displayed.

4 Select 'Just enable printer sharing'.

5 Click 'OK'. The printer properties will be indicated.

6 Select 'Share this printer'.

7 Enter the sharing printer name in 'Share name'.

8 Click OK. The printer will be shared, and the printer icon will become a sharing icon.

Checking the Connection

After the network setting is completed, access the shared drive on another computer to check the connectivity of the wireless LAN network.

● **Accessing Another Computer**

1 **Click [Start] → [My Computer].**

2 **From the left menu in [Other Places], click [My Network Places].**

3 **From the left menu in [Network Tasks], click [View workgroup computers]. The workgroup in which you are participating will appear.**

4 **Double click the computer to which you want to connect. The drive that you set in [Computer Sharing] appears.**

5 **Double click the drive to which you want to connect. The contents of the drive will appear, and is available for use.**

● **Checking the Connectivity**

1 **Click [Start] → [Control Panel].**

2 **Double-click the [PRISM Settings] icon. [PRISM Wireless Setting] appears.**

3 **Check the connectivity on the [Link] tab. The current condition of connection is displayed**

Item	Description
State	Shows the current condition of connection. The MAC address of the other computer that you are connected to is displayed, when the connection is successfully made. If you are connected to more than one computer, the computer that has the best connectivity is displayed.
Current Channel	Shows the current channel used for the connection.
Current Tx Rate	Shows the current transfer rate in Mbits/sec.
Radio Off/ Radio On	Click [Radio OFF] to disconnect. Click [Radio On] to connect to the network.
Rescan	Click this button to search for others to connect to.
Throughput (Bytes/sec)	Shows the actual transfer rate of the transfer data for send (Tx) and receive (Rx).
Link Quality	Shows the link quality. This is not shown for the AdHoc connection.
Signal Strength	Shows the signal strength. This is not shown for the AdHoc connection.

Table 15: Checking connectivity

Troubleshooting

This chapter contains troubleshooting information, including causes and actions, for problems you may find while using this device.

● Troubleshooting Table

Problem	Possible Cause	Possible Solution
An exclamation mark (!) or cross (x) is attached to [Intersil PRISM Wireless LAN PCI Card].	A failure to recognize the device.	Restart the computer.
	A failure in installing the driver.	Restart the computer.
Other computers are not displayed when the [Network Computer] icon is double-clicked.	You did not enter the password when Windows 98 started. You clicked [Cancel] or [ESC] when User Name/ Password window was shown.	Make sure that you enter user name and password and click [OK] when starting Windows 98. If you forget your password, enter another user name. A new user name and password is registered in the computer.
	The network has not been set up correctly.	Check the setting for the protocol, workgroup, and sharing. To check this, you need a different procedure, depending upon the operating system that you use. Refer to the appropriate section of this manual.
	It takes time before the network is searched and the computer connected is displayed.	Perform the following steps to search for the computer. • Click [Start] → [Search] → [Other Computers]. • Enter the computer name that you are connecting to in [Name], and click [Search]. • Double-click the icon of the computer that has been searched.
	A failure in installing the driver.	Make sure that the driver is correctly installed.
	The TCP/IP protocol is not installed, or, the IP address is not set correctly.	Make sure that the TCP/IP protocol is installed. To check this, you need a different procedure, depending on the operating system that you use. Refer to the appropriate section of this manual.

Problem	Possible Cause	Possible Solution
Other computers are not displayed when the [Network Computer] icon is double-clicked.	The TCP/IP protocol is not installed, or, the IP address is not set correctly.	If the TCP/IP protocol is installed, do the following to check the IP address: 1. Windows 98: Click [Start] → [Programs] → [MS-DOS Prompt]. Windows 2000: Click [Start] → [Programs] → [Accessories] → [Command Prompt]. Windows XP: Click [Start] → [All Programs] → [Accessories] → [Command Prompt]. 2. Enter " IPCONFIG" command, and press [Enter]. (If your hard disk is C drive, enter C:\>ipconfig) Check that the IP address is correctly displayed under the IP Address. Example: IP address: 10.0.1.3 Subnet Mask: 255.255.255.0 Default Gateway: 10.0.1.1
	No communication due to poor radio signal.	Shorten the distance between computers or remove visible obstacles between them, and retry the connection.

Problem	Possible Cause	Possible Solution
IP packet isn't reaching its destination	Run the PING command to check the connection	Perform the following steps to run the PING command to check if the IP packet is correctly delivered to the destination. To run the PING command, the TCP/IP protocol must be installed. First you will determine your IP address, then you will make sure your IP address can respond, and then you will make sure other computers can be addressed. 1. Windows 98: Click [Start] → [Programs] → [MS-DOS Prompt]. Windows 2000: Click [Start] → [Programs] → [Accessories] → [Command Prompt]. Windows XP: Click [Start] → [All Programs] → [Accessories] → [Command Prompt]. 2. Type: ipconfig > *directory\filename* where *directory* and *filename* represent the location at which you want to find the IP address. 3. Click [Enter], then go to the location you specified above. The IP address for your system will be contained in the file. 4. To check that your IP address is functioning properly, go back to the DOS prompt and type: ping *<IP address>*, then press [Enter]. You will receive several replies, followed by the PING statistics (similar to below). 5. To check that your system is communicating with other systems, go to the DOS prompt and type: \>ping XXX.XXX.XXX.XXX. (With the destination IP address in place of XXX.XXX.XXX.XXX). Example: if the destination IP address is 10.0.1.3: C:\>ping 10.0.1.3 A message similar to the following appears if the connection is successful. Pinging 10.0.1.3 with 32 bytes of data: Reply from 10.0.1.3: bytes=32 time=1ms TTL=32 Reply from 10.0.1.3: bytes=32 time<10ms TTL=32 Reply from 10.0.1.3: bytes=32 time=4ms TTL=32 Reply from 10.0.1.3: bytes=32 time<10ms TTL=32 If the connection fails, [Request timed out], [Destination host unreachable], or a similar message appears. In this case, refer to the " Other computers are not displayed" portion of this chapter.

Problem	Possible Cause	Possible Solution
Cannot connect to the network	There are several possible causes, as listed to the right. Refer to the specific section of this manual or your user's manual.	The following causes are possible. Check each one of them. • The network name or encryption key is not right. • The driver has not correctly started. • The destination computer is not turned on. • You do not have the access privilege to the destination computer. • The card has failed. • Hardware conflict.
I want to remove the driver. (Windows 98)		**Windows 98:** When removing the driver, make sure that the device is attached to the computer. If you try to remove the driver while the device is detached from the computer, the driver is not removed. 1. Right click the [My Computer] icon on the desktop, and then click [Properties] from the menu that appears. [System Properties] appears. 2. Click the [Device Manager] tab. 3. Click [+] beside [Network adapters]. 4. Perform the following steps. • Click [Intersil PRISM Wireless LAN PCI Card]. • Click [Remove]. [Confirm Device Removal] appears. 5. Click [OK]. The device is removed, and [System Settings Change] appears. 6. Click [No]. 7. Close [System Properties]. 8. Make sure that the icon has disappeared from the task tray in the lower right corner of the screen. 9. Click [Start] → [Settings] → [Control Panel]. [Control Panel] appears. 10. Double-click [Add/Remove Programs]. [Add/Remove Programs Properties] appears. 11. Double-click [PRISM 11Mbps Wireless LAN for Windows]. A window appears asking you if you really want to remove the driver. 12. Click [Yes]. When the driver is removed, a window appears showing that the driver has been removed. 13. Click [OK]. 14. Close [Add/Remove Programs Properties] and [Control Panel]. 15. Shut down Windows, and turn off the computer.

Problem	Possible Cause	Possible Solution
I want to remove the driver (Windows 2000)		**Windows 2000:** When removing the driver, make sure that the device is attached to the computer. If you try to remove the driver while the device is detached from the computer, the driver is not removed. 1. Right click the [My Computer] icon on the desktop, and then click [Properties] from the menu that appears. [System Properties] appears. 2. Click the [Hardware] tab. 3. Click [Device Manager...]. The [Device Manager] window appears. 4. Click [+] beside [Network adapters]. 5. Right click [Intersil PRISM Wireless LAN PCI Card], and click [Uninstall] from the menu that is displayed. [Confirm Device Removal] appears. 6. Click [OK]. 7. Close [System Properties]. 8. Make sure that the icon has disappeared from the task tray in the lower right corner of the screen. 9. Click [Start] → [Settings] → [Control Panel]. 10. Double-click [Add/Remove Programs]. [Add/Remove Programs] appears. 11. Perform the following steps. • Click [PRISM 11Mbps Wireless LAN for Windows]. • Click [Change/Remove]. A window appears asking you if you really want to remove the driver. 12. Click [Yes]. When the driver is removed, a window appears showing that the driver has been removed. 13. Click [OK]. 14. Close [Add/Remove Programs] and [Control Panel]. 15. Shut down Windows, and turn off the computer.

Problem	Possible Cause	Possible Solution
I want to remove the driver (Windows XP)		**Windows XP:** When removing the driver, make sure that the device is attached to the computer. If you try to remove the driver while the device is detached from the computer, the driver is not removed. 1. Click [Start], right click [My Computer], and then click [Properties] from the menu that appears. [System Properties] appears. 2. Click the [Hardware] tab. 3. Click [Device Manager]. 4. Click [+] beside [Network adapters]. 5. Right click [Intersil PRISM Wireless LAN PCI Card], and click [Uninstall] from the menu that is displayed. [Confirm Device Removal] appears. 6. Click [OK]. 7. Close [System Properties]. 8. Make sure that the icon has disappeared from the task tray in the lower right corner of the screen. 9. Click [Start] → [Control Panel]. [Control Panel] appears. 10. Double-click [Add/Remove Programs]. [Add/Remove Programs] appears. 11. Perform the following steps. • Click [PRISM 11Mbps Wireless LAN for Windows]. • Click [Change/Remove]. A window appears asking you if you really want to remove the driver. 12. Click [Yes]. When the driver is removed, a window appears showing that the driver has been removed. 13. Click [OK]. 14. Close [Add/Remove Programs] and [Control Panel]. 15. Shut down Windows, and turn off the computer.

If a Second LAN Device is Installed

● INSTRUCTIONS FOR DISABLING ANOTHER LAN DEVICE

If you have another LAN card on your computer running Windows 98, perform the following steps to disable that LAN card before installing the driver.

● **For Windows 98**

1 Click [Start] → [Settings] → [Control Panel].

2 Double-click [System]. [System Properties] appears.

3 Click [+] beside [Network adapters], and double-click the standard built-in LAN device.
The following devices appear depending on your computer model.
- [Intel(R) 82559 Fast Ethernet LOM with Alert on LAN 2*]
- [Intel(R) 8255x-based PCI Ethernet Adapter(10/ 100)]
- [Realtek RTL8139(A/B/C/8130)PCI Fast Ethernet NIC]
- or others.

The LAN Card Properties window appears.

4 Check [Set disable with this hardware profile], and click [OK]. An [x] mark is added to the LAN card icon.

5 Click [OK].

6 Restart the system.

About IP Addresses

● SETTING IP ADDRESSES

If you are not sure how to set the IP address, refer to the following procedure.

If you have an access point (DHCP server) on the network, set the IP address as follows:

Windows 98: [Obtain an IP address automatically]

Windows 2000: [Obtain an IP address automatically]

Windows XP: [Obtain an IP address automatically]

Critical Point

- A DHCP server is a server that automatically assigns IP addresses to computers or other devices in the network.
- There is no DHCP server for the AdHoc network.

If the IP address is already assigned to the computer in the network, ask the network administrator to check the IP address to be set for the computer.

If no access point is found in the network:

An IP address is expressed with four values in the range between 1 and 255.
Set the each computer as follows: The value in parentheses is a subnet mask.

<Example>

Computer A: 192.168.100.2 (255.255.255.0)

Computer B: 192.168.100.3 (255.255.255.0)

Computer C: 192.168.100.4 (255.255.255.0)

:

:
Computer X: 192.168.100.254 (255.255.255.0)

Specifications

● Technical Specifications for Integrated Wireless Lan Device

Item	Description
Network Type	IEEE 802.11b
Transfer Rate	11/5.5/2/1Mbps (auto change)
Frequency Range	2,400 - 2,483 MHz
Channels	One of 13 channels is used
Card Type	Non-intelligent
VCC	Class B
Security	Network name, encryption key
Supported Operating Systems	Windows 98, Windows 2000, Windows XP
Power Current	Max: 350mA
Maximum number of units recommended for wireless LAN (AdHoc network)	10 or less

Glossary

● Glossary of Terms Used in This Document

AdHoc
A name of a wireless LAN configuration.
It is a type of communication using wireless cards only.
Another type of communication is called Infrastructure (using a wireless card and an access point).

ADSL
Asymmetric Digital Subscriber Line Technology for transporting high bit-rate services over ordinary phone lines.

Channel
A radio frequency band used for communication between wireless cards and access points.

DHCP
Dynamic Host Configuration Protocol A protocol used to automatically acquire parameters required for the communication, such as IP address.
The sender of IP address is called a DHCP server, and the receiver is called a DHCP client.

DNS
Domain Name System
A function to control the association between the IP address and the name assigned to the computer. If you do not know the IP address but if you know the computer name, you can still communicate to that computer.

Encryption Key (Network Key)
Key information used to encode data for data transfer.
This device uses the same encryption key to encode and decode the data, and the identical encryption key is required between the sender and receiver.

IEEE 802.11b
The U.S. IEEE (Institute of Electrical and Electronic Engineers) promotes standardization of LAN, and its standards committee (IEEE 802.11) has promoted 1-Mbps and 2-Mbps wireless LAN. Currently, another standards committee (IEEE 802.11b) is working for standardization of the faster 11-Mbps wireless Lan.

Infrastructure
A name of a wireless LAN configuration. This type of communication uses an access point.
Another type of communication is called AdHoc.

IP Address
An address used for computers to communicate in the TCP/IP environment.
Current IPv4 (version 4) uses four values in the range between 1 and 255. (Example: 192.168.100.123).
There are two types of IP address: global address and private address.
The global address is an only address in the world.
A private address is an only address in theclosed network.

LAN

Local Area Network

A connection of computers within a relatively limited area, such as the same floor, or the same building.

MAC Address

Media Access Control Address

A unique physical address of a network card.
For Ethernet, the first three bytes are used as the vendor code, controlled and assigned by IEEE. The remaining three bytes are controlled by each vendor (preventing overlap), therefore, every Ethernet card is given a unique physical address in the world, being assigned with a different address from other cards. For Ethernet, frames are sent and received based on this address.

MTU

Maximum Transmission Unit

The maximum data size that can be transferred at a time through the Internet or other networks.
You can set a smaller MTU size to obtain successful communication, if you have difficulty transferring data due to the fact that the maximum size is too large.

PPPoE

Point to Point Protocol over Ethernet

A protocol for Ethernet, using a Point-to-Point Protocol (PPP), which is used for connection on the phone line.

Protocol

Procedures and rules use to send and receive data between computers.
- Method of sending and receiving data
- Process used to handle communication errors

Conditions required for communication are organized in procedures for correct transfer of information.

SSID

Service Set Identifier

Specifies which network you are joining. Some systems allow you to specify any SSID as an option so you can join any network.

TCP/IP

Transmission Control Protocol/Internet Protocol
A standard Internet protocol that is most widely used.

Wi-Fi Compatible

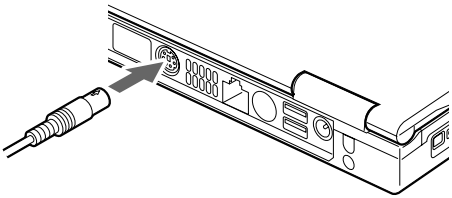
Wi-Fi (Wireless Fidelity) Identifies that the product has passed the interoperability test, supplied by the WECA (Wireless Ethernet Compatibility Alliance), which guarantees the interoperability of wireless IEEE 802.11 LAN products. For more information on the Wi-Fi standard, go to the WECA website at: www.wirelessethernet.com.

7. Numeric Keypad

Connection

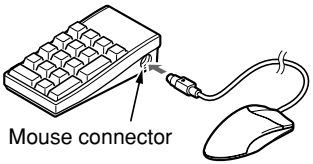
1. **Either switch Off the power for the computer or put it on standby.**

2. **Connect the external numeric keypad.**
   Connect the external numeric keypad to the expansion keyboard/mouse connector on the rear of the computer. Face the connector with the stamped arrow upward.

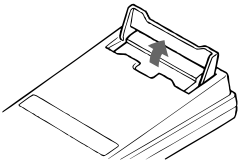


Critical Point

- The expansion numeric keypad can only be used when the computer is in numeric lock mode.
- You can connect a mouse to the mouse connector on the numeric keypad.



- Adjust the angle of the numeric keypad with the tilt foot on the bottom of the numeric keypad.



8. Printers

Critical Point

- If the printer supports USB connection, you can also use the USB connector.

Connection

⚠ WARNING

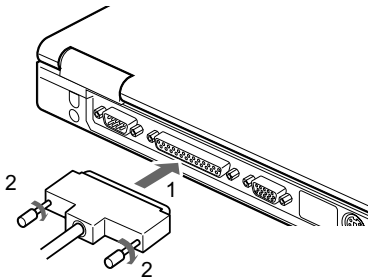
ELECTRIC SHOCK
Always switch off the power and disconnect the AC adaptor before connecting/disconnecting a printer.
Failure to do so can cause electrical shock.

⚠ CAUTION

BREAKDOWN
Read this manual carefully concerning cable connection so that you connect the cable correctly. Using this computer with an incorrectly connected cable can cause breakdown of this computer and of the printer.

1. **Either switch Off the power for the computer or put it on standby.**

2. **Connect the printer cable to the parallel connector on the rear of the computer.**
   Viewed from directly in front of it, the connector is trapezoidal. Line up the connectors with each other, then insert securely (1), and tighten the screws at the left and right of the printer cable (2).



3. **Connect the printer cable and power cable to the printer.**
   For details on the connection method, see the printer's manual.
   The power cable may be connected to the printer.

4. **Plug the printer power cable plug into a socket and switch on the power for the printer.**

5. **Connect the AC adaptor to the computer and switch on its power.**

6. **When connecting a printer for the first time, install the driver.**
   For details on installing the printer driver, see the printer's manual.

Critical Point

- Connecting a printer requires a printer cable. Some printers come without a printer cable. Also, some printers come with a cable that is the wrong configuration for connecting to this computer. If this is the case, separately purchase a printer cable that can connect your printer and this computer.
- The method for connecting the printer depends on the printer. For details, see the printer's manual.

9. External Displays

Connections

It is possible to connect a projector, CRT display, or other external display to this computer.
This section explains how to connect a CRT display to the external display connector on the rear of the computer.

⚠ WARNING

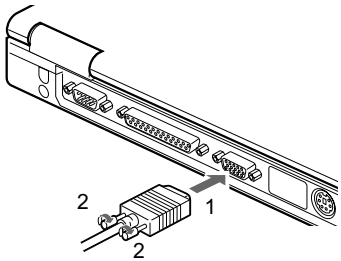
ELECTRIC SHOCK
When connecting/disconnecting an external display, always switch off the power for the computer and disconnect the AC adaptor. Failure to do so can cause electrical shock.

⚠ CAUTION

BREAKDOWN
Read this manual carefully concerning cable connection so that you connect the cable correctly. Using this computer with an incorrectly connected cable can cause breakdown of this computer and of the external display.

1. **Switch off the power for the computer, then disconnect the AC adaptor.**

2. **Connect the display cable to the external display connector on the rear of the computer.**
   Viewed from directly in front of it, the connector is trapezoidal. Line up the connectors with each other, then insert securely (1), then tighten the screws at the left and right of the display cable (2).



3. **Connect the display cable to the CRT display.**
   For details on the connection method, see the external display's manual.

4. **Connect the CRT display's power cable, then switch on the CRT display's power.**

5. **Connect the AC adaptor to the computer and switch on its power.**

Critical Point

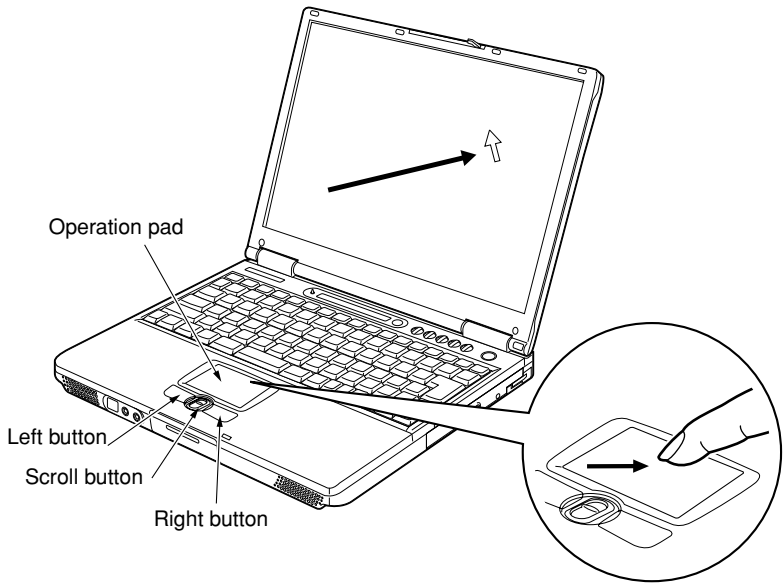
- When you switch on the power for the computer after connecting the external display, the following may occur.
  - The computer's LCD display and the external display may be displayed on at the same time.
  - The "Add new hardware wizard" may be displayed. In this case, install the driver for the external display according to the instructions on the screen.
- Separate the external display from the floppy disk drive and other units that generate magnetic fields.

6. **Switch the screen display.**
   Pressing the "Fn" + "F10" keys at the same time switches the display LCD display → CRT → Both → LCD display... You can also switch the display with the operating system "Display properties".

10. Pointing Devices

Touch Pad

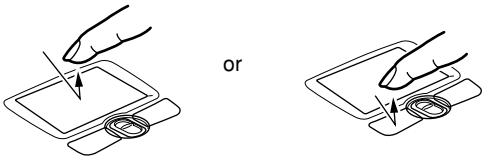
The touch pad is a convenient pointing device with which you can move the mouse pointer with your fingertip. The touch pad comprises the operation pad and the two buttons in front of it.
The operation pad has the function of the ball section of a mouse. You move the mouse pointer on the screen by dragging your fingertip up/down/left/right over the operation pad. Also, by gently tapping the operation pad you can carry out such operations as clicking, double-clicking, pointing, dragging, etc.
The left and right buttons are equivalent to the left and right buttons on a mouse. These functions depend on the application. The center scroll button allows you to move the screen easily up and down by pressing the center scroll button forward and back.



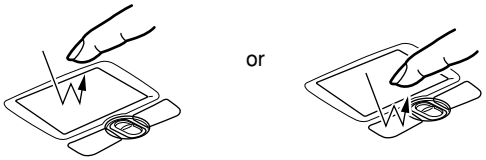
Critical Point

- The basic principles of the touch pad are such that the touch pad operates somewhat differently for different users due to such factors as the degree of dryness of the fingertip of the user.
- If condensation due to humidity or soiling gets on the operation pad, this can cause malfunction. If this happens, use a soft, dry cloth to wipe it clean. If the touch pad is extremely dirty, wipe it with a soft cloth dipped in neutral cleaning agent diluted with water.
- The center scroll button can be used if you install the accessory “Alps Pointing Device Driver”.
- Some applications can not scroll the screen with the scroll button.
- When using a PS/2 mouse, it is necessary to set such parameters as simultaneous use with the touch pad in the BIOS setup “Keyboard/mouse settings”.

- **Touch pad usage**
- **Click**
  Clicking means to tap the operation pad once and let it go quickly or to click the left button. Also, clicking the right button once is called a “right click”.

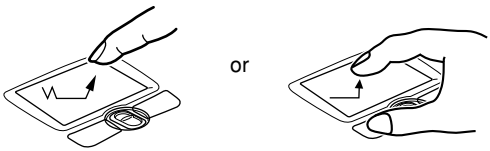


- **Double-click**
  Double-clicking means to tap the operation pad twice and let it go quickly or to click the left button twice. The speed of double-clicking can be adjusted with the “Mouse Properties” screen.

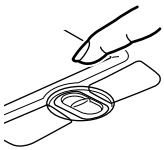


- **Point**
  Pointing means to line up the mouse pointer with a menu or the like. If there are levels under the menu the mouse pointer is on (if ▶ is displayed at the right of the menu), that menu is displayed.

- **Drag**
  Move the mouse pointer to any position, then quickly tap the operation pad twice and leave your finger on the operation pad after the second tap, then drag your fingertip along the operation pad to the desired position, then pull your fingertip off the operation pad. Alternatively, move the mouse pointer to any position, then holding down the left button, drag along the operation pad to the desired position, then pull your fingertip off the operation pad.



- **Scroll**
  If you click the scroll area in the window and press the scroll button forward or back, the display in the window is scrolled.



Return: Press away from you.
Forward: Press toward you.

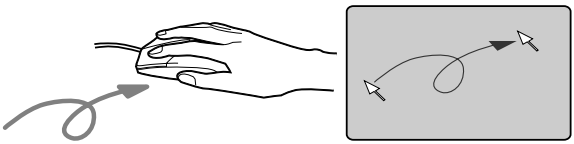
Critical Point

- The above button operations are for when the touch pad is set to right-handed operation. The roles of the left and right buttons, the mouse pointer speed, etc. can be set with the "Mouse Properties" window.
- When tapping, touch the operation pad quickly and gently. There is no need to apply force.
- When moving the mouse pointer with the touch pad, if you lift up your fingertip, move it to another position, then lower it to the touch pad again, the mouse pointer on the screen does not move. If you drag your fingertip along the operation pad from where you first touched it, then the screen moves in the direction you dragged along.
- The center scroll button can be used if you install the accessory "Alps Pointing Device Driver".

Mouse Usage

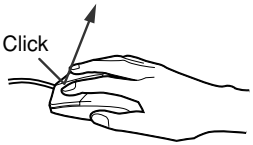
● **Mouse Usage**

Place your hand on the mouse with the fingers on the left and right mouse buttons, then slide the mouse over your desktop or other flat surface. The arrow mark on the screen (mouse pointer) moves in the same direction as the mouse. Try moving the mouse while watching the screen.

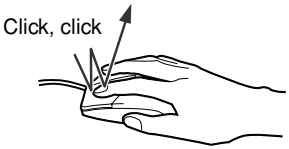


● **Button Operation**

- **Click**
  Clicking means to tap the left mouse button once.
  Also, clicking the right button once is called a “right click”.

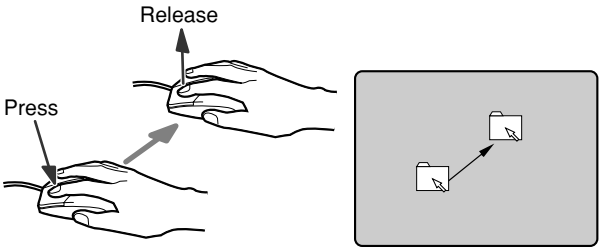


- **Double-click**
  Double-clicking means to tap the left mouse button twice in a row.



- **Point**
  Pointing means to line up the mouse pointer with a menu or the like. If there are levels under the menu the mouse pointer is on (if ▶ is displayed at the right of the menu), that menu is displayed.

- **Drag**
  While holding down the left button, move the mouse pointer to any position, then release the button.

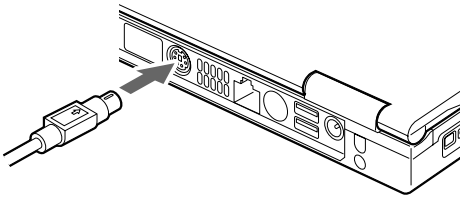


Critical Point

- The above button operations are for when the mouse is set to right-handed operation. The roles of the left and right buttons, the mouse pointer speed, etc. can be set with the “Mouse Properties” window.

PS/2 Mouse

1. **Switch off the power for the computer or put it on standby.**
2. **Connect the mouse.**
   Connect the mouse to the expansion keyboard/mouse connector on the rear of the computer. Face the connector with the stamped arrow upward.



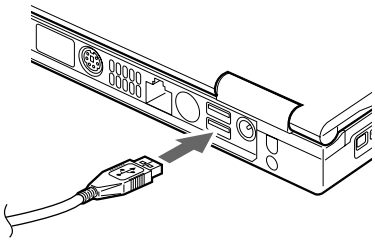
Critical Point

- On models with no internal pointing device, always connect the mouse before switching on the power.
- Set such parameters as simultaneous use with the internal pointing device and hot plug functions in the BIOS setup “Keyboard/mouse settings”.

USB Mouse

You can connect a USB mouse to a USB connector on this computer.

1. **Connect the mouse to the computer’s USB connector.**
   Line up the connector shapes, then insert straight in.



Critical Point

- A USB mouse can be installed or removed with the power for the computer On.
- Connecting a USB mouse does not disable the touch pad. To disable the touch pad, see “Disabling the Touch Pad” below.
- A USB mouse can be connected to either USB connector.

● **Disabling the Touch Pad**

When you connect a USB mouse to this computer, both the touch pad and the USB mouse are enabled. To disable the touch pad when a USB mouse is connected, set the following.

1. **Set the BIOS setup "Internal Pointing Device" item to ""Manual Setting"".**

2. **When you start Windows, press the "Fn" and "F4" keys at the same time.**
   Each time these keys are pressed, the touch pad toggles between enabled and disabled. When the touch pad is enabled "Internal pointing device: Enabled" is displayed; when the touch pad is disabled "Internal pointing device: Disabled" is displayed.

IMPORTANT

- Always connect a mouse if you are going to disable the touch pad.

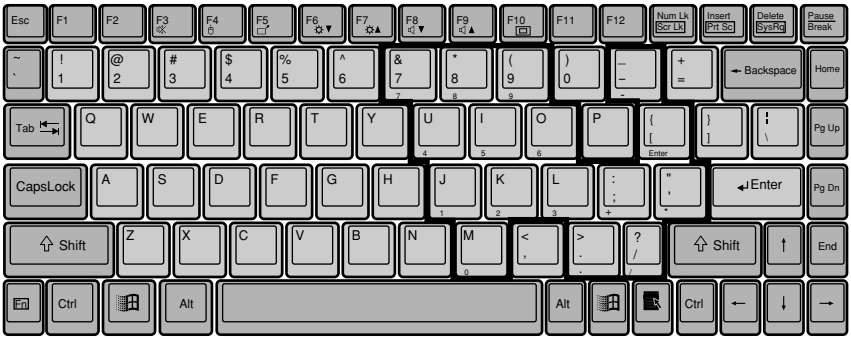
Critical Point

- Even if you press the "Fn" + "F4" keys at the same time and disable the touch pad, after the computer is restarted or after resuming, the touch pad is enabled. If you want the touch pad disabled again, you must press the "Fn" + "F4" keys again.
- If the "BATTERYAID (2/2)" tab is not displayed on the Windows 2000 "Power Option Properties", the message in Step 2 is not displayed on the screen. (Hotkey Utility for XP)
- If the BIOS setup "Internal pointing device" item is set to "Always disable", the touch pad is always disabled.

11. Keyboard

The keyboard is a device for inputting data and instructions to the computer and having it execute them.

Control keys
Character keys



Numeric Keypad Mode

The mode in which some of the character keys are used as numeric keys (with a key layout that makes numeric input easier) instead of their normal functions is called numeric keypad mode. The keyboard is switched to numeric keypad mode with **[Num Lk]**. (In numeric keypad mode, 1 is displayed on the status indicator LCD.) The keys surrounded by thick lines in the diagram above become the numeric keypad. The numbers input with these keys are printed in front of each key.

Critical Point

- When the separately sold numeric keypad is connected, if you press **[Num Lk]** to put the computer into numeric keypad mode, the keys on the external numeric keypad are enabled, but the numeric keypad section on the keyboard is disabled.

Function Keys

Your LifeBook notebook has 12 function keys, F1 through F12. The functions assigned to these keys differ for each application. You should refer to your software documentation to find out how these keys are used.

The **[Fn]** key provides extended functions for the notebook and is always used in conjunction with another key.

[Fn+F3]: Pressing [F3] while holding [Fn] will toggle the Audio Mute on and off.

[Fn+F4]: Pressing [F4] while holding [Fn] will toggle the touchpad on and off. (This function key combination only works if the BIOS setting for Advanced > Keyboard/Mouse Features > Internal Pointing Device is set to Manual Setting.)

[Fn+F5]: Pressing [F5] while holding [Fn] allows you to toggle between video compensation and no compensation. (Video compensation controls spacing on the display. When it is enabled, displays with less than 1024 x 768 or 800 x 600 pixel resolution will still cover the entire screen.)

[Fn+F6]: Pressing [F6] repeatedly while holding [Fn] will lower the brightness of your display.

[Fn+F7]: Pressing [F7] repeatedly while holding [Fn] will increase the brightness of the display.

[Fn+F8]: Pressing [F8] repeatedly while holding [Fn] will decrease the volume of your LifeBook notebook.

[Fn+F9]: Pressing [F9] repeatedly while holding [Fn] will increase the volume of your LifeBook notebook.

[Fn+F10]: Pressing [F10] while holding [Fn] allows you to change your selection of where to send your display video. Each time you press the combination of keys you will step to the next choice. The choices, in order, are: built-in display panel only, both built-in display panel and external monitor or external monitor only.

SUS/RES switch

Activates the Hibernate/Standby or Shutdown. If you press this button for more than 4 seconds, the system will force to shutdown.

Space key Inputs a single space character.
(This is the long key with nothing written on it at the center of the front of the keyboard.)

[↑][↓][←][→] **(cursor) keys**

Move the cursor.

[Enter] key
Also called the return key or the line feed key. This key inputs line feeds and executes command.

[Ctrl] key
Used in combination with other keys; its functions depend on the application software.

[Shift] key
Used in combination with other keys.

[Alt] key
Used in combination with other keys; its functions depend on the application software.

[Caps Lock] key
To lock the keyboard into caps mode, press this key, pressing this key again ends caps mode.

[Num Lk] (numerical lock) key
Press this key to put the computer into numeric keypad mode.

[Scr Lk] (scroll lock) key
Its functions depend on the application software.

[Print Screen] key
Press this key to make a hard copy of the screen.

[Pause] key
Press this key to pause the screen display.

[Break] key
Its functions depend on the application software.

[Insert] key
Press this key to insert a new character between characters. The new characters are entered at the cursor position.

[Delete] key
Press this key to delete a character. Pressing the Delete key and the Ctrl and Alt keys at the same time resets this computer.

[Home] key
Press this key to move the cursor directly to the head of the row or the head of the document.

[End] key
Press this key to move the cursor directly to the end of the row or the end of the document.

[Pg Up] key
Press this key to switch to the previous screen.

[Pg Dn] key
Press this key to switch to the next screen.

[Back Space] key
Press this key to delete the character to the left of the cursor position.

[Sys Rq] (system request) key
When this key is supported by the application software, this key is used for such functions as resetting the keyboard. Press this key together with the Fn key.

[ ] (Windows) key (only valid for Windows 98 / Windows Me and Windows XP)
Press this key to display the Start menu.

[ ] (Application) key (only valid for Windows 98 / Windows Me and Windows XP)
Press this key to display the shortcut menu for the selected item. This key has the same role as the mouse right click.

12. CDs

Cautions on Handling

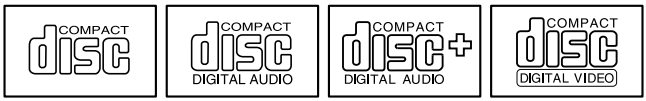
In order to prevent breakdowns, please pay attention to the following points when using the CD drive.

CD Media Precautions

- Do not paste labels or write with a ballpoint pen or a pencil on either side of a CD.
- Do not touch or scratch the data side of a CD.
- Do not bend a CD or place any heavy objects on it.
- If a CD becomes dirty or wet, wipe it gently with a slightly damp cloth from the center to the outside, then dry it gently with a dry cloth.
- Do not let coffee or other liquids get onto CDs.
- Do not store CDs anywhere too hot or too cold.
- Do not store CDs anywhere humid or dusty.

CD-ROM Drive Cautions

- Do not use any CDs that are not circular (for example, star-shaped CDs or card-shaped CDs). They may not be read or written correctly and can cause breakdowns.
- This computer can only use CDs that have one of the following marks. Do not use any CD that has none of these marks. Using such a CD can cause a breakdown.
  CDs with certain of these marks require specific applications in order to be used.

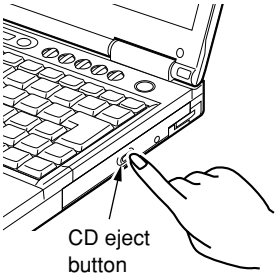


- When using anything other than a CD, please read “To users of the DVD-ROM & CD-R/RW drive and CD-R/RW drive”.

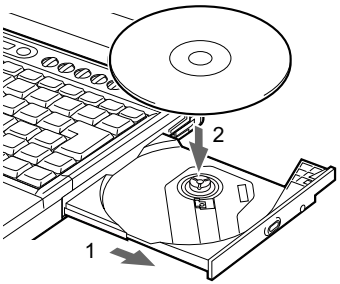
Loading/Removing CDs

This section explains how to load CDs. The procedure for removing CDs is the same.

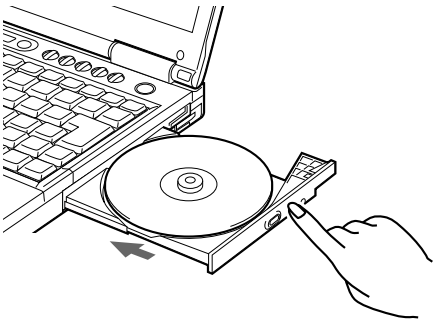
1. **Press the CD eject button.**
   The tray jumps out slightly.



2. **(1) Pull out the tray the rest of the way. (2) Place the CD on the tray.**
   While supporting the tray with one hand, place the CD on the tray with its label facing up and fit the CD onto the tray so that the round projection at the center of the tray snaps into the CD's center hole with a click.



3. **Gently push the tray into the computer.**

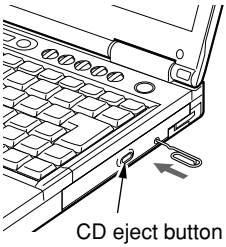


IMPORTANT

- When placing a CD on the tray, be sure to line up the projection at the center of the tray and the hole at the center of the CD and press the CD onto the projection until it snaps into place with a click. If you do not fit the CD onto the tray projection properly, the CD may come loose inside the CD drive, which can damage the tray, the inside of the drive, and the CD.

Critical Point

- When the data is read from it, a CD turns at high speed, so there may be vibration and a sound like rushing air.
- The CD drive for this computer has an electronic lock, so CDs can only be loaded/removed when the computer is running.
- If you use a CD with an off-balance center of gravity, for example a CD with something pasted on it, the CD drive unit may vibrate and not provide the normal level of performance.
- If you can not push the tray all the way back in, pull out the tray until you hear a sound, then push it in again.
- When the power for the computer is Off, the tray may not close. If that happens, switch the power back On, then close the tray.
- If for any reason, the tray does not come out when you press the eject button, double-click the “My Computer” icon, right-click the CD icon in the “My Computer” window, then click “Eject”.
  If the tray still does not come out, slip the tip of a paper clip or the like into the hole at the right of the CD eject button on the front of the CD-ROM drive and pull out the tray.



CD eject button

13. Diskettes

Cautions for Handling

In order to prevent damage, please observe the following points carefully when using diskettes.

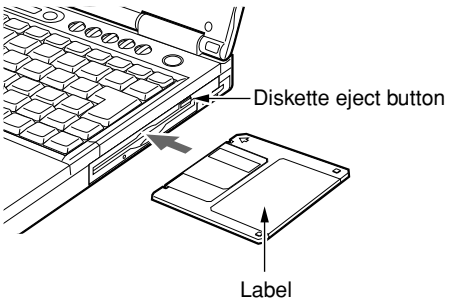
- Be careful not to let coffee or any other liquid get on a diskette.
- Do not open the shutter and touch the disk itself.
- Do not bend a diskette or place any heavy objects on it.
- Keep magnets and other magnetic objects away from diskettes.
- Be careful not to drop diskettes on hard floors.
- Do not store diskettes anywhere too hot or too cold.
- Do not store diskettes anywhere humid or dusty.
- Do not pile one label on top of another. They can jam up in the drive.
- Do not let condensation or water drops get onto diskettes.

Loading/Removing Diskettes

This section explains how to load and remove diskettes.

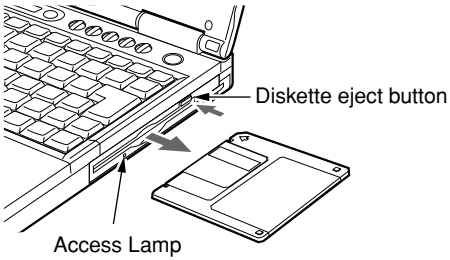
- **Loading**

  With the shutter facing the inside of the drive and the label facing up, insert the diskette until the diskette eject button pops out.



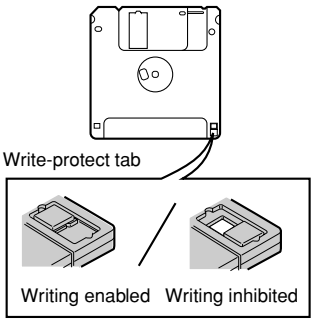
● **Removing**

After making sure that the diskette access lamp is not lit up, press the diskette eject button.



Critical Point

- Use diskettes formatted for DOS/V. Operation of other diskettes is not guaranteed.
- If you eject a diskette while the diskette access lamp is lit up, data on the disk may be destroyed.
- When you want to protect the data written on a diskette from erasure or know that you will not write further data on the diskette, slide the write-protect tab on the diskette so that the hole is exposed (inhibiting writing to the disk). If you later want to write to the disk again, slide the write-protect tab back to its original position covering up the hole.



14. Caring for the Hardware

Caring for the Computer

⚠ WARNING

ELECTRIC SHOCK
In order to prevent electrical shock and injury, always do the following before caring for the computer.
- Switch off the computer power and disconnect the AC adaptor.
- Switch off the power for the printer and any other peripheral equipment and disconnect it from the computer.

Gently wipe the computer clean with a soft, dry cloth.
If the computer is very soiled, wipe it with a soft cloth dipped in water or in neutral cleaning agent diluted with water and well wrung out. When wiping using neutral cleaning agent, follow this by wiping with a soft cloth dipped in water. Also, when wiping the computer, be careful not to let any water get inside the computer. Never use benzene, paint thinner, or other volatile chemical or washcloth embedded with a chemical cleaner.

Caring for the Floppy Disk Drive

When the floppy disk drive is used for a long time, the head (the part that reads and writes the data) becomes dirty. If the head becomes too dirty, the floppy disk drive will stop being able to read and write data recorded on diskettes. Clean the head with a separately-sold cleaning diskette about once every three months.

● **Cleaning the Floppy Disk Drive Head**

1. **Put the cleaning diskette in the drive.**
2. **Access the floppy disk drive from “My Computer”.**
3. **When the message is displayed, click “No”.**
4. **When the diskette access lamp goes out, remove the cleaning diskette.**

SECTION 3

In order to prevent unauthorized usage of this computer, a security button, and other security functions can be used.

1. Security

IMPORTANT

- Security functions cannot provide complete verification and checking of identity. Please understand that Fujitsu Ltd. bears no responsibility whatsoever for damage occurring due to the use of security functions or due to the inability to use them.

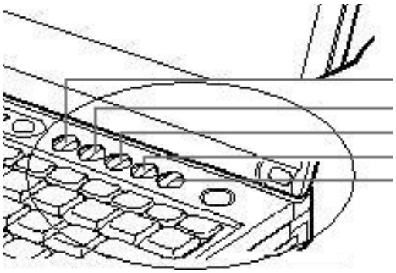
Security Button

If the password is set with the accompanying “Security Button”, when this computer is started or resumed, it can only be used if that password is input. When you switch on the power for this computer or resume this computer and the Security display lights up, input the password.

Critical Point

- For details on the security button, please refer "LifeBook Security/Application Panel".
- When you install the accompanying “Security Button”, you can set the password.

2. LifeBook Security/Application Panel



A unique feature of your LifeBook is the Security/Application Panel that allows you to secure your LifeBook from unauthorized use. The Security/Application Panel also allows you to launch applications with a touch of a button when your system is on. If the security system is activated, upon starting your LifeBook or resuming from suspend mode the security system requires you to enter a password code using the buttons on the Security/Application Panel. After entering a correct password, press enter button, your LifeBook resumes system operation. (Refer diagram above)

Setting up your LifeBook Security Panel

- **Numbered Buttons**
  Use these buttons to enter your password. (Refer diagram above)
- **Enter Button**
  After entering the button strokes, push this button to enter the password into the LifeBook. (Refer diagram above)

Note:
Before you can used these buttons, your system must installed with Security Panel Application which can be found from the Software Driver CD.

Passwords

The user and supervisor password may be set on this LifeBook. A supervisor password is typically the same for all LifeBooks in a working group, office, or company to allow for system management. Individual LifeBooks in a group environment should not use a common password. A password consists of one to five button strokes plus the enter button. A valid stroke consists of pushing one or up to four buttons simultaneously. The following are valid button strokes:

- Pushing [4] by itself
- Pushing [2] and [3] at the same time
- Pushing [1], [2], and [4] at the same time
- Pushing [1], [2], [3], and [4] at the same time

The following are valid passwords. The numbers within braces ({ }) are button strokes using more than one button.

- {[2]+[3]}, [1], [enter]
- [4], [enter]
- {[1]+[3]}, {[2]+[3]+[4]}, [1], [4], [2], [enter]

- **Setting Passwords**
  When shipped from the factory, no passwords are set. You have a choice of having no password or setting a supervisor and user password. You must set the supervisor password before the user password.

Critical Point

- The purpose of supervisor password is to be able to bypass the user password in case the user password is forgotten. The supervisor password alone will not lock the system.
- You have to set both the supervisor and user passwords for the security panel to work.

- **Setting Supervisor Password**
  You must have set a supervisor password before setting any user passwords. The supervisor password can bypass the user password.
  1. Go to the **Start** menu.
  2. Click on **Run**.
  3. Type in FJSECS.EXE, then press [Enter].
  4. Follow the on-screen instructions to set the Supervisor password.

- **Setting User Password**
  1. Go to the **Start** menu.
  2. Click on **Programs**.
  3. Click on **Security Panel Application** and **Set User Password**.
  4. Follow the on-screen instructions to set the User password.

Critical Point

- You may change or remove the supervisor or user password by repeating the steps defined above.

Operating your LifeBook Security/Application Panel

The security lock feature is in effect both when the system resumes from Off or suspend state. You always need to push the buttons to input the user password. Your system will not begin the boot sequence without entering your supervisor/user password.

- **From Off State**
  1. Turn on your system.
  2. When the Security Indicator flashes, enter the password and press Enter button. For example, if the password is 22222, Press Button Number 2 five times and press Enter button. The LifeBook will boot to normal operation.

- **From Suspend State**
  1. Press your Suspend/Resume button.
  2. When the Security Indicator flashes, enter the password and press Enter button. The LifeBook should resume normal operation.

- **Incorrect Password Entry**
  If an invalid supervisor or user password is entered three times in succession, the system will "beep" for about one minute. If a valid password is entered within a minute (while system beeps), the beeping will stop and the LifeBook will resume normal operation. If no or an invalid password is entered while the system beeps, the system will return to its previous locked state (suspend or off) and the Security Indicator will go off. To reactivate the LifeBook after a password failure, you must press the Suspend/Resume button, then enter a correct password.

Critical Point

- Remember the user password you specified on the Security Panel Application. If you forget the password you will not be able to use your computer. The supervisor password can override the user password.

Precautions

- **Opening and Closing the Cover**
  Closing the cover automatically places the LifeBook into suspend mode. Opening the cover does not automatically place the LifeBook into normal operation. Instead, you must enter the proper security password after pushing the Suspend/Resume button.

- **Low Battery Operations**
  If your LifeBook has low battery, pushing the suspend/ resume button only turns on the Security Indicator. Your LifeBook does not unlock, the Security Indicator turns off after one minute. To resume normal operation, first attach a power supply to the LifeBook. Then you may unlock the LifeBook.

Uninstalling the Security Panel Application Software

You have two options when uninstalling the security panel application:

- Uninstall the security panel application software. This will disable all security feature.
- Uninstall the security panel application with password still active. This will not allow any changes to the password.

- **Uninstalling the security Panel Application**
  Remove passwords when User wants no password protection whatsoever and doesn't want to give anybody the utility to set a password on their computer. In this case, if passwords (supervisor, user, or both) are set, the passwords must first be cleared BEFORE removing the application. To clear passwords, follow same procedure in SETTING PASSWORD CODES except this time, select REMOVE, enter current password then click **Next**. When asked to confirm select Yes.

- **Removing Security Panel Application With Password still Active**
  Using this feature will not allow any changes to the password.

Critical Point

- Removing the applications does not remove the password. It simply removes the utility to change/ add/ remove passwords. To change your password you must reinstall the application.

- **User:**
  1. Go to Start Menu, Click on **Control Panel**.
  2. Open **Add/Remove Programs Properties** in the Control Panel.
  3. Select the **Security Panel Application** in the list, and click **Add/Remove**.
  4. When the Confirm File Deletion box appears, click **Yes**.

- **Supervisor:**
  1. Go to **Start** Menu, Click on **Control Panel**.
  2. Open **Add/Remove Programs Properties** in the Control Panel.
  3. Select the **Security Panel Application for Supervisor** in the list, and click **Add/Remove**.
  4. When the Confirm File Deletion box appears, click **Yes**.

- **Reinstalling the Security/Application Panel**
  To reinstall supervisor or user security application, you will need your Software Drivers CD where the programs is located Supervisor. It contains the setup files for supervisor and user security application.
  1. User double-click the Setup SETUPS.EXE file. The Installing Security Panel Application window will appear. Follow the instructions on the screen.
  2. User double-click the Setup SETUP.EXE file. The Installing Security Panel Application window will appear. Follow the instructions on the screen. Supervisor and user passwords can be set by the Windows Software which are FJSECS.EXE and FJSECU.EXE respectively. FJSECU.EXE for user password cannot run without supervisor password. First you need to run FJSECS.EXE to set supervisor password before setting user password. Follow instructions under Setting Passwords.

The LifeBook Security Panel is designed to prevent theft or unauthorized access to your LifeBook. It is important that you remember the password that has been set in your LifeBook otherwise the LifeBook will not be able to operate or resume from suspend.

The LifeBook Security Panel is a high security feature. Should you forget the password that you have set, you are required to return your LifeBook to:

Fujitsu PC Asia Pacific Pte. Ltd.
238A Thomson Road, #24-01/05
Novena Square Tower A
Singapore 307684

Note: The authorised Fujitsu Service Center will not be able to reset the password. Please remember to keep your password in a safe place.
There is a service charge for unlocking the password restricted LifeBook. You will bear all the cost returning the LifeBook to our service centre to unlock the password.

Email: www.fujitsu-pc-asia.com\contactus

Configuring your LifeBook Application Panel

When you start Windows, the LifeBook Application Panel is automatically activated.
As an application launcher, the LifeBook Application Panel is very flexible, giving you a variety of options. To set up the Panel to best suit your needs, we have provided the Application Panel Setup utility that quickly and easily helps you make the most of this valuable feature.

To configure your LifeBook Application Panel with Application Panel Setup:

1. **Click on Start.**
2. **Click on Control Panel.**
3. **Click on Application Panel.**

The Application Panel Setup utility will appear. There are tabs that correspond to the application buttons on the LifeBook Application Panel. When you receive your notebook, these buttons are configured to launch specific applications. Below is the example of applications associated with each button.

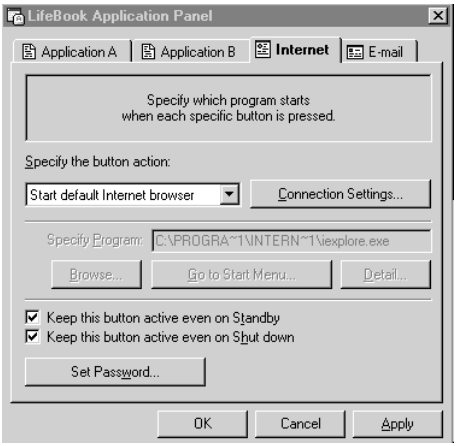
Label	Button Function	Default Application
1	Application A	Notepad
2	Application B	Calculator
3	Internet	Internet Explorer
4	E-Mail	Outlook Express/*others email application

Critical Point

- The tabs in Application Panel Setup may not be in the same order as the buttons on your LifeBook notebook. Please carefully select the tab you wish to change.

To change an application associated with the Application A, Application B, or E-mail buttons, click on the tab for the button you would like to reconfigure – for example, Application A. Click on Browse from Start Menu, scroll down the list of applications, click on the application you wish to launch with this button, and then click OK. The button will now launch the new application.
The Internet tab is different. It comes set to launch your default Windows Internet browser, (Internet Explorer, unless changed.) In order to reconfigure it to launch another program follow these easy steps:

1. **Click on Other from the Internet browser box.**
2. **Click on Browse from Start Menu.**
3. **Scroll down the list of applications, and the click on the application you wish to launch with this button.**
4. **Click OK.**



The button will now launch the new application. If you want to return to launching your Windows default Internet browser with this button, you need only click on “Default Internet Browser” from the Internet browser box. Be aware that you will erase the settings for the “other application”. If you wish to go back to launching the “other application” from this button, you will need to reconfigure it as described above.
When you have finished with Application Panel Setup click on OK, and the new settings will take effect. You can reconfigure your LifeBook Application Panel as often as you like.

Critical Point

- The Internet or E-mail buttons can be configured to launch any application you wish, not just an Internet browser or e-mail program.

Enabling/disabling Application Launcher button (Select Models Only)
At the bottom of each application setup page are two selectable options. The first will “Keep this button active even on Standby”, and the second will “Keep this button active even on Hard Drive Timeout”. You can enable/disable either or both of these functions simply by check or unchecking the check Box.

Configure your E-mail Account Settings

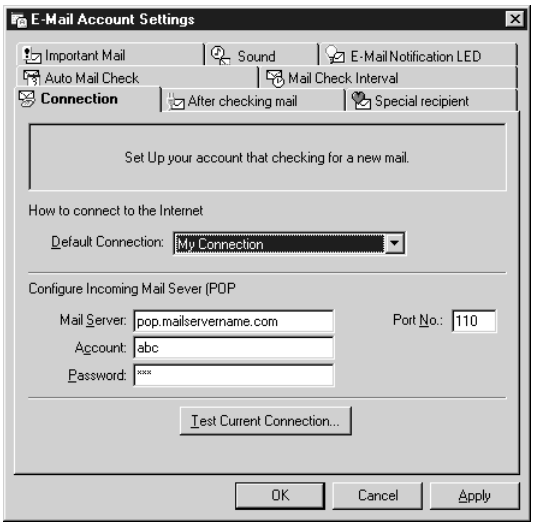
Critical Points

- The E-mail Notification LED is available on select LifeBook notebook models only.
- To use the E-mail LED notification, you must have access to a POP3 Server with no Security Password Authentication. Contact your service provider to determine if they support POP3 without Security Password Authentication.

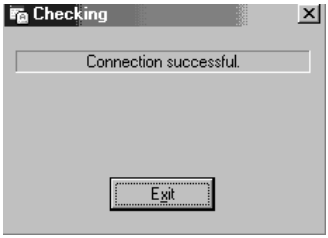
Connection

To configure the E-mail Account Settings:

1. **Click on Start.**
2. **Click on Control Panel.**
3. **Click on Application Panel.**
4. **Click on the E-Mail tab.**
5. **Click on E-Mail Account Settings...**
6. **The E-Mail Setup screen appears. Choose the type of connection: LAN or Dial Up.**



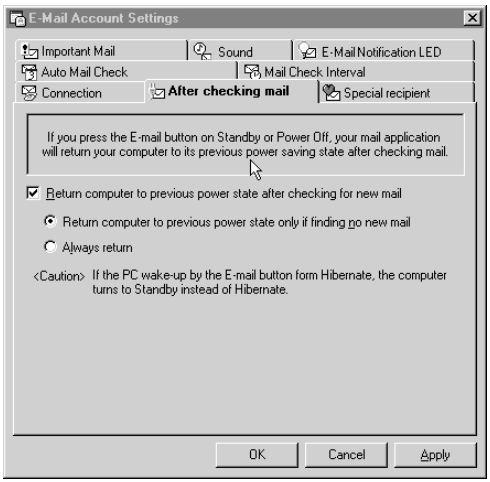
- If LAN: Click on LAN. Enter the POP3 Server name, your account name and password for that account. Consult your Service provider if you do not know or are unsure of the information requested.
- If Dial Up: Click on Dial Up. Choose the Dial up configuration (as previously set in Dial Up Networking) you wish to retrieve mail from. Enter the POP3 Server name, your account name and password for that account. The account name and password should be the same information you entered in the Dial Up configuration. After all the information has been entered, test the connection by clicking on "Testing connection with current setting". If an error occurs, check the settings and information on Dial Up Network and E-mail LED notification.



After the setup (Dial Up Networking/E-mail) is completed, you are ready to retrieve mail. When you press the E-mail button, your system will establish connection with your provider, check for and retrieve new mails, terminate the connection.

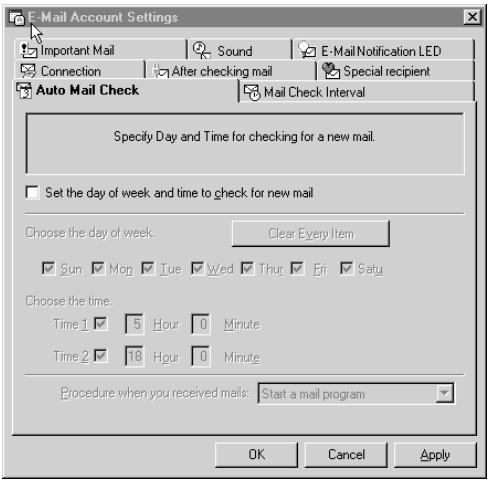
To configure After checking mail

This setting let you set your computer to return back to the previous power saving state after checking mail.



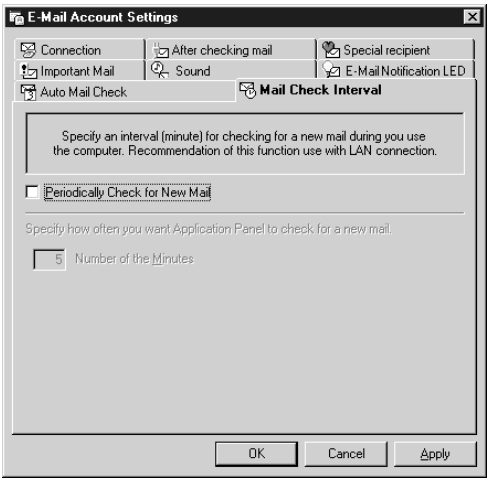
To configure Auto Mail Check

This function allow you to specify day and time for checking new mail. Only applicable when the PC stays Standby.



To configure Mail Check Interval

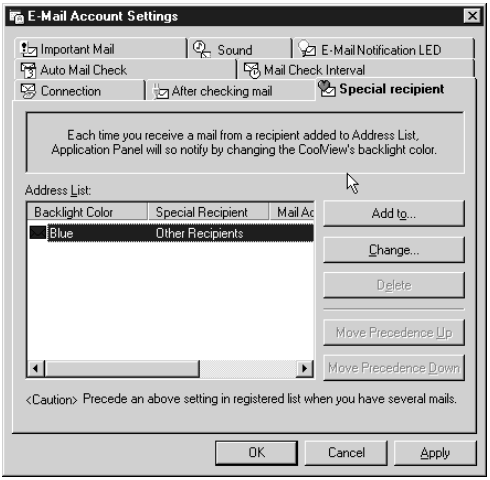
This function allow you to specify an interval (minutes) for checking for a new mail during you use the computer. Recommendation of this function use with LAN connection.



To configure Special recipient

This function allow you to add a special recipient on the Address List.

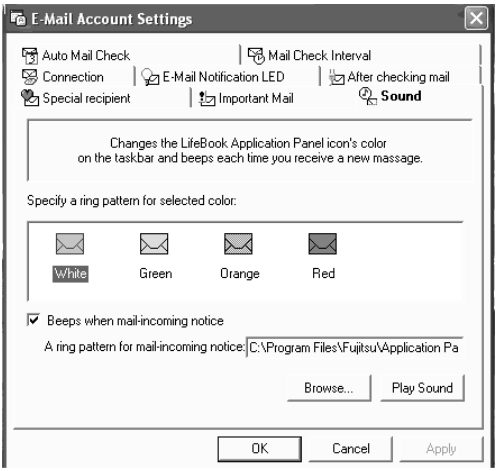
You have to specify from the Mail Check Interval to check the check box of Periodically check for New Mail from the menu Mail Check Interval.



There is an icon like envelop appear on the taskbar. When you received the email from the special recipients that you configure.

To configure Important Mail (Only applicable for CoolView Panel model)
This function allow you to change the icon color on the taskbar to notifies you that an important mail comes.

To configure Sound
This allow you to change the LifeBook Application icon's color on the taskbar and beeps each time you receive a new message.



Desktop Control Panel

Your LifeBook notebook includes a CD Player control panel. You may use this panel to operate the Disc Player.

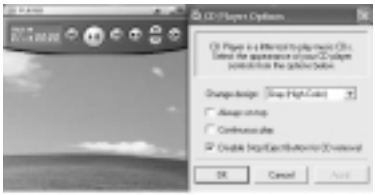
To use the desktop control panel:

1. **Click on Start.**
2. **Click on All Programs.**
3. **Click on LifeBook Application Panel.**
4. **Click on Display CD Player.**

The CD Player will appear in the upper left corner of your screen.
To close the panel, click on the "x" button. To minimize the panel, click on the "-" button.

You can select from four appearances for your CD Player. Simply double click on the track display area of the panel, and a menu will appear which will allow you to select from a pull down menu. On the CD Players Options menu box, you have an options to select : Always on top, Continuous play and Disable Stop/Eject Button from the CD removal. If you click on "Always on top" the desktop controls will always be seen on your screen, no matter what other application you are running. If you click on "Continuous Play", your Disc Player will automatically start over at the beginning as soon as it finishes the last track. By default the Eject Button is disable from the CD Player Options. Once you click the Eject button from the CD Player, the drive will not eject. If you want the Eject Button to be function, uncheck this options.

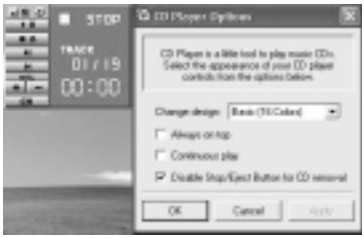
You can change the CD Player design by selecting the setting from the pull down menu from the CD Player options.



Grey (High Color)

Circle (High Color)

Stick (High Color)



Basic (16 colors)

You can move the CD Player to anywhere on your desktop. Drag it by clicking on the track number display, holding it down, and dragging the control panel.
When you have placed it where you would like, release the mouse button.

Critical Points

- If you have your display set to 256K colors the basic display will appear no matter which one you select. You will need to set your display colors to more than 256K in order to select other display appearances.
- When you close the Disc Player's desktop control panel, it will stop the audio Disc Player.

Precautions

- LifeBook Application Panel uses the date and time settings of your LifeBook notebook. If the date and time are off, you can adjust this setting in the Windows Control Panel.
- If you insert an audio CD which has both audio and data tracks into the Disc Player, the Disc Player may fail to play the first audio track.
- The Volume Up, Volume Down and Mute controls for the Disc Player desktop control panel adjusts the volume of the CD audio line only. It does not adjust your notebook's master software volume control or the manual volume on the LifeBook notebook.
- The Disc Player desktop control panel is designed to be displayed in High Color (16-bit) or in True Color (24-bit or more). If you have your notebook's display set for 256 colors or less, the Disc Player control panel will display in a "basic" mode.

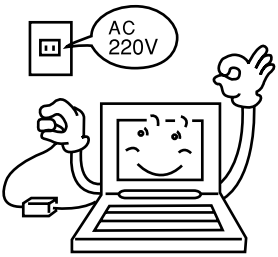
3. When This Happens

When you are having trouble with this computer, there is something you think is strange, or there is something you want to do, but do not know how. This section is divided into related items.

● The power does not come on.

Checkpoint	Cause and Solution
Is the AC adaptor connected?	When using this computer for the first time after purchase, the battery is not yet charged, so you must connect the AC adaptor and switch on the main switch.
Is the main switch switched on?	If the main switch is not switched on, the power will not come on even if the SUS/RES switch is pressed.
Is the battery charged?	If a beep is heard when the main switch is turned on, then the battery is running low (LOW BATTERY). Connect the AC adaptor.
Has the computer been left unused for a long time?	When using the computer for the first time after leaving it unused for a long time, connect the AC adaptor and switch on the main switch to switch on the power.

● Nothing displayed on the LCD panel

Checkpoint	Cause and Solution
Is anything displayed on the status indicator LCD?	Connect the AC adaptor and switch on the main switch.
Is ⏻ displayed on the LCD panel? 	• **Displayed** Adjust the brightness and darkness with the brightness and contrast controls. • **Flashing** Press the SUS/RES switch to put the computer into operating mode. • **When the icon is off on the status indicator LCD.** When the computer runs by the battery power, check the battery status if it is sufficiently charged for operation or not. If it is not charged, connect the AC adaptor and charge it. If you are already using this computer with the AC adaptor connected, check that it is correctly plugged into the power socket and into the computer.

Checkpoint	Cause and Solution
Have you been pressing any of the keys?	On this computer, if the power management functions are set and no key is pressed for a certain period of time, the CPU stops and the LCD panel backlight goes out. (In this state, pressing any key lights up the backlight again.) If the computer stops too frequently, change the BIOS setup settings.
Is it set to output to the CRT?	Switch over to the LCD display with the **[Fn]** + **[F10]** keys.

● **LCD panel hard to read.**

Checkpoint	Cause and Solution
Did you adjust the brightness?	Adjust the luminance of the LCD's backlight with the **[Fn]** + **[F6]** keys or **[Fn]** + **[F7]** keys on the keyboard.

● **Battery is not charged.**

Checkpoint	Cause and Solution
Is the AC adaptor connected?	Check that the AC adaptor is correctly plugged into the power socket and into the computer.
Is the battery overheated (The ➡ on the LCD display flashes.)?	If the ambient temperature is high and the battery temperature becomes too high during use, the battery protection function may be triggered to stop the charging.
Is the computer too cold (The ➡ on the LCD display flashes.)?	If the battery temperature falls too low, the battery protection function may be triggered to stop the charging.
Was the charging stopped midway?	If you use the computer and disconnect the AC adaptor between the start of charging and the time the ➡ LCD turns off, the battery will not become fully charged, Once you start charging do not remove the AC adapter until the ➡ LCD turns off.

● **The remaining battery charge indicator does not stop flashing.**

Checkpoint	Cause and Solution
Is the battery connected correctly?	Check that the battery is connected correctly. If it is connected correctly, there is an abnormality in the battery pack, so replace the battery pack.
Is the battery low?	Attach the AC adaptor and charge the battery.

● **Floppy disk can not be used.**

Checkpoint	Cause and Solution
Is the floppy disk loaded into the floppy disk drive correctly?	Insert the floppy disk with its label facing up, into the drive shutter and keep inserting firmly until you hear a clicking sound.
Is the floppy disk formatted?	New floppy disks can not be used until they are formatted (initialized). Format the floppy disk.
Is the floppy disk unit securely installed?	Firmly install the floppy disk drive unit.
Are both items of “Floppy disk A” and “Floppy controller” of the BIOS Setup menu set properly?	In the case a floppy disk is used, select “1.44/1.2MB 3.5” for the item “Floppy disk A” and “Use” for the item “Floppy controller”.
Is “Administrator only” selected for the item “Floppy disk access” of the BIOS Setup menu?	In the case a floppy disk is used, select “Accessible at any time” for this item. When a super disk is used, accessibility cannot be controlled by this item.
Is the floppy disk write inhibited?	Set the write protect tab on the floppy disk to the write enable position.
Does it work with a different floppy disk?	If it works with a different floppy disk then the problem floppy disk may be damaged.

● **No sound or minimal sound from speaker.**

Checkpoint	Cause and Solution
Is the volume control correctly adjusted?	Turn the volume control to adjust the volume to a proper level. If volume adjustment with the volume control results in failure, check to see if the sound driver is correctly installed.

● **Can not record from Mic or Line In jack.**

Checkpoint	Cause and Solution
Is the volume adjusted properly?	Turn the volume control to obtain the correct volume. If the line jack is connected to the sound source, then check that connection. If recording still results in failure after the above-mentioned operation and check, activate the item “Recording” of the “Volume Control” and again adjust the volume with it.

● **LCD panel does not close.**

Checkpoint	Cause and Solution
Is something caught in the LCD panel?	Forcing the LCD panel closed can damage it. Check for something caught in the LCD panel. Also, a metal object such as a paper clip can cause a breakdown if it gets caught in between the keys.

● **The power management function is not executed.**

Checkpoint	Cause and Solution
Is Power Savings set to off in the BIOS setup?	Reset the BIOS setup.

● **Message displayed on screen.**

See the message list.

● **Data cannot be read from the CD-ROM drive.**

Checkpoint	Cause and Solution
Is the CD-ROM correctly set?	Set the CD-ROM correctly with its label facing upwards.
Is there any dirt, condensation or water on the CD-ROM?	Wipe it from the center outwards with a dry, soft cloth.
Is the CD-ROM scratched or extremely warped?	Replace the CD-ROM.
Are you using a non-standard CD-ROM?	Use a CD-ROM which conforms to the standards.
Is the CD-ROM drive unit securely installed?	Securely install the CD-ROM drive unit.

● **The CD cannot be ejected from the CD-ROM.**

Checkpoint	Cause and Solution
Is it in operating mode?	The CD can only be ejected when the personal computer main unit is in operating mode because its CD- ROM drive has an electronic lock. Check that the personal computer main unit is in operating mode and press the EJECT button. If for some reason the CD tray does not come out even when you press the EJECT button, insert a clip or something into the hole to the right of the EJECT button and pull the tray out. If the tray doesn't still come out, click the CD-ROM icon in the "My Computer" window with the right button of the mouse and then click "EJECT".

● **Super disk cannot be ejected.**

Checkpoint	Cause and Solution
Is the computer in operation?	Since the super disk drive secures the super disk by the electronic lock, the disk can be ejected only when the computer is in the operation status. If the super disk cannot be ejected for some reason, insert a thin linear wire such as a straightened paper clip or the like into the emergency disk ejecting hole and push it into the depth. The disk will be resultingly ejected from the drive.

4. Care and Maintenance

If you use your Fujitsu LifeBook notebook carefully, you will increase its life and reliability. This section provides some tips for looking after the notebook and its devices.

Caution:
Electrical equipment may be hazardous if misused. Operations of this product or similar products, must always be supervised by an adult. Do not allow children access to the interior of any electrical products and do not permit them to handle any cables.

LIFEBOOK NOTEBOOK

Caring for your LifeBook Notebook

- Your Lifebook notebook is a durable but sensitive electronic device. Treat it with care.
- Make a habit of transporting it in a suitable carrying case.
- Do not attempt to service the computer yourself. Always follow installation instructions closely.
- Keep it away from food and beverages.
- If you accidentally spill liquid on your notebook:

  1. Turn it off.
  2. Position it so that the liquid can run out.
  3. Let it dry out for 24 hours, or longer if needed.
  4. If your notebook will not boot after it has dried out, call your support representative.
- Do not use your LifeBook notebook in a wet environment (near a bathtub, swimming pool).
- Always use the AC adapter and batteries that are approved for your notebook.
- Avoid exposure to sand, dust and other environmental hazards.
- Do not expose your LifeBook notebook to direct sunlight for long periods of time as temperatures above 140°F (60°C) may damage your notebook.
- Keep the covers closed on the connectors and slots when they are not in use.
- Do not put heavy or sharp objects on the computer.
- If you are carrying your LifeBook notebook in a briefcase, or any other carrying case, make sure that there are no objects in the case pressing on the lid.
- Do not drop your LifeBook notebook.
- Do not touch the screen with any sharp objects.

Cleaning your LifeBook Notebook

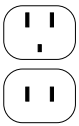
- Always disconnect the power plug. (Pull the plug, not the cord.)
- Clean your LifeBook notebook with a damp, lint-free cloth. Do not use abrasives or solvents.
- Use a soft cloth to remove dust from the screen.Never use glass cleaners.

Storing your LifeBook Notebook

- If storing your notebook for a month or longer, turn your LifeBook notebook off and remove all Lithium Ion batteries.
- Store your LifeBook notebook and batteries separately. If you store your notebook with a battery installed, the battery will discharge, and battery life will be reduced. In addition, a faulty battery might damage your notebook.
- Store your LifeBook notebook in a cool, dry location. Temperatures should remain between -25°C (13°F) and 60°C (140°F).

Travelling with your LifeBook Notebook

- Do not transport your LifeBook notebook while it is turned on.
- Do not check your LifeBook notebook as baggage. Carry it with you.
- Always bring your System Recovery CD that came with your LifeBook notebook when you travel. If you experience system software problems while travelling you may need it to correct any problems.
- Never put your LifeBook notebook through a metal detector. Have your notebook hand-inspected by security personnel. You can, however, put your LifeBook notebook through a properly tuned X-ray machine. To avoid problems, place your notebook close to the entrance of the machine and remove it as soon as possible or have your notebook hand-inspected by security personnel. Security officials may require you to turn your notebook On. Make sure you have a charged battery on hand.

Outlet type	Location
	United States, Canada, parts of Latin America, Japan, Korea, the Philippines, Taiwan
	Russia and the Commonwealth of Independent States (CIS), most of Europe, parts of Latin America, the Middle East, parts of Africa, Hong Kong, India, most of South Asia
	Mexico, United Kingdom, Ireland, Malaysia, Singapore, parts of Africa
	China, Australia, New Zealand

- When travelling with the hard drive removed, wrap the drive in a non-conducting materials (cloth or paper). If you have the drive checked by hand, be ready to install the drive if needed. Never put your hard drive through a metal detector. Have your hard drive hand-inspected by security personnel. You can however, put your hard drive through a properly tuned X-ray machine.
- Take the necessary plug adapters if you're travelling overseas. Check the following diagram to determine which plug adapter you'll need or ask your travel agent.

BATTERIES

Caring for your Batteries

- Always handle batteries carefully.
- Do not short-circuit the battery terminals (that is, do not touch both terminals with a metal object). Do not carry lose batteries in a pocket or purse where they may mix with coins, keys, or other metal objects. Doing so may cause an explosion or fire.
- Do not drop, puncture, disassemble, mutilate or incinerate the battery.
- Recharge batteries only as described in this manual and only in ventilated areas.
- Do not leave batteries in hot locations for more than a day or two. Intense heat can shorten battery life.
- Do not leave a battery in storage for longer than 6 months without recharging it.

Increasing Battery Life

- Power your LifeBook notebook through the AC or optional auto/airline adapater whenever possible.
- If your LifeBook notebook is running on battery power all day, connect it to the AC adapater overnight to recharge the battery.
- Keep brightness to the lowest level comfortable.
- Set the power management for maximum battery life.
- Put your LifeBook notebook in Suspend mode when it is turned on and you are not actually using it.
- Limit your DVD/CD-RW/CD-ROM access.
- Disable the Windows CD automatic insertion function.
- Always use fully charged batteries.
- Eject PCMCIA cards when not in use.

FLOPPY DISKS AND DRIVES

Caring for your Floppy Disks

- Avoid using the floppy disks in damp and dusty locations.
- Never store a floppy disk near a magnet or magnetic field.
- Do not use a pencil or an eraser on a disk or disk label.
- Avoid storing the floppy disks in extremely hot or cold locations, or in locations subject to severe temperature changes. Store at temperatures between 50°F (10°C) and 125°F (52°C)
- Do not touch the exposed part of the disk behind the metal shutter.

Caring for your Floppy Disk Drive

- To clean, wipe the floppy disk drive clean with a dry soft cloth, or with a soft cloth dampened with water or a solution of neutral detergent. Never use benzene, paint thinner or other volatile material.
- Avoid storing the floppy disk drive in extremely hot or cold locations, or in locations subject to severe temperature changes. Store at temperatures between 50°F (10°C) and 125°F (52°C)
- Keep the floppy disk drive out of direct sunlight and away from hating equipment.
- Avoid storing the floppy disk drive in locations subject to shock and vibration.
- Never use the floppy disk drive with any liquid, metal, or other foreign matter inside the floppy disk drive or disk.
- Never disassemble or dismantle your floppy disk drive.

DVD/CD-RW/CDs

Caring for your DVD/CD-RW/CDs

- DVD/CD-RW/CDs are precision devices and will function reliably if given reasonable care.
- Always store your DVD/CD-RW/CDs in its case when it is not in use.
- Always handle DVD/CD-RW/CDs by the edges and avoid touching the surface.
- Avoid storing any DVD/CD-RW/CDs in extreme temperatures.
- Do not bend DVD/CD-RW/CDs or set heavy objects on them.
- Do not spill liquids on DVD/CD-RW/CDs.
- Do not scratch DVD/CD-RW/CDs.
- Do not put a label on DVD/CD-RW/CDs.
- Do not get dust on DVD/CD-RW/CDs.
- Never write on the label surface with a ballpoint pen or pencil. Always use a felt pen.
- If a DVD/CD-RW/CD is subjected to a sudden change in temperature, cold to warm condensation may form on the surface. Wipe the moisture off with a clean, soft, lint free cloth and let it dry at room temperature, DO NOT use a hair dryer or heater to dry DVD/CD-RW/CDs.
- If a DVD/CD-RW/CD is dirty, use only a DVD/CD-RW/CD cleaner or wipe it with a clean, soft, lint free cloth starting from the inner edge and wiping to the outer edge.

Caring for your DVD/CD-RW/CD-ROM Drive

Your DVD/CD-RW/CD-ROM drive is durable but you must treat it with care. Please pay attention to the following points:

- The drive rotates the compact disk at a very high speed. Do not carry it around or subject it to shock or vibration with the power on.
- Avoid using or storing the drive where it will be exposed to extreme temperatures.
- Avoid using or storing the drive where it is damp or dusty.
- Avoid using or storing the drive near magnets or devices that generate strong magnetic fields.
- Avoid using or storing the drive where it will be subjected to shock or vibration.
- Do not disassemble or dismantle the DVD/CD-RW/D-ROM drive.

PC CARDS

Caring for your PC Cards

PC Cards are durable, but you must treat them with care. The documentation supplied with your PC Card will provide specific information, but you should pay attention to the following points:

- To keep out dust and dirt, store PC Cards in their protective sleeves when they are not installed in your notebook.
- Avoid prolonged exposure to direct sunlight or excessive heat.
- Keep the cards dry.
- Do not flex or bend the cards, and do not place heavy objects on top of them.
- Do not force cards into the slot.
- Avoid dropping cards, or subjecting them to excessive vibration.

5. Glossary

AC Adapter
A device which converts the AC voltage from a wall outlet to the DC voltage needed to power your notebook.

Active-Matrix Display
A type of technology for making flat-panel displays which has a transistor or similar device for every pixel on the screen.

APM
Advanced Power Management.

Auto/Airline Adapter
A device which converts the DC voltage from an automobile cigarette lighter or aircraft DC power outlet to the DC voltage needed to power your notebook.

BIOS
Basic Input-Output System. A program and set of default parameters stored in ROM which tests and operates your notebook when you turn it on until it loads your installed operating system from disk. Information from the BIOS is transferred to the installed operating system to provide it with information on the configuration and status of the hardware.

Bit
An abbreviation for binary digit. A single piece of information which is either a one (1) or a zero (0).

bps
An abbreviation for bits per second. Used to describe data transfer rates.

Boot
To start-up a computer and load its operating system from disk, ROM or other storage media into RAM.

Bus
An electrical circuit which passes data between the CPU and the sub-assemblies inside your notebook.

Byte
8 bits of parallel binary information.

Cache Memory
A block of memory built into the micro-processor which ins much faster to access than your system RAM and used in specially structured ways to make your overall data handling tine faster.

CardBus
A faster, 32-bit version of the PC Card interface which offers performance similar to the 32-bit PCI architecture.

CD-ROM
Compact disc read only memory. This is a form of digital data storage which is read optically with a laser rather than a magnetic head. A typical CD-ROM can contain about 600MB of data and is not subject to be crashing into the surface and destroying the data when there is a failure nor to wear from reading.

CMOS RAM
Complementary metal oxide semiconductor random access memory. This is a technology for manufacturing random access memory which requies very low level power to operate.

COMM Port
Abbreviation for communication port. This is your serial interface connection.

Command
An instruction which you give your operating system. Example: run a particular application or format a floppy disk.

Configuration
The combination of hardware and software that make up your system and how it is allocated for use.

CRT
Cathode Ray Tube. A display device which uses a beam of electronic particles striking a luminescent screen. It produces a visual image by varying the position and intensity of the beam.

Data
The information a system stores and processes.

DC
Direct current. A voltage or current that does not fluctuate periodically with time.

Default Value
A pre programmed value to be used if you fail to set your own.

DIMM
Dual-in-line memory module.

LAN
Local Area Network. An interconnection of computers and peripherals within a single limited geographic location which can pass programs and data amongst themselves.

LCD
Liquid Crystal Display. A type of display which makes images by controlling the orientation of crystals in a crystalline liquid.

Lithium ion Battery
A type of rechargeable battery which has a high power-time life for its size and is not subject to the memory effect as Nickel Cadmium batteries.

LPT Port
Line Printer Port. A way of referring to parallel interface ports because historically line printers were the first and latter the most common device connected to parallel ports.

MB
Megabyte.

Megahertz
1,000,000 cycles per second.

Memory
A repository for data and applications which is readily accessible to your notebook CPU.

MHz
Megahertz.

MIDI
Musical Instrument Digital Interface. A standard communication protocol for exchange of information between computers and sound producers such as synthesizers.

Modem
A contraction for MOdulator-DEModulator. The equipment which connects a computer or other data terminal to a communication line.

Monaural
A system using one channel to process sound form all sources.

MPU-401
A standard for MIDI interfaces and connectors.

NTSC
National TV Standards Commission. The standard for TV broadcast and reception for the USA.

Operating System
A group of control programs that convert application commands, including driver programs, into the exact form required by a specific brand and model of microprocessor in order to produce the desired results from that particular equipment.

Parallel Port
A connection to another device through which data is transferred as a block of bits simultaneously with a wire for each bit in the block and with other wires only for control of the device not for transfer of data.

Partition
A block of space on a hard drive which is set aside and made to appear to the operating system as if it were a separate disk, and addressed by the operating system accordingly.

PCMCIA
PCMCIA is trademark of the Personal Computer Memory Card International Association. The Personal Computer Memory Card International Association is an organization that sets standards for add-in cards for personal computers.

Peripheral Device
A piece or equipment which performs a specific function associated with but not integral to a computer. Examples: a printer, a mode, a CD-ROM.

Pitch (keyboard)
The distance between the centers of the letter keys of a keyboard.

Pixel
The smallest element of a display, a dot of color on your display screen. The more pixels screen. The more pixels per area the clearer your image will appear.

POST
Power On Self Test. A program which part of the BIOS which checks the configuration and operating condition of your hardware whenever power is applied to your notebook. Status and error messages may be displayed before the operating system is loaded. If the self test detects failures that are so serious that operation can not continue, the operating system will not be loaded.

Disk
A spinning platter of magnetic data storage media. If the platter is very stiff it is a hard drive, if it is highly flexible it is a floppy disk, if it is a floppy disk in a hard housing with a shutter it is commonly called diskette.

Disk Drive
The hardware which spins the disk and has the heads and control circuitry for reading and writing the data on the disk.

Diskette
A floppy disk in a hard housing with a shutter.

DMA
Direct Memory Access. Special circuitry for memory to memory transfer of data which do not require CPU action.

DMI
Desktop Management Interface. A standard that provides PC management applications with a common method of locally or remotely querying and configuring PC computer systems hardware and software components, and peripherals.

DOS
Disk Operating System (MS-DOS is a Microsoft Disk Operating System).

Driver
A computer program which converts application and operating system commands to external devices into the exact from required by a specific brand and model of device in order to produce the desired results from that particular equipment.

ECP
Extended Capability Port. A set of standards for high speed data communication and interconnection between electronic devices.

ESD
Electro-Static Discharge. The sudden discharge of electricity form a static charge which has built-up slowly. Example: the shock you get from a doorknob on a dry day or the sparks you get form brushing hair on a dry day.

Extended Memory
All memory more than the 640KB recognized by MS-DOS as system memory.

FCC
Federal Communication Commission.

Floppy Disk
A spinning platter of magnetic data storage media which is highly flexible.

GB
Gigabyte.

Hard drive
A spinning platter of magnetic data storage media where the platter is very stiff.

Hexadecimal
A decimal notation for the value of a 4 bit binary number. (0-9, A, B, C, D, E, F) Example: 2F in hexadecimal = 00101111 = 47 in decimal.

I/O
Input/Output. Data entering and leaving your notebook in electronic form.

I/O Port
The connector and associated control circuits for data entering and leaving your notebook in electronic form.

IDE
Intelligent Drive Electronics. A type of control interface for a hard drive which is inside the hard drive unit.

Infrared
Light just beyond the red portion of the visible light spectrum which is invisible to humans.

IR
An abbreviation for infrared.

IrDA
Infrared Data Association. An organization which produces standards for communication using infrared as the carrier.

IRQ
Interrupt Request. An acronym for the hardware signal to the CPU that an external event has occurred which needs to be processed.

KB
Kilobyte.

Program
An integrated set of coded commands to your computers telling your hardware what to do and how and when to do it.

PS/2
An IBM series of personal computers which established a number of standards for connecting external devices such as keyboards and monitors.

RAM
Random Access Memory. A hardware component of your notebook that holds binary information (both program and data) as long as it has the proper power applied to it.

RAM Module
A printed circuit card with memory and associated circuitry which allows the user to add additional memory to the computer without special tools.

Reset
The act of reloading the operating system. A reset erases all information stored in RAM.

Restart
See Reset.

Resume
To proceed after interruption. In your notebook this refers to returning to active operation after having been in one of the suspension states.

ROM
Read Only Memory. A form of memory in which information is stored by physically altering the material. Data stored in this way can not be changed by your notebook and does not require power to maintain it.

SDRAM
Synchronous Dynamic Random Access Memory.

Serial Port
A connection to another device through which data is transferred one bit at a time on a single wire with any other wires only for control of the device not for transfer of data.

Shadow RAM
A technique of copying data or applications stored in ROM (Read Only Memory) into RAM (Random Access Memory) for access during actual operation. RAM is much faster to access than ROM, however ROM contents are not lost when power is removed. Shadowing allows permanently stored information to be rapidly accessed.

SMART
Self-Monitoring, Analysis and Reporting Technology (SMART) is an emerging technology that provides near-term failure predictions for hard drives. When SMART is enabled the hard drive monitors predetermined drive attributes that are susceptible to degradation over time. If a failure is likely to occur. SMART makes a status report available so that the LifeBook can prompt the user to back up the data on the drive. Naturally not all failures are predictable. SMART predictability is limited to those attributes which the drive can self-monitor. In those cases where SMART can give advance warning, a considerable amount of precious data can be saved.

SRAM
Static random access memory. A specific technology of making RAM which does not require periodic data refreshing.

Status Indicator
A display which reports the condition of some portion of your hardware. On your notebook this is an LCD screen just above the keyboard.

Stereo (audio)
A system using two channels to process sound from two different sources.

Stroke (keyboard)
The amount of travel of a key when it is pressed from resting to fully depressed.

Suspend
To make inoperative for a period of time. Your notebook uses various suspension states to reduce power consumption and prolong the charge of your battery.

SVGA
Super VGA.

S-Video
Super Video. A component video system for driving a TV or computer monitor.

System Clock
An oscillator of fixed precise frequency which synchronizes the operation of the system and is counted to provide time of day and date.

TFT
Thin Film Transistor - A technology for flat display panels which uses a thin film matrix of transistors to control each pixel of the display screen individually.

UL
Underwriters Laboratories - An independent organization that tests and certifies the electrical safety of devices.

VGA
Video Graphics Array. A video display standard originally introduced by IBM with the PS/2 series of personal computers.

VRAM
Video Random Access Memory. A memory dedicated to video display data and control.

WFM
Wired for Management is Intel's broad-based initiative to reduce the total cost of ownership (TCO) of business computing without sacrificing power and flexibility.

Write Protect
Prevent alteration of the binary state of all bits in a storage media. Example: all information on a device such as a floppy diskette; a block of space in a storage media such as partition of a hard drive; a file or directory of floppy diskette or hard drive.

XGA
Extended VGA.

Zip Drive
A 100MB read/rite removable media disk drive.

Zoomed Video
A PC Card port which allows notebook PCs to deliver full screen broadcast quality video through third party PC Cards, including TV tuners, video capture, and MPEG full-motion video.