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DECLARATION OF CONFORMITY according to FCC Part 15

This device complies with Part 15 of the FCC Rules. 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).

# **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 dialling. It is strongly recommended that pulse dialling 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

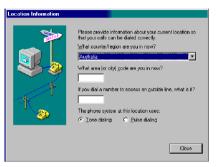
The default modem setting in Windows 98 / Windows Me operating system is United States of America. If you are residing in Australia or New Zealand, please choose the appropriate country where you are located.

The Modem will only operate with Tone Dialing; Selection of Pulse dialing is not possible.

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



# 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.

lcon	Meaning
	Incorrect handling or ignoring this warning can cause a dangerous situation that could result in death or severe injury.
<b>A</b> 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
Â	The $\Delta$ symbol indicates a warning or caution. The symbol inside the $\Delta$ 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, [ $\rightarrow$ ] key

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

Examples: [Ctrl] + [F3] keys; [Shift] + [ 1 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
<b>Critical Points</b>	Indicates a point necessary for correctly operating the hardware or software.
Column	Gives the meaning and brief explaination of a term.
$\rightarrow$	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  $\uparrow$ , 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<sup>®</sup> Windows<sup>®</sup> 98 operating system" is written as "Windows 98". "Microsoft<sup>®</sup> Millennium<sup>®</sup> Edition operating system is written as "Windows Me" "Microsoft<sup>®</sup> MS-DOS<sup>®</sup> operating system Version 6.2/V" is written as "MS-DOS". "Microsoft<sup>®</sup> Windows<sup>®</sup> operating system Version 3.1" is written as "Windows 3.1". "Microsoft<sup>®</sup> Windows NT<sup>®</sup> Server network operating system Version 3.5" and "Microsoft<sup>®</sup> Windows NT<sup>®</sup> Workstation operating system Version 3.5" are both written as "Windows NT 3.5". "Microsoft<sup>®</sup> Windows NT<sup>®</sup> Server network operating system Version 3.51" and "Microsoft<sup>®</sup> Windows NT<sup>®</sup> 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, quick point IV operation methods, connector box handling, 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.

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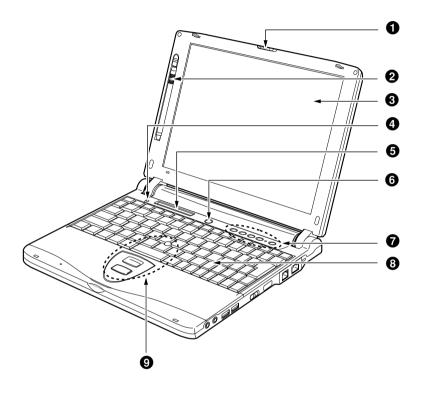
Index

# SECTION



# 1. Names of the Parts and their Functions

Front Side of the PC Main Unit



#### Latch

This latch locks the liquid crystal display (LCD) against unintended opening. Unlock it to open the LCD.

#### Pen

A pen for the use in operation on the Touch Panel is supplied for some models.

#### 3 Liquid Crystal Display (LCD)

Displays the screen of this PC. A Touch Panel is attached on the LCD display for some models.

### Critical Point-

#### Characteristic of LCD

The following natures are characteristic to LCD and you must not interpret them as defects.

- The TFT color liquid crystal display (LCD) of this PC has more than 2.35 million pixels or dots (in 1024 x 768 resolution), or 1.44 million pixels or dots (in 800 x 600 resolution) through the utilization of high-level technology. Because of this fact, the display may contain some unlit or continuously lit dots.
- The color tone of the LCD of this PC may differ among the units. And temperature change and other cause may result in some uneven color tone.

#### **4** Cover close switch

This switch is used to suspend/resume the function of this PC unit and to turn off the LCD back light when you close or open the LCD display.

## **5** Status Indicator LCD

This LCD displays the status of this PC.

#### **6** SUS/RES Switch

This switch is used to put the PC into suspend mode and to resume working.

#### Security / One-touch Buttons

These buttons are used to set/reset security lock, password input during power on of the PC unit, application start-up, incoming E-mail receiving and other functions.

#### **Critical Point-**

- Do not turn the MAIN switch Off when you use One Touch Button.
- Be sure to keep pressing the One Touch Button until you confirm the application starts up.

#### 8 Keyboard

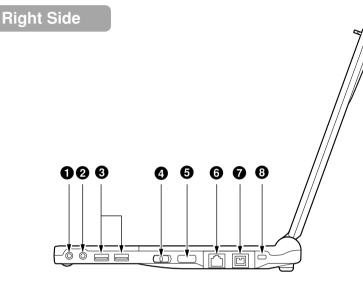
You can input characters and give commands to the PC unit through this device.

#### **Critical Point**

- You may experience feedback noise when you use minus-one music software and other software that uses simultaneously the microphone and speakers. In this case, adjust the sound volume level or use a headphones or an external microphone available in stores.
- Do not close the LCD when you use the built-in microphone to avoid feedback noise.
- The recorded sound from the built-in microphone may not clear when the distance or the direction of the sound source is not appropriate. We recommend you to use an external microphone to record sound clearly.

#### **9** Quick Point IV

Quick Point IV allows you to control the mouse pointer.





# AUTION-



#### HEARING LOSS

Minimize the volume level on your PC before you connect devices to the headphones jack or the mic-in jack, or it may damage devices or cause harmful effects on your hearing by noise.

#### Headphones Jack

It is the terminal to connect a headphones available in the market (3.5-mm mini plug type). However, you cannot use some headphones if its type is not compatible. Please check its connectivity before purchase.

# A CAUTION-



#### **HEARING LOSS**

Be careful not to use a headphones at excessive volume level, or it might give adverse effect to your audibility.



#### **HEARING LOSS**

Do not turn on or off the power switch while you are wearing a headphones, or it might give adverse effect to your audibility.

#### **2** Mic-in Jack

This is a terminal for connecting a third party's microphone to enable recording mono audio sounds. (It enables to connect a small plug of 3.5 mm-external diameter.) Note that some types of microphone such as Dynamic Mic cannot be used. Make sure to confirm that a microphone can be used with your PC before you purchase it.

#### **3** USB Connector

This connector is used to connect USB-compliant peripheral devices such as FDD unit (USB) and a printer which enables USB connection. Two ports are available. USB-compliant peripheral device can be connected to either of them.

#### 4 MAIN switch

This is a main power supply switch to the PC.

#### **5** Infrared Communication Port

This port enables you to make infrared communication.

#### **Critical Point-**

 During making the infrared communication, keep the AC adapter or an external display away from the infrared communication port. It may cause abnormal operations by making noises.

#### 6 Modular Connector

Modular Connector is supplied with some models of this PC product. This connector allows you to connect the PC to a telephone line and enables PC communications and Internet connection through a modular cable.

#### **7** Communication Connector

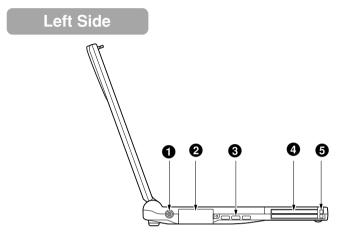
This LAN connector cannot be used when the connector box is attached to your PC. In this case, use the LAN connector on the connector box.

#### Anti-theft Lock

The Anti-theft Lock enables you to connect a third party's cable for theft prevention.

#### **Critical Point-**

This anti-theft lock is compatible with Micro Saver Security System from Kensington Ltd. Product Name: Micro Saver (Security Wire) Product Number: 0522010



#### DC-In Connector

This is the connector to connect the AC adapter.

#### 2 External Display Connector

This connector is used to connect external displays such as optional CRT display. The external display connector cannot be used when the connector box is attached to your PC. In this case, use the external display connector on the connector box.

#### 3 Air Cooling Fan

It is a fan to let out the heat from the inside of the PC unit. It starts rotating when the temperature of the inside of the PC unit is high.

## \Lambda CAUTION-

#### FAILURE

Do not cover the holes over the ventilation fan, or the heat inside the PC unit might cause the machine failure.

#### PC Card Slots

These slots are used to install optional PC Cards. The lower is Slot 1 and the upper is Slot 2.

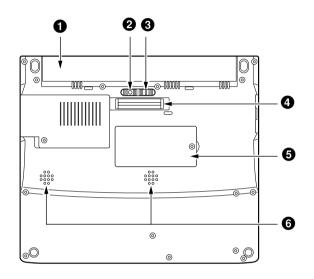
#### **Critical Point-**

- Dummy cards are installed in these PC Card Slots when you purchase this PC unit.
- Some operating system calls Slot 1 as "Slot 0" and Slot 2 as "Slot 1".

#### PC Card Eject Button

Press this button to eject a PC card.

# Bottom Side of the PC Main Unit



#### Battery Pack

A battery pack is installed here.

#### 2 Battery Pack Lock

Battery Pack Lock locks the Battery Pack Removing Button to prevent a battery pack from being removed unnecessarily.

Slide the Battery Pack Lock towards left to unlock the removing button.

#### **3** Battery Pack Removal Button

Slide this button towards left to remove a battery pack.



#### 4 Connector Box Connector

This is the connector to connect the connector box.

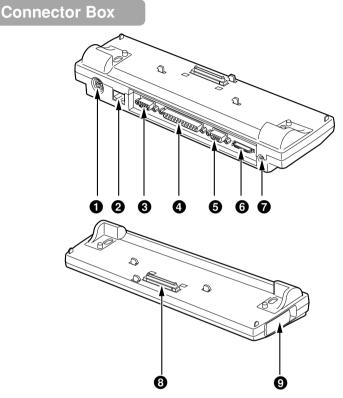
#### **5** Expansion RAM Module Slot

The memory unit of the PC is installed here. You may change the memory unit to increase the memory.

#### 6 Speakers

They output the sound from this PC unit.

# 2. Port Replicator



**SECTION 1** 

#### Extended Keyboard / Mouse Connector

This connector allows you to attach an optional PS/2 keyboard, a numeric keypad, or a mouse.

#### **2** LAN Connector

Some models are equipped with LAN connectors.

#### S External Display Connector

This is the connector to connect a CRT display and other displays sold separately.

#### **4** Parallel Connector

This is the connector to connect a printer and other devices sold separately.



#### **5** Serial Connector

This is the connector to connect the separately sold devices with RS-232C interface.



This is the connector to connect the FDD unit. (Optional item for model have 1.44MB disk dirve)



#### DC-IN Connector

This is the connector to connect the AC adapter.



#### 8 Connection connector

This is connected to the connector box connector on the PC.

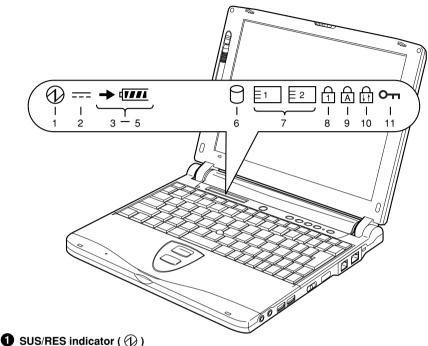
#### **9** Connector Box Detaching Lever

Slide this lever to detach the connector box from your PC.

#### IMPORTANT-

- When you connect peripheral devices to each corresponding connector, make sure the right direction of the connector and insert it straight into the connector.
- When the Connector box is attached, the LAN connector and the external display connector on the PC cannot be used.

# 3. Status Indicator LCD



This indicator appears up when this PC unit is functioning and blinks when the unit is in suspend status.

#### AC adapter indicator ( \_\_\_\_ )

This indicator appears when the power is supplied from AC adapter.

#### 3 Battery installation indicator (

This indicator appears when batteries are installed.

#### ④ Battery charge indicator ( → )

This indicator appears when batteries are charged. And it blinks when battery charge is not in progress because the batteries are too hot or too cold.

#### **5** Remaining battery power indicator ( **1**

This indicator indicates the remaining battery power.

#### **6** Hard disk access indicator ( $\bigcap$ )

This indicator appears when the internal hard disk is accessed. See also POINT on the next page.

## **7** PC card access indicator ( $\begin{bmatrix} 1 \\ 1 \end{bmatrix}, \begin{bmatrix} 2 \\ 2 \end{bmatrix}$ )

This indicator appears when a PC card is accessed. See also POINT on the next page.

#### 8 Num Lock (Numerical Lock) Indicator (

This indicator appears when the keyboard is set to numeric keypad mode. You can set and reset the numeric keypad mode by pressing the [Num Lk] key.

#### **9** Caps Lock Indicator ( A)

This indicator appears when the keyboard is set for all capital letters. You can activate or deactivate the Caps Lock Mode by pressing [CapsLock] key.



#### 

This indicator appears when scroll lock is set to avoid screen scrolling. You can set and reset the scroll lock by pushing down the [Scr Lk] key while pressing down the [Fn] key. The function depends on the application when this indicator appears.



#### **1** Security Indicator ( Ο<sub>Π</sub> )

This indicator appears when security function is on. You must input password if the security indicator blinks when you put on the power of the PC unit.

#### **Critical Point-**

- If you turn off the MAIN SWITCH or operate SUS/RES switch while the hard disk access indicator appears, the data on the hard disk may be corrupted.
- When the MAIN switch is turned off, all of the indication in the status indicator LCD disappears except for during charging.
- Some operating systems call Slot 1 as "Slot 0" and Slot 2 as "Slot 1" on the PC card access indicator.

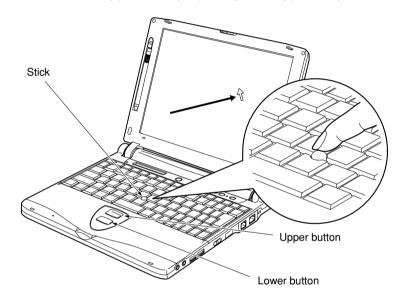
# 4. Pointing Device

# **Quick Point IV**

Quick Point IV is a convenient pointing device which enables you to control mouse pointer with the fingertip. It is composed of a stick located at the center, and two buttons located at the front of the keyboard.

The stick functions as a ball inside a mouse and moves the mouse pointer around on the screen - up, down, left and right as you press it lightly with your finger tip.

The upper button works as the left mouse button and the lower button as the right mouse button and the functions they perform vary depending on the application you are running.

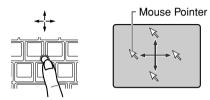


#### Critical Point-

- If you use a mouse that you purchased separately.
- If you choose to use a PS/2 mouse, it is required to make some settings such as simultaneous use with Quick Point IV in the Keyboard/Mouse Setup of the BIOS Setup Utility.
- The surface of the Stick Cap will become slippery after a long use. Replace an old cap with a new rubber cap supplied with the PC. New rubber cap is also available from Fujitsu.

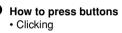
## How to use Quick Point IV

#### Controlling Stick



Put your finger tip on the stick and press it up, down, left or right and the mouse pointer will move accordingly. Try to press the stick while confirming the mouse pointer movements on the screen.

Note that the mouse pointer may move spontaneously but this should not be regarded as a failure. In this case, wait until the mouse pointer stops (about 3 seconds) before you move it.





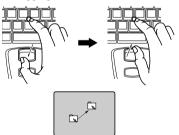
Clicking means pressing the upper button once and releasing it immediately. Pushing the lower button once is the Right Clicking.

Double-Clicking



Double-Clicking means pressing the upper button twice in rapid succession and releasing it immediately.





Dragging means, while keeping the upper button depressed, moving the mouse pointer by pressing the stick to the desired location and releasing the button.

#### **Critical Point**

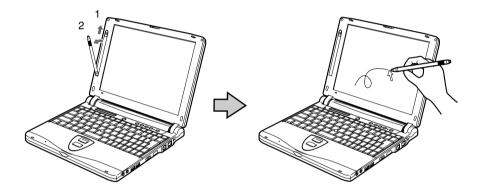
- These button operations described above are the operations when [Right-handed] is selected in the [Mouse Property] dialog box.
- When you continue to move the mouse pointer slowly for several seconds while slanting the Quick Point IV Stick slightly, the mouse pointer may move the other way around, but this should not be regarded as a failure. In this case, wait until the mouse pointer stops.

# Touch Panel (Only for Touch Panel Model)

The Touch Panel is a convenient pointing device which enables you to control the mouse pointer directly on the screen. Use the pen supplied with your PC to operate on the Touch Panel which is attached on the LCD display of the PC. Intuitive and speedy operation is possible by operating the mouse pointer directly on the screen.

Take the pen out. (Store the pen here when it is not in use.)

Move the pen on the screen and then the mouse pointer moves accordingly.



#### **Critical Point**

Do not use anything with a sharp point to operate on the Touch Panel.

- You can use your fingertip to operate on the Touch Panel as well.
- Avoid using anything with a sharp point such as a ball point pen or a pencil or it may damage the display.
- When you use the pen on the Touch Panel, be careful not to touch on it with your fingers. If your finger touches on the panel, the mouse pointer will move accordingly.
- If the pen is damaged or lost, you should purchase new one.

#### How to use Touch Panel

Clicking



Double-Clicking



Dragging



Touch once on the screen lightly and release the pen immediately.

Touch twice in rapid succession on the screen and release the pen immediately.

While pushing the pen lightly on the screen and draw it.

#### **Critical Point**

Other operations

- The following operations can be performed on Touch Panel. Use Quick Point IV for the others: - To open submenu, touch the desired item in the menu.
- To select an icon, press the panel near the desired icon lightly with the pen and drag it onto the icon and the icon will be inverted.
- To right-click on the icon, you can do it in the following ways:
  - Press the [ ] (application) key.
    - Press the panel near the desired icon lightly with the pen and drag it onto the icon. Then press the [
  - Press the [Ctrl] key.
    - There are two ways. One is to touch the icon while pressing the [Ctrl] key and the other is to press the [Ctrl] key once and then touch the icon.

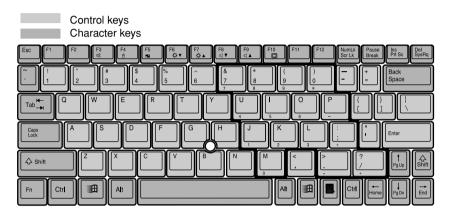
Go to Start Button Menu and click on [Program] > [Fujitsu Touch Panel] > [Touch Panel Setting] and then [Touch Panel Setting] dialog box will appear. Select the functions you want to use by check them and click on OK.

- To right-click on other items, use the Quick Point IV.
- When task bar icon cannot be displayed, operate by using the Quick Point IV.
- Which one of Touch Panel, Quick Point IV, or external PS/2 mouse to be selected to use.
- To use PS/2 mouse that is equipped with a driver such as IntelliMouse<sup>™</sup> from Microsoft, it is required to uninstall the Touch Panel. In order to use Touch Panel again, re-install the Touch Panel driver.

# 5. Keyboard

# Keyboard

The keyboard is the device for giving instructions to the computer, inputting data, and executing. The keys can be divided into two types.



# **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,  $\frac{1}{11}$  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.

# Names of the Main Keys and their Functions

#### [Esc ](escape) key

The usage is determined by the application software. It is often used to return to the previous operation.

#### [F1]-[F12] (function) keys

The usage depends on the application software.

#### [Fn] key

A key unique to this computer; it has the following functions.

[Fn] + [F3]	This switches ON/OFF of the speaker.
	When a pip sounds with this operation, the speaker is on. When nothing sounds, the speaker is turned off.
[Fn] + [F4]	This select to disabled the touch pad mouse when you attached an external mouse.
[Fn] + [F5]	This selects whether or not to use the entire LCD screen for display in text mode.
[Fn] + [F6] [Fn] + [F7]	Turns down the backlight of the LCD. Turns up the backlight of the LCD.

#### **Critical Point-**

Luminance of the backlight of the LCD can be turned up (with [Fn] + [F7] keys) or turned down (with [Fn] + [F6] keys) in three degrees.

[Fn] + [F8] [Fn] + [F9] [Fn] + [F10]	Turn down the internal speaker volume. Turn up the internal speaker volume. Rotates among the three display options: LCD only, CRT only, both LCD
[] · []	and CRT.
[Fn]+SUS/RES	S switch Activates the Save To Disk function.
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.)
[^][↓][←][→] (0	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 the "Caps Lock 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 Alt key.

## [ 1] (Windows) key (only valid for Windows 98/Me and Windows 2000)

Press this key to display the Start menu.

#### [ 🛃 ] (Application) key (only valid for Windows 98/Me and Windows 2000)

Press this key to display the shortcut menu for the selected item. This key has the same role as the mouse right click.

# 6. Turning on the Power

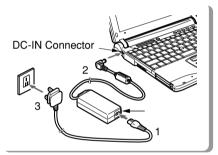
# Notes on Power on the System

- When the power is On, do not carry the PC around, or subject it to shocks or vibration, as you risk damaging your PC.
- If you turn on the power to the PC when it is connected with FDD unit, remove a floppy disk if any is inserted in the drive.

# How to Power on the System

This section explains the normal procedure to turn on the power.

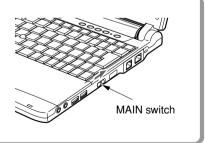
1 Connect the AC adapter to your PC.



(1)Connect the cord of the AC adapter. (2) Connect the adapter to the DC-IN connector

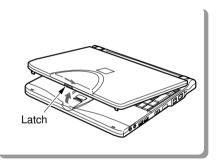
- on the PC unit.
- (3) Connect the plug to a socket.

#### 3 Turn on the MAIN switch of the PC.



Power will be supplied and POST will start. Status indicator LCD such as ( ) will turn On.

2 Open the LCD Display



Press the front latch to unlock and open the LCD Display.

#### **IMPORTANT**-

- Keep the optional FDD unit (USB) or FDD unit away from the AC adapter.
- If the following settings are activated, never close the LCD Display when the power is on. It will prevent the heat radiation from the keyboard and may cause a PC failure.
  - Windows 2000 or Windows 98 / Me In [Power supply option] or [Power management], it is set to [No] for [When the portable computer lid is closed].
  - Windows 95 In the BIOS Setup Utility, [Cover closed suspend] is [Disabled].

#### **Critical Point-**

- POST means Power On Self Test which is a self-diagnosis test to check for abnormalities in the PC. POST starts automatically when you turn on the power and finishes immediately before the operating system starts up.
- Turning off the power during the POST, it will be determined that the POST is aborted. System abortion is counted and if the system aborted three times in a row, an error message appears at the fourth restart. Be sure not to turn off the power during the POST.

# 7. Turning off the Power

## Notes on Power off the System

The following precautions must be observed when switch off the power.

- Be sure to close the oper ating system and w ait until the SUS/RES Indicator ( ①) of Status indicator LCD tur ns off prior to tur ning off the po wer with the MAIN s witch.
- When the system is in Suspend Mode , resume the PC activity first and sa ve the data and close the oper ating system prior to tur ning off the po wer.
- When y ou restart the PC after turning off the power, be sure the power is off for 10 seconds or more.
- Turn off the MAIN s witch when;
  - taking the PC with y ou,
  - connecting or disconnecting per ipher al devices , or
  - the batter y level is low or saving the power.

## How to Power off the System

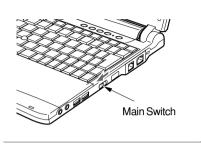
- Windows Me, Windows 98, or Windows 95
  - 1 Go to Start Button Menu and click on Exit Windows. Exit Windo ws dialog bo x appears .
  - 2 For Windows Me, select Exit and click on OK. Verify [Shut do wn the po wer?] for Windo ws 98, and [Shut do wn the computer?] for Windo ws 95 are selected respectively and click on OK or Yes.

The oper ating system will be closed and the po wer will tur n off. Status indicator LCD (  $\bigcirc$ ) will tur n off.

#### **Critical Point-**

- If you do not put the MAIN switch in the Off position after step 2, you should use SUS/RES Switch to turn on your PC.
- If you use the One Touch Button, do not perform the step 3.
- On the screen that appears in step 1, selecting [Restart] or [Restart the computer?] will start up the PC again. Restart means the procedure to erase the information in the memory once and start to read the operating system from a floppy disk or hard disk again.
- With Windows Me and Windows 98, selecting Standby or Suspend on the screen that appears in step 1 will set the PC in Power Saving Mode.

3 Put the MAIN switch in the Off position.



Slide the MAIN switch toward the arrow direction (  $\bigcirc$  side).

#### Windows 2000

- 1 Go to Start Button Menu and click on Shutdown. Shutdo wn Windo ws dialog bo x appears.
- 2 Select Shutdown and click on OK. The po wer will tur n off automatically.

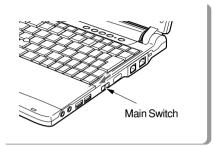
#### **Critical Point-**

- If you do not put the MAIN switch in the Off position after step 2, you should use SUS/RES Switch to turn on your PC.
- On the screen that appears in step 1, selecting Restart will start up the PC again. Restart means the procedure to erase the information in the memory once and start to read the operating system from a floppy disk or hard disk again.
- If you use the One Touch Button, do not perform the step 3.
- On the screen that appears in step 1, selecting Standby or Suspend will set the PC in Power Saving Mode.
- You can follow the steps below as well to turn off the power.
  - 1 Press the [Ctrl] + [Alt] + [Delete] keys simultaneously. Windows Security dialog box will appear.
  - 2 Click on Shutdown. Shutdown Windows dialog box will appear.
  - 3 Select Shutdown and click on OK. The power will turn off automatically.

#### **Critical Point-**

If you do not use your PC after turning off the MAIN switch for a long time, remove the AC adapter and the Battery Pack from the PC. **SECTION 1** 

3 Put the MAIN switch in the Off position.



Slide the MAIN switch toward the arrow direction ( O side).

### **Critical Point-**

If you do not use your PC after turning off the MAIN switch for a long time, remove the AC adapter and the Battery Pack from the PC.

# 8. Resetting

# How to Reset

You should reset the system when a new application is installed or running software activity freezes for some reason.

#### **Critical Point-**

 If you reset the system, all the unsaved data in memory will be lost. Be sure to save necessary data before you reset the system.

#### • Windows Me, Windows 98, or Windows 95

- 1 Go to Start Button Menu and click on Exit Windows. Exit Windo ws dialog bo x appears .
- 2 Select [Restart] or [Restart the computer?] and click on OK or Yes. Your PC will be restar ted.

#### **Critical Point-**

If this restarting procedure doesn't work, follow the procedure below.
 Press the [Ctrl] + [Alt] + [Delete] keys simultaneously.
 Terminate the Program dialog box appears and follow the steps according to the message.

#### Windows 2000

- 1 Go to Start Button Menu and click on Shutdown. Shutdo wn Windo ws dialog bo x appears .
- 2 Select [Restart] and click on OK.

#### Critical Point-

- You can follow the steps below as well to reset.
  - 1 Press the [Ctrl] + [Alt] + [Delete] keys simultaneously. Windows Security dialog box appears.
  - 2 Click on Shutdown. Shutdown Windows dialog box appears.
  - 3 Select [Restart] and click on OK. Your PC will be restarted.

# **SECTION 1**

#### Windows NT

- 1 Go to Start Button Menu and click on Shutdown. Shutdo wn Windo ws dialog bo x appears.
- 2 Select [Restart the computer?] and click on Yes. Your PC will be restar ted.

#### Critical Point-

- You can follow the steps below as well to reset
  - 1 Press the [Ctrl] + [Alt] + [Delete] keys simultaneously.
  - 2 Windows NT Security dialog box appears and then click on Shutdown.
  - 3 Shutdown Computer dialog box appears and then select [Restart after shutdown?] and click on OK. Your PC will be restarted.

# 9. Battery

This PC is capable to supply power from batteries as well as the AC adapter.

# Charging

#### 1. Connect the AC adapter

With the connection of the A C adapter, charging star ts and the battery charge indicator  $(\overrightarrow{I} \rightarrow )$  and the current batter y po wer indicator appear in the status indicator LCD

2. Make sure that the battery charge indicator disappears and disconnect the AC adapter.

#### **Critical Point-**

- Charge battery when you start using this PC after purchase or if you have not charged it for more than 1 month.
- The batter y charge completes when the batter y charge indicator ( →) disappears and the remaining batter y po wer indicator change from b linking ( → ) to appearing ( → ). Take sufficient time for battery recharge to make sure that the battery is fully charged.
- When the remaining battery power is still 90% or more, the unit does not start charging even though the AC adapter is connected. Charging starts when the power is 89% or less.
- When you turn the MAIN switch off, the indication of the status indicator LCD disappears soon after the charge completion.
- The battery charging capability deteriorates when room temperature is too high or too low.
- Battery charging may not begin when battery temperature is too high after usage (
   blinks in this case). However, charging starts when the battery temperature lowers after a while.

# Using PC with Battery

Here is the explanation on how to use the PC with battery.

1 Remove the AC adapter and turn on the MAIN switch.



Slide the MAIN switch to the direction of the arrow (| side). ( $\bigcirc$ ) lights up.

#### Critical Point-

- When the MAIN switch is already turned on, push down the SUS/RES switch.
- When the room temperature is low, the battery operation time length becomes shorter.
- When the battery has been used for a longer period, the battery operation time duration becomes shorter. If you notice that the operation time length becomes extremely short, replace the battery with a new one.

# Checking Remaining Battery Power

You can check the remaining battery power through the remaining battery power indicator in the status indicator LCD when the power is on or while charging is in progress.

#### **Remaining Battery Power Indication**

It means that the remaining batter y po wer is about 100% to about 76%.

- Ŷ
  - It means that the remaining batter y po wer is about 75% to about 51%.



Ŷ

It means that the remaining batter y po wer is about 50% to about 26%.

- It means that the remaining batter y po wer is about 25% to about 13% (It represents 0%) to about 25% of remaining batter y po wer dur ing charging).
- It means low battery status (the remaining batter y po wer is about 12% or less). ( ÷1 blinks.
  - It means that battery is completely e xhausted (The remaining batter y po wer is 0%).

## **Critical Point**

- The remaining battery power indicator ( **11**) may show the different indicator value from the actual remaining battery power depending on the usage environment (temperature condition, battery usage and recharging cycle numbers, etc) because of the characteristic of the battery (lithium ion battery).
- Charging does not start even though the AC adapter is attached when the remaining battery power is 90% or more. Charging starts when the power is 89% or less.

#### Battery Malfunctioning Indicator

( is not charged proper ly.

#### **Critical Point**

• When ( ()) blinks, turn off the power of the PC unit and reinstall the battery. When the blinking persists, the battery is defective. Replace it with a new battery.

# Low Battery Status Indication

This section explains the status indications when the battery is running low and the measures to be taken.

#### Low battery indication

The remaining batter y po wer indicator b links in the status indicator LCD (

#### **Critical Point-**

- Alarm rings when low battery status begins for Windows 95. However, this alarm may not be audible if sound volume level is set low.
- Alarm sound is not audible if speaker is turned off. Speaker is turned On/Off by pushing the [F3] key while pressing down the [Fn] key. A sound like whistle means that the speaker is turned on and silence means that it is turned off.

#### Counter measure against Low Battery Status

#### 1 Press the SUS/RES Button.

When y ou confirm the Low Battery condition, press the SUS/RES Button as soon as possible to set the system in Suspend Mode (inoper able for a period of time). Even if y ou set y our PC in Suspend Mode during oper ation, neither program nor data will be lost.

#### Critical Point-

- If you use Windows 2000, never select [Power Off] setting for [When the PC Power Switch Button is pressed] in [Details] tab of the [Power Option Property]. If the [Power Off] is selected, the power to the PC turns off when you press the SUS/RES Button and then the unsaved data you entered will be lost.
- If you use Windows 98, never select [Shutdown] setting for [When the PC Power Switch Button is pressed] in [Details] tab of the [Power Management Property]. If the [Shutdown] is selected, the power to the PC turns off when you press the SUS/RES Button and then the unsaved data you entered will be lost.

#### 2 Connect the AC adapter.

Connecting the A C adapter starts charging the batter y.

#### Critical Point -

- Reading and writing process on hard disk consumes a large amount of power. If you save data on hard disk in low battery condition, be sure to connect the AC adapter.
- If the PC is left in low battery condition, it automatically suspends its operation. If the system is reading/writing on hard disk or other data storage media, however, it will wait until the process is completed before suspending the operation.
- If you continue to operate the PC in low battery condition, the data you are entering or in saving process may be lost in the worst scenario. Connect the AC adapter immediately or, if you do not have the AC adapter, resume the system first by pressing SUS/RES Button and then shut down the power to the PC.

#### 3 Press SUS/RES Button.

Your PC will resume activity and be ready f or oper ation.

#### **Critical Point**-

- If you use Windows 2000 or Windows 98, the PC is preset to suspend operation automatically when the remaining battery level becomes 3%. Do not change the settings in the following fields under [Dead Battery Alarm] in [Alarm] tab of the dialog box [Power Option Property] or [Power Management Property].
  - [Issue alarm to notify dead battery when the power level reaches the following point.]
  - The following fields in the dialog box [Alarm operation with dead battery] that will appear when you click on [Alarm Operation]
    - [Computer operation after alarm is issued] under [Power Level]
    - [Set Standby Mode or shut down the computer even if there is no response from a program.]

If you use your PC with all these settings selected, the power will be immediately shut down when the battery becomes dead and unsaved data will be lost. It may also lead to a system failure.

# Notes on battery

## \land WARNING-



#### ELECTRIC SHOCK

Battery is v ery sensitiv e. When y ou install or remo ve batter y, be careful not to subject it to shocks by dropping it or otherwise . For safety, do not use the batter y that was subjected to shocks, as it may cause an electr ic shock or a burst.

#### Electric discharge

- Battery contin ues to discharge e ven if the PC is not used after the batter y charging, so we recommend to charge the batter y immediately bef ore y ou use it.
- If you do not use the PC f or a long time (more than one month), remo ve the batter y and store it in a cool place. If the battery is left installed in the PC f or a long time, it will discharge excessively and the life of battery will be shored.

#### Battery Life

- Battery contin ues to age and deter iorate even if the PC is not in use f or a long time. Check the batter y condition at least once a month b y using the PC with batter y po wer source.
- Battery is a consumption product and the batter y charging capacity is reduced as the batter y ages.
- If your batter y is r unning lo w quickly, it is a sign that the batter y is aged.

#### Disposing battery

When y ou dispose a batter y, take measures such as to insulate the batter y ter minals with a tape to prevent shor t-circuit and check with y our local government authority for details regarding disposal of batteries.

#### Prolong actual battery life

Use power saving functions to prolong actual batter y life.

#### • Conditions where actual battery life will be shortened

- Actual batter y life v aries depending on the en vironment temper ature and it may be shor tened in a low temper ature condition.
- Battery charging capacity is reduced as the batter y ages. If your batter y is running lo w quickly, you should replace it with a ne w one.

#### Use the AC adapter when;

- using hard disk or pla ying CDs frequently ,
- using LAN or a modem frequently , or
- restor ing the pre-installed softw are status of the PC when y ou purchased it.

# **Replacing Battery Pack**

This section explains replacing of the battery pack. You should save all the programs and data in hard disk or other data storage media before you replace the battery pack.

## \land WARNING -



#### ELECTRIC SHOCK

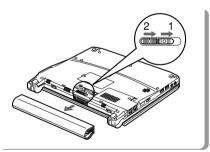
Remove the AC adapter before y ou replace the batter y pack. Do not touch the connectors on y our PC and on the batter y pack, as it may cause an electr ic shock or a PC failure.

#### **Critical Point-**

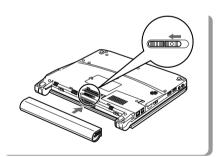
• When a new battery pack is required, you should purchase the Fujitsu original battery pack. (Contact your service provider.)

- 1 Power off your system and disconnect the AC adapter.
- 2 Close the LCD Display and turn the bottom side of your PC up.
- 3 Remove the battery pack.

3 Install a new battery pack.



(1) Slide the Battery Pack Lock to unlock and (2) while sliding the Battery Pack Removing Button, remove the battery pack.



Align the groove on a battery pack with the projection on your PC and install a battery pack, then slide the Battery Pack Lock to lock it.

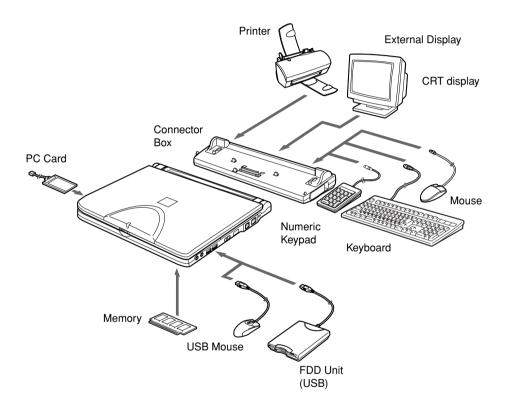


# SECTION 2 1. Option

# Option

#### Available Peripherals

For detailed information on connecting procedures or other topics, refer to the appropriate references or the instruction manual of each device.



\* If you want to start up your PC from the floppy disk that is set in FDD Unit (USB), it is supported only when doing a recovery using the Recovery CD-ROM Start-up Disk. Note that some models don't support FDD Unit (USB).

## **Peripherals**

#### Here is the explanation necessary as your basic knowledge before connecting peripherals.

#### • Some setting up works are required for a certain peripherals.

You cannot use some PC peripherals just by connecting it to a PC. Those peripherals require some setting up work after connection. For example, printers and PC cards require "driver installation" work after connecting them. And memory and other peripherals do not require such setting up works. Make sure to consult with this document for the peripheral connection to complete the work correctly.

#### See also the documents for the peripherals

The peripheral installation methods shown in this document are only a few examples. Make sure to consult with the documents for the peripherals as well as this document.

#### Use genuine products

See "System Diagram" for the genuine optional device from our company. We cannot guarantee proper function on this PC for the peripherals from other sources. When it is necessary to use the peripheral from the other source, consult with the manufacturer of the product.

#### Use the peripherals conform ACPI standard

This PC is set to ACPI mode for Windows 2000 and Windows 98. Power save and other functions may not work correctly if a peripheral does not work in ACPI mode.

 Notes for installation/removal. The installation of the peripheral must be done after the setting up an operating system except for a PS/2 mouse. The set-up function might not complete correctly if such a peripheral is attached before the operating system set up. For the operating system set up, see "Software Guide".

#### Critical Point-

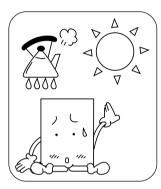
- When you connect a peripheral to a connector, make sure that the direction of the connection is correct and connect straight.
- When you connect more than one peripherals, complete setting for each peripherals before installing others.

# **SECTION 2** 2. PC Cards

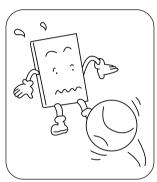
# Notes on using PC Cards

#### Observe the following points when using PC cards to prevent breakdown.

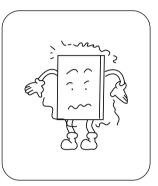
You should pay attention to the following points when you use PC Cards in order to prevent failures.



temperature locations and loca- strong shocks. tions subject to direct sunlight.



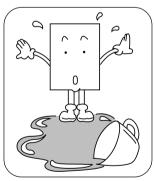
Do not place PC cards in high- Do not subject PC cards to Avoid rubbing PC cards and



building up static electricity.



top of PC cards.



Do not place heavy objects on Be careful to avoid spilling coffee and other liquids on PC cards.



When storing a PC card, always place it in its special case.

#### Critical Point-

- Most common PC Cards include:
- Note that some kinds of PC Card used for communication such as LAN Card or Modem Card cannot be used simultaneously. Check with the instruction manual supplied with each PC Card. Note that LAN cards may not be usable with the model which has built-in LAN, and modem cards may not be usable with the model which has a built-in modem.
- PC Cards which use 12V are not supported by this PC product.
- Zoom Video port is not supported by this PC product.

# **Installing PC Cards**

A PC Card has the same size as a name card and is equipped with peripheral device functions such as a modem. This section explains how to install a PC Card in your PC.

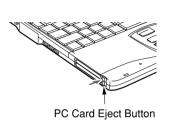
## A CAUTION-

#### INJURY

Do not put your finger into the PC Card Slot when you install a PC Card, or you may be injured.

#### **Critical Point-**

It may be required to turn off the power to the PC or to install a device driver when you install a specific PC Card. Check with the instruction manual supplied with each PC Card. 1 Press the PC Card Eject Button.



PC Card Eject Button will pop out slightly.

#### **Critical Point**-

• Make sure to store the dummy card you removed to prevent it from being lost.

#### 3 Install a PC Card.

Insert a PC Card fully into the PC Card Slot with the product name label facing up.

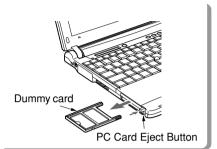


When the PC Card is installed for the first time, install a driver if necessary.
 Some PC Cards require installation of a driver. Check with the instruction manual supplied with each PC Card and install a driver.
 A floppy disk or a CD-ROM may be required for installing a driver.

#### **Critical Point-**

- Do not place anything on top of the connector between a PC Card and its cord or do not hit it as you may damage the connector.
- As a PC Card locking system is not provided with this PC product, if a PC Card has a cord or an external connector and a cable, do not pull it. If you do, the PC Card may be pulled out of the slot.

2 Pull a dummy card out of the PC Card Slot.



Press the PC Card Eject Button and then pull a dummy card out of the slot.

# **Removing PC Card**

Here is the explanation on how to remove a PC card in various operating systems.

#### Critical Point-

- When you remove a PC card attached with a cable, do not pull the cable connected to the PC card, or it results in machine failure.
- When you remove a PC card, follow the following procedures, or it results in machine failure.
- Some PC cards require shutting down when you remove it. Consult with the documentation of the PC card.

#### Windows 2000

## AUTION-

#### HIGH TEMPERATURE

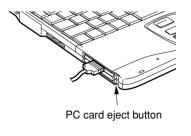
A PC card may be quite hot right after its usage. Wait for a while before removing a PC card after Step 3, or your fingertip might be burned.



#### INJURY

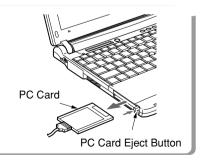
When you remove a PC card, do not insert your finger into the PC card slot, or it may cut your fingertip.

- 1 Click on the Unplug or Eject Hardware icon on task bar.
- 2 Click "Stop XXXXX".
- 3 Click on OK.
- 4 Push PC card eject button.



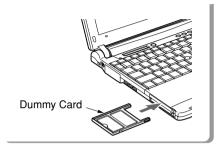
The PC card eject button pops out a little.

5 Remove a PC Card.



Press the PC Card Eject Button and remove a PC Card.

#### 6 Install a dummy card.



Insert a dummy card fully into the PC Card Slot.

#### Windows 98 / Windows Me or Windows 95

## \land CAUTION-

	Λ	
Ι	۳ ۱	

#### HIGH TEMPERATURE

PC Card may become very hot after you use it. Wait for a while after step 3 before you remove a PC Card, or you may get burned

A	
le \	

#### INJURY

Do not put your finger into the PC Card Slot when you remove a PC Card, or you may be injured.

1 Click on the PC Card icon on the task bar.

#### Critical Point –

 In PC Card (PCMCIA) Property dialog box which appears when you click on the PC Card icon on the task bar or in Control Panel, do not click on Stop and remove a PC Card. It may make the PC operation unstable.

#### 2 Click on Stop XXXXXXXX.

XXXXXXXX shows the name of the PC Card in use. The PC Card will stop its operation and then the next message will appear on the screen.



#### Critical Point-

• Different message [Device cannot be remove.] may appear depending on PC Cards. In this case, turn off the power to your PC first and then perform step 4 for Windows 2000.

- 3 Click on OK.
- 4 Remove a PC Card.

Follow the steps 4 through 6 for Windows 2000 and remove a PC Card.

# 3. Expansion RAM Modules

If you increase memory capacity, you will be able to handle larger data and the PC performance will be enhanced when multiple applications are running simultaneously.

# **Replacing Memory**

This section explains how to replace the memory installed in your PC.

## \land WARNING -



#### ELECTRIC SHOCK

Always turn off the power to the PC and disconnect the AC adapter when replacing memory, or you may get electric shock.



#### SWALLOWING

Make sure to keep the small parts that you removed such as a cover, caps and screws, away from small children. If a child swallows any of those parts by accident, he or she may suffocate. Parents should take extra care to keep those parts out of children's reach.

Should a child swallow a small part by accident, see a medical doctor as soon as possible.

# A CAUTION-



#### FAILURE

Hold the edge of memory not to touch its terminal and IC while you replace it. And do not touch the parts and terminals inside the PC unit. Fat substance on your fingertip might results in improper contact.



#### FAILURE

A memory is composed of parts very sensitive to static. It may be destroyed by the static on a human body. Discharge static from your body by touching metal object before handling a memory.

#### FAILURE

Always turn off the power to the PC when you replace memory. If you replace it in Standby or Suspend Mode with Windows 2000 or Windows 98, or in Suspend or Save-to-Disk Mode with Windows 95, unsaved data will be lost or the PC or the memory may become faulty.

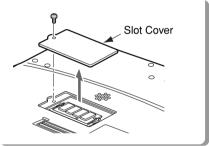
#### **IMPORTANT**-

When you unscrew the screws on your PC, use the cross-point screwdriver No. 1 with the appropriate size for the screws. Using screwdrivers other than that may damage the head of screws.

#### Critical Point-

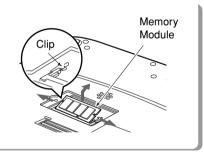
- To check the memory size after you have replaced a memory, check the memory slot indication which is displayed in the Information menu of the BIOS Setup Utility. Memory size is displayed for example: 64MB SDRAM. If your PC doesn't start up even if the memory is properly installed, the RAM Expansion Module should be faulty or have a defect. In this case, contact Fujitsu Service Center or the retailer from which you have purchased your PC.
- If you want to expand the memory, replace the pre-installed memory at the shipping with larger capacity one.
- Always make sure to install a memory before turn on the power to the PC.
- Make sure not to drop small parts you removed such as screws inside the PC body, as it may cause a PC failure.

- 1 Power off the system and disconnect the AC adapter.
- 2 Close the LCD Display and turn your PC bottom side up.
- 3 Unscrew the screw and remove the RAM Expansion Module Slot Cover.



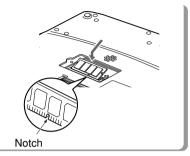
Remove the RAM Expansion Module Slot Cover on the bottom side of the PC.

4 Remove the memory.

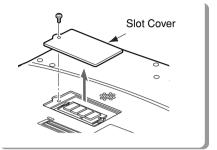


Pull clips sideways from each side of the memory and remove the memory module.

5 Install a new memory module



Align the hollow part on the memory and the protrusion of the connector and insert the memory firmly as seen above and turn it down until you can hear snap sound. 6 Attach the RAM Expansion Module Slot Cover.



Attach the cover you removed in step 3.

#### **IMPORTANT**-

If the memory module is not properly installed, a message indicating a RAM expansion error will appear or nothing will be displayed when you turn on the power. In this case, turn off the power using the MAIN switch and repeat the installation procedure of the memory module.

# 4. Connector Box

This section explains the connector box.

### **IMPORTANT**-

- The connector box can be installed/removed regardless of the PC status. If a FDD unit is connected using the FDD unit connector on the connector box, however, be sure to turn off the power to the PC before installing/removing the connector box.
- If the connector box is installed or removed during the power to the PC is On, operation of some of the peripheral devices which are connected with the connector box may become unstable. In this case, turn off the power to the PC before you install/remove the connector box.

# Installing the Connector Box

This section explains the installing procedure of the connector box.



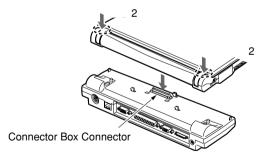


#### INJURY

When installing the connector box on the PC, be careful not to get your finger caught in as you may be injured.

#### 1 Install the connector box on the bottom side of your PC.

(1) Put your PC straight down on the Connector box so as to align both connectors. (2) Hold the specified parts shown in the figure and attach the PC firmly onto the Connector box.



#### **IMPORTANT**-

- When you install peripheral devices on, or remove them from the connector box, always turn off the power to the PC and disconnect the AC adapter.
- Always remove the peripheral devices when you carry your PC around, or the PC body or the connector on the connector box may be damaged.

# **Detaching Connector Box**

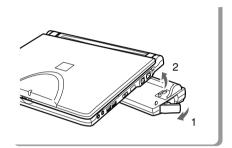
This section explains detaching procedure of the connector box.

- 1 Shut down the power to the peripheral devices if any of them are connected with the connector box.
- 2 Unlock the connector box.



Pull the connector box removing lever toward the arrow direction to unlock.

3 Detach the connector box.



(1) Pull the removing lever and (2) lift your PC up and detach the connector box.

# 5. Using internal Data / FAX Modem

# Connection

Internal Data / FAX Modem which supports V.90 is built in certain models of this PC product to provide comfortable error-free communication conforming to MNP Class 4/5 and ITU-T V.42/ V42bis.

# \land WARNING-



#### ELECTRIC SHOCK

Always turn off the power to the PC and disconnect the AC adapter when you connect modular cables as you may get electric shock.



#### ELECTRIC SHOCK

Always turn off the power to the PC and disconnect the AC adapter when you connect modular cables as you may get electric shock.

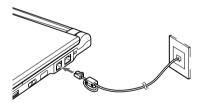
# ▲ CAUTION-



#### ELECTRIC SHOCK

Do not put your finger into the modular connector, or you may get electric shock.

- 1 Power off the system and disconnect the AC adapter.
- 2 Connect the modular connector on your PC to a telephone line using a modular cable.



#### **Critical Point-**

• When you pull the plug out of the modular connector, pull it while holding the clip on the connector, or you may damage the connector.



• We recommend to use your PC with the AC adapter attached when you use a modem as it consumes a large amount of power.

#### **Critical Point-**

If you use a data / fax modem of the Modem Model (a model which has a built-in modem only), put the core supplied with the cable on the modular cable in order to reduce unnecessary radiation of radio wave. Insert the plug with the core into the PC.
 1 Twine the cable once around the core near the plug of modular cable.
 2 Close the Core. When closing the core, be careful not to pinch the cable.
 Core Plug
 Core Plug</

# 6. Using Internal LAN

# Connecting

LAN device is built in certain models of this PC product, enabling connection to IEEE802.3 compliant high-speed LAN system with 100BASE-TX. It also enables connection to a conventional LAN system with 10BASE-T.

# \land WARNING-

#### ELECTRIC SHOCK

Always turn off the power to the PC and disconnect the AC adapter when you connect LAN cables as you may get electric shock.



#### ELECTRIC SHOCK

If lightning strikes in the near area, turn off the power to the PC and disconnect the AC adapter and LAN cables. If you continue to use in that situation, your PC may be damaged by lightning and it may also cause a fire.

## 🛝 CAUTION-



#### ELECTRIC SHOCK

Do not put your finger into the LAN communication connector as you may get electric shock.

- 1 Power off the system and disconnect the AC adapter.
- 2 Connect the LAN connector on your PC to a network using a LAN cable. Align the network connector with the LAN communication connector on your PC.



#### **Critical Point-**

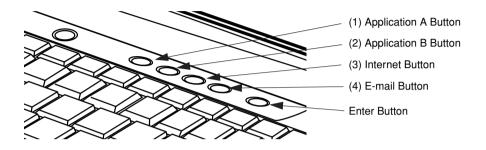
- About LAN functions.
- When you pull the plug out of the LAN connector, pull it while holding the clip on the connector, or you may damage the connector.



- We recommend to use your PC with the AC adapter attached when you use LAN as it consumes a large amount of power.
- If the connector box is attached, you cannot use the LAN connector on your PC. Use the LAN connector provided on the connector box.

# 7. LifeBook Security/Application Panel

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, 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)

# 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 Suspend /Resume button 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.
- 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.

# 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 over-

# Precautions

ride the user password.

Critical Point

#### • 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

#### 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 Software

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 at LifeBook\_Options\Security Panel.It contains the setup files for supervisor and user security application.

- 1. Double-click the Setup SETUPS.EXE file. The Installing Security Panel Application window will appear. Follow the instructions on the screen.
- 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:

Lifebook Security Panel Administrator Fujitsu PC (Asia) 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.

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

# Launching Applications with the Security/Application Panel

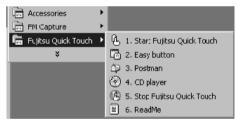
The security panel also enables you to launch applications with the touch of a button when your system is on. Pressing any of the buttons will launch a user-defined application. Your LifeBook is preinstalled with software utilities that let you operate and configure your LifeBook Security /Application Panel. These utilities are found under the Start menu, under Programs, then under Fujitsu Quick Touch. They include Start Fujitsu Quick Touch, Easy Button, Postman, CD Player, Stop Fujitsu Quick Touch and Readme.

#### Configuring your Fujitsu Quick Touch

When you start Windows, the Fujitsu Quick Touch is automatically activated. An icon resembling a finger pressing a button will appear on the system tray (the indented portion of the status bar where the clock is displayed). When you see this icon you will know that Fujitsu Quick Touch is active.

As an application launcher, the Fujitsu Quick Touch is very flexible, giving you a variety of options. To set up the Panel to best suit your needs, we have provided the Easy button configuration that quickly and easily helps you make the most of this valuable feature.

- 1. Click on Start.
- 2. Click on Programs.
- 3. Click on Fujitsu Quick Touch.
- 4. Click on Easy button.



The Easy button configuration utility will appear. There are tabs that correspond to the application buttons on the Fujitsu Quick Touch. When you receive your LifeBook, these buttons are preconfigured to launch specific programs, please refer table below:

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

#### **Critical Point-**

• The tabs in Easy button configuration may not be in the same order as the buttons on your LifeBook.

To change an application associated with the Application buttons, click on the tab for the button you would like to reconfigure – for example, Application 1. 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 Windows default Internet browser (Internet Explorer), unless you have changed this in Windows. 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 then click on the application you wish to launch with this button.
- 4. Click OK.

📷 [Easy button] configuration	×
🖺 Application A 🛛 🖺 Application B 😫 Internet 📰 E-mail	
Select a program for each button.	
Start the Internet browser when the button is hit     Internet browser     Default Internet browser     Other     Start the other program when the button is hit	
Target: C:\Program Files\Internet Explorer\iexplore.ex	
Start in: C:\Program Files\Internet Explorer	
Parameters:	
Browse Browse from start menu Clear	
Enable the button while the PC is on stand-by	
Enable the button while the PC is on soft-OFF	
OK Cancel Apply	

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.

#### **Critical Point-**

If your system has dedicated one of the application launcher buttons to be an Internet launcher, the button can still be configured to launch any application you wish, not just an Internet browser.

When you have finished with Easy button configuration click OK, and the new settings will take effect. You can reconfigure your Fujitsu Quick Touch as often as you like.

Deactivating and Activating the Fujitsu Quick Touch To deactivate the Fujitsu Quick Touch, follow these easy steps:

- 1. Click on Start.
- 2. Click on Programs.
- 3. Click on Fujitsu Quick Touch.
- 4. Click on Stop Fujitsu Quick Touch.

To reactivate, follow the same procedure, except for step 4. Click on **Start Fujitsu Quick Touch** instead.

Accessories	۲	
🕞 FM Capture	۲	
👼 Fujitsu Quick Touch	Þ	🚯 1. Star: Fujitsu Quick Touch
×		🙆 2. Easy button
		🛱 3. Postman
		🕙 4. CD player
		🕼 5. Stop Fujitsu Quick Touch 👘
		🗒 6. ReadMe

#### Critical Point-

• Every time you start Windows the Fujitsu Quick Touch is activated, even if you deactivated it before you shut down.

#### Configure your E-mail Launcher Button Application

A unique feature of your Fujitsu LifeBook is the E-mail Launcher Button. This button allows you to launch the E-mail application with the touch of the button even when your system is on.

By using the E-mail button in conjunction with your E-mail button setup, you can connect to your ISP, check for and retrieve new mail, terminate connection and launch you E-mail application to notify that new E-mail has arrived in your mailbox.

In case you use more than one Internet Service Provider, only the specified Internet Service Provider in the E-mail application could be used.

The default setting for the E-mail application is Outlook Express. We have provided the Fujitsu Quick Touch application that quickly and easily helps you make the most of this valuable feature. In order to reconfigure it to launch another E-mail application program follow these easy steps:

- 1. Click on Start.
- 2. Click on Programs.
- 3. Click on Fujitsu Quick Touch.
- 4. Click on Easy button.
- 5. Easy button configuration menu will display on the screen.
- From the Easy button configuration menu, you will see the default setting for the E-mail application is set to Outlook Express.
- If you wish to change the E-mail application, you can click on the Browse or Browse from start menu and select your E-mail application you wish to launch with this button.
- 8. Click **OK** and the button will now launch the new E-mail application.

📭 [Easy button] configuration	X
🖺 Application A 📑 Application B 😫 Internet 🔚 E-mail	
Select a program for each button.	
<ul> <li>Start the meil application when the button is hit</li> <li>E-mail notification LED blinking time: 60 Secs.</li> <li>Start the other program when the button is hit</li> </ul>	
Target: MSIMN.EXE Start in: Parameters:	
Browse Browse from start menu Clear	
Enable the button while the PC is on stand-by Enable the button while the PC is on soft-OFF	-
OK Cancel Apply	

#### Configure the E-mail button.

For using the E-mail button, you must have access to a POP3 Server. Contact your service provider to determine if they support POP3. To configure the E-mail button please follow these easy steps:

- 1. Click on Start.
- 2. Click on Programs.
- 3. Click on Fujitsu Quick Touch.
- 4. Click on Postman.
- 5. The Postman setting screen will appear.
- 6. Choose the type of connection: LAN or Dialup.
  - 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.
- 7. After all the setting are set correctly, try to do a testing on the connection by clicking the Testing connection with current setting.

🏟 [Postman] setting	
🖭 Mail application	]
if you have a	ndy tool which checks mail, and tells you any mail. It configures the mail application is used by [Postman]/[Easy button].
How would ye	ou like to connect to the Internet?
O LAN	
	My ISP
User name:	abc
Pa <u>s</u> sword: [	NNK
POP3 Mail se	erver setting
S <u>e</u> rver name:	pop.mailservername.com Port number: 110
A <u>c</u> count name:	abc
Password:	xxx
Testi	ing connection with current setting
<u></u>	ing connection with current setting
	OK Cancel Apply

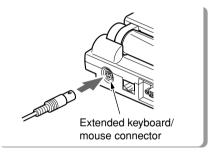
When you have finished with E-mail button setup, you are ready to retrieve mail. When you press the E-mail button, your system will establish connection with your provider, check for and retrieve new mails, terminate the connection, and launch the mail application.

# 8. Using Mouse

# Connecting a PS/2 mouse

This PC product supports connection of a PS/2 mouse to the extended keyboard/mouse connector on the connector box. This section explains the connecting procedure of a mouse.

- 1 Power off the system.
- 2 Install the connector box.
- 3 Connect a mouse.



Connect a mouse to the extended keyboard/ mouse connector on the connector box. Connect it with the engraved arrow mark facing up.

4 Make settings other than [Configuration 1] for [Pointing Device] of [Keyboard/Mouse Setting] under the [Details] menu of the BIOS Setup Utility.

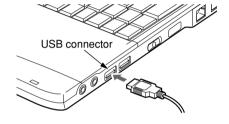
#### **Critical Point-**

- If the connector box is attached with your PC, you can connect a mouse in Suspend Mode.
- You can select settings for simultaneous use with Quick Point IV and Hot Plug functions in [Keyboard/Mouse Setting] of the BIOS Setup Utility.
- If you want to use wheel functions with a PS/2 mouse, you should make the following setting. Note that if you make this setting, the Touch Panel and the Quick Point IV cannot be used.
  - In the [Pointing Device Setting] of the BIOS Setup Utility, set [Configuration 4] and delete the touch panel driver.

# **Connecting USB mouse**

This PC product supports connection of optional USB mouse to the USB connector. This only supported only by Windows 2000 and Windows 98 and Windows Me.

1 Connect the mouse to the USB connector on your PC. Align the connectors by matching their shapes and insert the connector of a mouse straight into the connector on the PC.



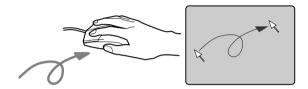
#### **Critical Point-**

- A mouse can be connected or disconnected with the power to the PC On. Be sure to insert the connector straight.
- Connecting a USB mouse doesn't affect the usability of the Quick Point IV.
- A USB mouse is disabled in MS-DOS Mode.
- A USB mouse can be connected to either of the USB connectors.

## How to use a mouse

#### Moving a mouse

Put your hand on a mouse so that your fingers are on the left and right mouse buttons and move a mouse smoothly on a flat surface. An arrow indication on the screen (it is called "mouse pointer") will move according to the movement of your mouse. Try to move a mouse while checking the mouse pointer movements on the screen.



Operation of buttons
 Clicking



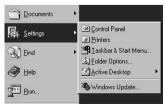
Click on the left mouse button once. Clicking on the right mouse button is called right click.

Double-clicking



Clicking the left mouse button twice in rapid succession.

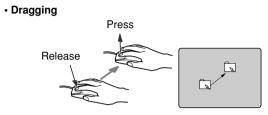
#### Pointing





Move the mouse pointer on the desired menu. If it has a pull

down menu, ( ▶ ) is displayed to the right edge of the menu and the pull down menu will be displayed.



While holding down the left mouse button, move a mouse and release it at the desired place.

## **Critical Point-**

• These button operations described above are the operations when [Right-handed] is selected in the [Mouse Property] dialog box.

# **SECTION 2**

## **SECTION 2**

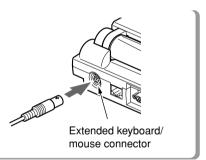
# 9. Connecting PS/2 Port

## Connecting external keyboard or numeric keypad or mouse

This PC product supports connection of a PS/2 numeric keypad or other devices to the extended keyboard/mouse connector on the connector box. This section explains the connecting procedure of a numeric keypad.

- 1 Power off the system.
- 2 Install the connector box.
- 3 Connect a numeric keypad.

Connect a numeric keypad to the extended keyboard/mouse connector on the connector box. Connect it with the engraved arrow mark facing up.



## **Critical Point**

When a mouse is connected to the numeric keypad mouse connector, the mouse connector on the computer main unit cannot be used.
Mouse connector
A numeric keypad can be used only when your PC is in the Numeric keypad mode.
You can change the tilt angle of the numeric keypad by adjusting the tilt foot on the bottom of it.
Other keyboards including 101, OADG, JIS, and Thumb Shift keyboards are supported for connecting to the extended keyboard/mouse connector.

# SECTION 2 10. Printer

This section explains connecting of a printer to a parallel connector on the Connector box. If you connect a printer, you can print the texts or graphics you created on your PC.

## Critical Point

• A printer that supports USB connection can be connected to a USB connector.

## **Connecting a printer**

## \land WARNING—



#### ELECTRIC SHOCK

Always turn off the power to the PC and disconnect the AC adapter when you connect or disconnect a printer, or you may get electric shock.

## ▲ CAUTION-



#### FAILURE

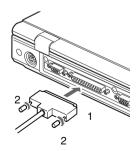
When you connect cables, read this instruction to avoid incorrect connections. If you use your PC with a wrong connection, it may cause a failure in your PC or a printer.

- 1 Power off the system and disconnect the AC adapter .
- 2 Install the connector box.

#### 3 Connect a printer cable to the parallel connector on the connector box.

The front view of the connector is a trapezoid.

(1) Align the connectors by matching their shapes and insert the connector of a printer straight into the connector on the connector box. (2) Tighten the screws on both sides of the printer cable to fix the connectors.



- 4 Connect the printer cable and the power cable with the printer. Refer to the printer instruction manual for connecting procedure. Some printers have a power cable fixed with them.
- 5 Insert the power cable plug of the printer into an electric outlet and then turn on the power switch.
- 6 Connect the AC adapter to your PC and then turn on the power switch.
- 7 If the printer is connected for the first time, install a driver. Refer to the printer instruction manual and install a driver. A floppy disk or a CD-ROM may be required for installing a driver.

## Critical Point-

- A printer cable is required to connect a printer. Some printers are supplied without a cable. Even if a printer is supplied with a cable, it cannot be connected depending on the connector form. In these cases, you should purchase an appropriate printer cable separately.
- Connecting procedures vary for each printer. Refer to the instruction manual supplied with each printer.

## **SECTION 2**

# **11. Connecting External Display**

## Connecting external display

This PC product supports connection of an external display such as a CRT display. This section explains the connecting procedure of a CRT display to the external display connector on the left side of the PC.

## 🛝 WARNING -



#### ELECTRIC SHOCK

Always turn off the power to the PC and disconnect the AC adapter when you connect or disconnect an external display, or you may get electric shock.

## A CAUTION-



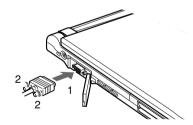
#### FAILURE

When you connect cables, read this instruction in order to avoid incorrect connections. If you use your PC with a wrong connection, it may cause a failure in your PC or an external display.

- 1 Power off the system and disconnect the AC adapter.
- 2 Connect an external display to the external display connector on the left side of your PC.

The front view of the connector is a trapezoid.

(1) Align the connectors by matching their shapes and insert the connector of an external display straight into the connector on your PC. (2) Tighten the screws on both sides of the display cable to fix the connectors.



## Critical Point-

- An external display can also be connected to the external display connector on the Connector box.
- If you prefer sharper and clearer images on the display, we recommend to use the external display connector on your PC.
- When the connector box is attached, the external display connector on your PC cannot be used. In this case use the external display connector on the Connector box.

3 Connect the display cable with the CRT display.

Refer to the CRT instruction manual for connecting procedure.

- 4 Connect the power cable of the CRT display and turn on the power switch.
- 5 Attach the AC adapter to your PC and then turn on the power switch.

## Critical Point-

- When you turn on the power to the PC after an external display is connected, the following events may occur.
  - Both the internal LCD display of the PC and the external display will show images on their screens at the same time.
  - [Add new hardware wizard] dialog box will appear. In this case, follow the instructions displayed on the screen and install a driver for the external display.

#### 6 Switch the display on the screen.

Press [F10] key while pressing [Fn] key down, then you can switch the display to LCD, CRT, and Simultaneous in sequence. You can also switch the display by using settings in [Display Property] of your operating system.

# SECTION



**SECTION 3** 

## **SECTION 3**

# 1. 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?	<ul> <li>Displayed Adjust the brightness and darkness with the brightness and contrast controls.</li> <li>Flashing Press the SUS/RES switch to put the computer into operating mode.</li> <li>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.</li> </ul>

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 <b>[Fn]</b> + <b>[F6]</b> keys or <b>[Fn]</b> + <b>[F7]</b> 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 $\rightarrow$ LCD turns off, the battery will not become fully charged, Once you start charging do not remove the AC adapter until the $\rightarrow$ LCD turns off.

# **SECTION 3**

## • 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 or LS-120 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, port replicater or LS-120 disk 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 connec- tion. 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.

## **SECTION 3**

# 2. 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.

- 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.

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

3. Glossary

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

#### APM

**SECTION 3** 

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 requise 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.

#### ΜВ

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.

#### KΒ

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.

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