

Your guide to setting up your new LifeBook™
i Series Notebook



SERIES

USER'S MANUAL

i-4190



L I F E B O O K™

FUJITSU

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DECLARATION OF CONFORMITY according to FCC Part 15

Responsible Party Name : FPCA
Address : Fujitsu PC (Asia) Pte Ltd
200 Pandan Loop
#05-03, Pantech 21
The Computer Centre
Singapore 128388
Telephone : 65-776 0688
Declares that product: Model : LifeBook i4190
complies with Part 15
of the FCC Rules.

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

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 recommended 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 dialing. It is strongly recommended that pulse dialing is not used.

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

For repeat calls to the same number.

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

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

For Automatic calls to different numbers.

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

For Automatically answered Incoming Calls

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

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

WARNING

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

Note: Modem setting in Windows 98 / Windows Me

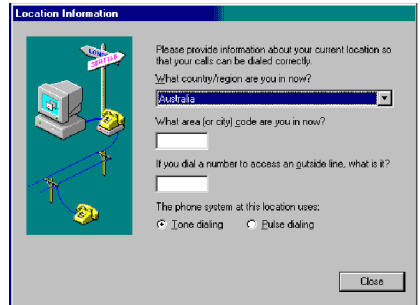
The default modem setting in Windows 98 / Windows Me operating system is United States of America. If you are residing in Australia or New Zealand, please choose the appropriate country where you are located.

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

Please see below instruction for quick modem setup.

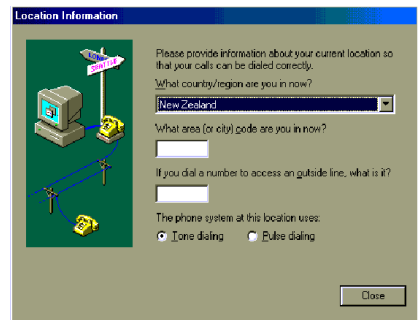
A. If you are located in Australia

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



B. If you are located in New Zealand



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






NOTATION IN THIS DOCUMENT

● Warnings

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

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

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

Symbol	Meaning
	The Δ symbol indicates a warning or caution. The symbol inside the Δ 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 \bullet indicates instructions that must be followed. The symbol inside indicates the concrete nature of those instructions. (The example on the left tells you to unplug the power plug from the socket.)

● Key notation and operation methods

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

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

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


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

● Screen examples

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

● Notation in text

Here is what symbols in text mean.

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

● Command input (key input)

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

Example: `dir c:`
 ↑

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

● Product names

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

“Microsoft® Windows® 2000 operating system” is written as “Windows 2000”.

“Microsoft® Millennium® Edition operating system” is written as “Windows Me”.

“Microsoft® Windows® 98 operating system” is written as “Windows 98”.

“Microsoft® MS-DOS® operating system Version 6.2/V” is written as “MS-DOS”.

“Microsoft® Windows® operating system Version 3.1” is written as “Windows 3.1”.

“Microsoft® Windows NT® Server network operating system Version 3.5” and “Microsoft® Windows NT® Workstation operating system Version 3.5” are both written as “Windows NT 3.5”.

“Microsoft® Windows NT® Server network operating system Version 3.51” and “Microsoft® Windows NT® Workstation and NT Server Version 4.0” are both written as “Windows NT 4.0”.

“Windows NT 3.51” and “Windows NT 4.0” are both written as Windows NT.

“Fujitsu Lifebook” is written as “this computer” or “the computer main unit”.

Configuration of this Manual

SECTION 1

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

SECTION 2

This section explains installation of options for this computer.

SECTION 3

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

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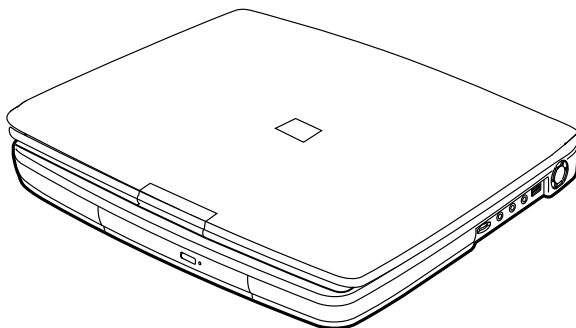
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SECTION

1

1. Overview



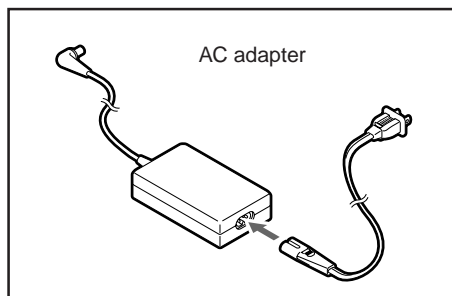
This section describes the components of your Fujitsu LifeBook. We strongly recommend that you read it before using your LifeBook – even if you are already familiar with notebook computers.

UNPACKING

When you receive your LifeBook, unpack it carefully, and compare the parts you have received with the items listed below.

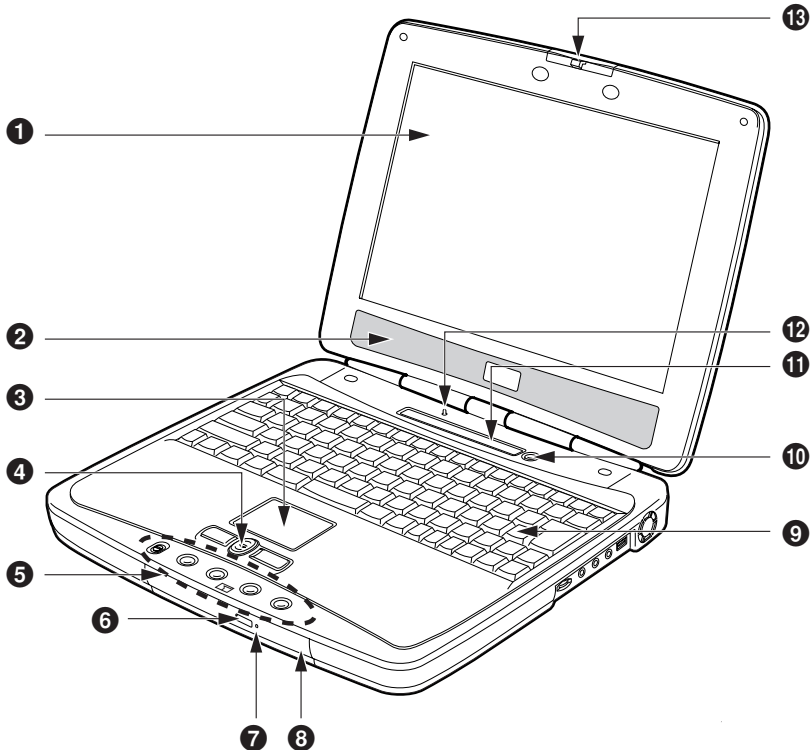
For a Pre-configured model you should have:

- LifeBook i Series from Fujitsu
- Lithium ion battery, pre-installed
- AC adapter with AC power cord
- Phone/Modem (RJ-11) telephone cable
- Driver and Application Restore CD
- Getting Started Guide
- International Limited Warranty Brochure
- Getting Started with Microsoft Windows 98 Second Edition or Microsoft Me Manual



Once you have checked and confirmed that your LifeBook system is complete, read through the following pages to learn about all of your LifeBook's components.

2. Locating the Controls and Connectors



Top And Front Components

The following is a brief description of your LifeBook's top and front components.

1 Display Panel

The display panel is a color LCD panel with back lighting for the display of text and graphics.

2 Stereo Speakers

The built-in dual speakers allow for stereo sound.

3 Touchpad Pointing Device

The Touchpad pointing device is a mouse-like cursor control with three buttons (left, right, and scroll buttons).

Critical Point

- The media player that your LifeBook uses is determined by the configuration of your system.
- The terms "media" and "media disc" in this document refer to any of the possible media drives or media discs available for your LifeBook (i.e., DVD, CD-ROM, CD-R, or CD-RW).

4 Scroll Button

5 LifeBook Application Panel

The LifeBook Application Panel allows you to either launch your favourite applications by the touch of a button or to use as a media player when your unit is on.

6 Media Player Eject Button

The Media Player Eject Button allows you to open the media player tray to remove or install a DVD, CD-R, or CD-ROM.

7 Emergency Media Player Tray Release

The Emergency Media Player Tray Release allows you to open the media player tray without powering on your LifeBook.

8 Media Player

The media player allows you to play back a media disc.

9 Keyboard

A full-size keyboard with dedicated Windows keys.

10 Suspend/Resume/Power On Button

The Suspend/Resume/Power On button allows you to suspend LifeBook activity without powering off, resume your LifeBook from suspend mode, and power on your LifeBook when it has been shut down from Windows 98 Second Edition or Me.

11 Status Indicator Panel

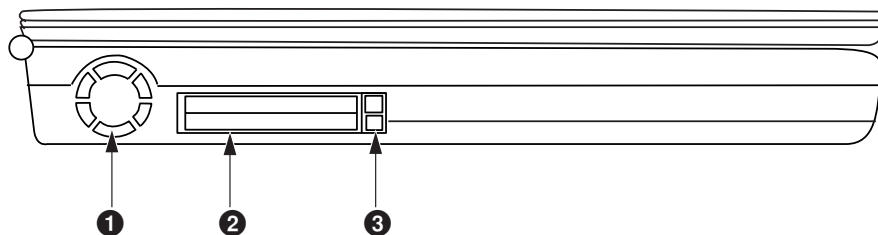
The Status Indicator Panel displays symbols that correspond with a specific component of your LifeBook.

12 Closed Cover Switch

The closed cover switch turns off the LCD back lighting when the display panel is closed.

13 Display Panel Latch

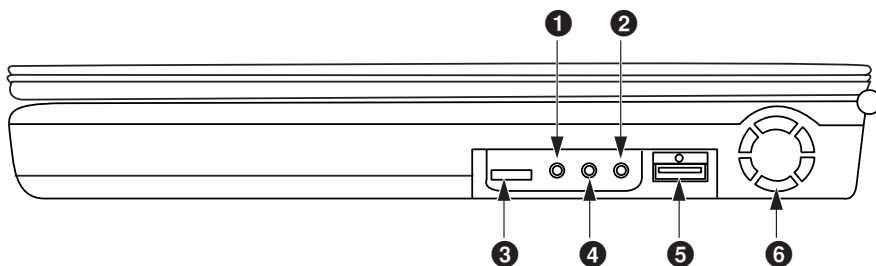
The display panel latch locks and releases the display panel.



Left Side Panel Components

The following is a brief description of your LifeBook's left-side components.

- 1 Air Flow Vent**
The air flow vent helps your LifeBook maintain a proper temperature.
- 2 PC Card Slots**
The PC Card Slots allow you to install two Type II PC Cards or one Type III PC Card.
- 3 PC Card Eject Buttons**



Right Side Panel Components

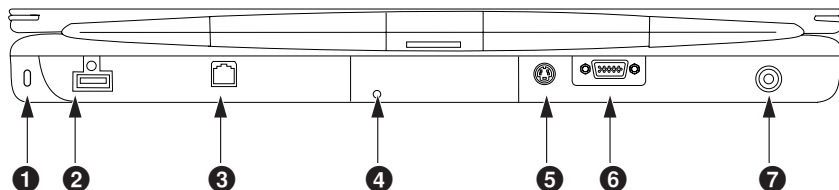
The following is a brief description of your LifeBook's right-side components.

- 1 Headphone Jack**
The headphone jack allows you to connect headphones or powered external speakers.
- 2 Microphone Jack**
The microphone jack allows you to connect an external mono microphone.
- 3 Volume Control**
The volume control provides manual control of the sound level of all audio output.
- 4 Stereo Line-in Jack**
The stereo line-in jack allows you to connect an external audio source.

Optical Digital Audio-Out

The optical digital audio-out jack allows you to download digital audio onto a MiniDisc recorder's SPDIF (Sony Philips Digital Interface) format.

- 5 USB Port**
The USB port allows you to connect Universal Serial Bus devices.
- 6 Cooling Fan**
The cooling fan helps your LifeBook maintain a proper temperature.



Back Panel Components

The following is a brief description of your LifeBook's back panel components.

1 Anti-theft Lock Slot

The anti-theft lock slot allows you to attach an optional physical lock-down device.

2 USB Port

The USB port allows you to connect Universal Serial Bus devices.

3 Modem (RJ-11) Telephone Jack

The Modem (RJ-11) telephone jack is for attaching a telephone line to the internal 56K modem.

⚠ CAUTION

- The internal modem is designed to the ITU-T V.90 standard. Its maximum speed of 53000bps is the highest allowed by FCC, and its actual connection rate depends on the line conditions. The maximum speed is 33600bps at upload.

⚠ WARNING

- The internal modem is not intended for use with Digital PBX systems. Do not connect the internal modem to a Digital PBX as it may cause serious damage to the internal modem or your entire LifeBook. Consult your PBX manufacturer's documentation for details. Some hotels have Digital PBX systems. Be sure to find out BEFORE you connect your modem.

4 Reset Switch

The Reset Switch allows you to reboot the system in the event it gets hung up and cannot be exited using a software exit. Inserting a small device such as an opened paper clip into the Reset Switch hole will cause the system to reboot.

5 S-Video Port

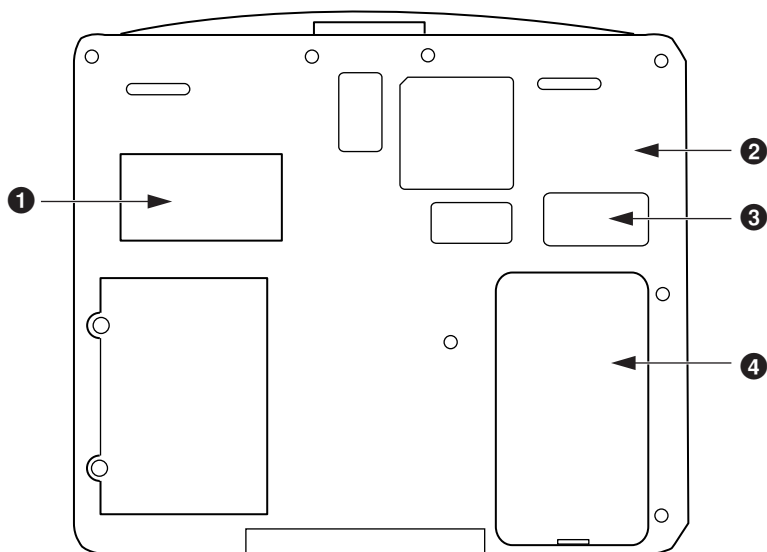
The S-Video output is used to transmit the S-Video signal. The S-Video port is used to connect to a compatible TV or VCR.

6 External Monitor Port

The external monitor port allows you to connect an external monitor.

7 DC Power Jack

The DC power jack allows you to plug in the AC adapter or the optional Auto/Airline adapter to power your LifeBook and charge the internal Lithium ion battery.



Bottom Components

The following is a brief description of your LifeBook's bottom panel components.

1 Expansion RAM Slot

The expansion RAM slot allows you to add optional memory upgrades.

2 Certificate of Authenticity Label (approximate location) Expansion

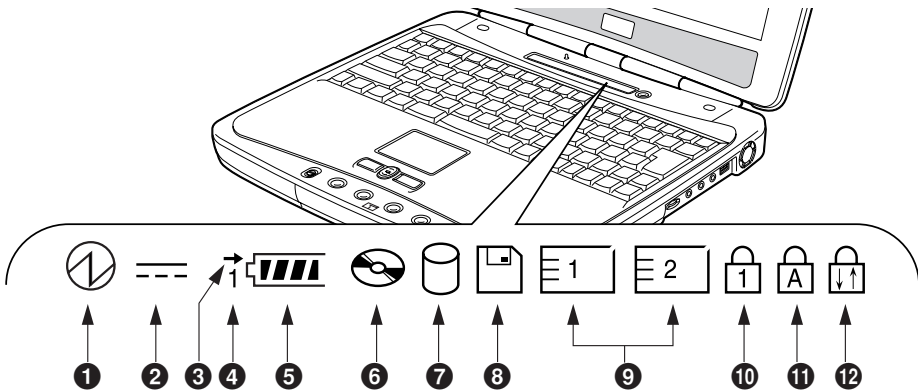
3 Main Unit and Configuration Label

The configuration label shows the model number and other information about your LifeBook. In addition, the configuration portion of the label has the serial number and manufacturer information that you will need to give your support representative. It identifies the exact version of various components of your LifeBook.

4 Lithium ion Battery Bay

The battery bay contains the internal Lithium ion battery. It can be opened for the removal of the battery when stored over a long period of time or for swapping a discharged battery with a charged Lithium ion battery.

3. Status Indicator Panel



The Status Indicator displays symbols that correspond with a specific component of your Fujitsu LifeBook. These symbols tell you how each of those components are operating.

1 Power Indicator ()

The Power indicator symbol states whether your system is operational. It has several different states, each of which tells you what mode your LifeBook is in at that time.

- **Steady On:**
This means that there is power to your LifeBook and that it is ready for use.
- **Flashing:**
This means that your LifeBook is in Suspend mode.
- **Steady Off:**
This means that your system is either in Save-to-Disk mode, or that your LifeBook has been turned off with the power switch.

If you are charging your battery, the Power indicator symbol will remain on even if your LifeBook is shut off. The Power indicator symbol will also remain on if you have either adapter connected and are shut down from Windows, but have not turned off the power switch.

2 AC Adapter Indicator ()

The AC Adapter indicator states whether your LifeBook is operating from the AC adapter, the Auto/Airline adapter or the batteries. This icon has two different states that can tell you what power source your LifeBook is using.

- **On:** This means that either of the adapters are currently in use.
- **Off:** Power is only coming from the batteries, and you do not have an adapter connected.

3 Battery Charging (→)

Located to the left of the Battery Level indicator is a small arrow symbol. This symbol states whether the battery is charging. This indicator operates whether the power switch is in the On or Off position, and will flash if the battery is too hot or cold to charge.









CAUTION

- Batteries subjected to shocks, vibration or extreme temperatures can be permanently damaged.

4 Battery Identifier

5 Battery Level Indicator ()

The Battery Level indicator states whether or not the primary Lithium ion battery is installed. In addition, this symbol states how much charge is available within the battery. The symbol will only be displayed for a battery that is currently installed in your LifeBook.

	76%–100% Charging
	76%–100%
	51%–75%
	26%–50%
	11%–25%
	Low Warning <11%
	Critical Low or Dead Battery
	Shorted Battery

CAUTION

- A shorted battery is damaged and must be replaced.

Critical Point

- If there is no battery activity, the power adapters are not connected, or the power switch is Off, the Battery Level indicator will also be off.

6 Media Player Access Indicator ()

The Media Player Access indicator tells you that the media player drive is being accessed. If the Auto Insert Notification function is active, the indicator will flash periodically when your system is checking the media player drive. If the Auto Insert Notification function is not active, the indicator will only flash when you access the media player drive. The default setting is the Auto Insert Notification function active.

7 Hard Drive Access Indicator ()

The Hard Drive Access indicator states whether your internal hard drive is being accessed.

8 Floppy Drive Access Indicator ()

The Floppy Drive Access indicator states whether the external floppy disk drive is being accessed. This indicator will flash if your software tries to access a disk even if no floppy disk drive is installed.

9 PC Card Access Indicators ( )

The PC Card Access indicators state whether or not your LifeBook is accessing a PC Card. The indicators will flash if your software tries to access a PC Card even if there is no card installed. The first indicator represents the built-in PC card slot; the second indicates when a modular PC Card slot is installed.

10 NumLk Indicator ()

The NumLk indicator states that the internal keyboard is set in ten-key numeric keypad mode.

Critical Point

- If you are using the optional external numerical keypad, pressing the [NumLk] key will activate the external keypad. The indicator will come on, however it will not change any of the functionality of your keyboard keys.

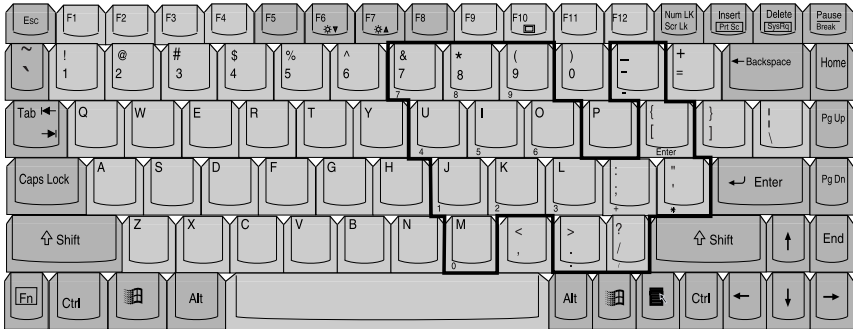
11 Capslock Indicator ()

The CapsLock indicator states that your keyboard is set to type in all capital letters.

12 ScrLk Indicator ()

The ScrLk indicator states that your scroll lock is active.

4. Keyboard



Using The Keyboard

Your Fujitsu LifeBook has an integral 87-key keyboard. The keys perform all the standard functions of a 101-key keyboard, including the Windows keys and other special function keys. This section describes the following keypad.

- Numeric keypad
- Cursor keys
- Function keys
- Windows keys

Numeric Keypad

Certain keys on the keyboard perform dual functions as both standard character keys and numeric keypad keys. NumLk can be activated by pressing the [NumLk] keys. Turning off the NumLk feature is done the same way. Once this feature is activated you can enter numerals 0 through 9, perform addition (+), subtraction (-), multiplication (*), or division (/), and enter decimal points (.) using the keys designated as ten-key function keys. The keys in the numeric keypad are marked on the front edge of the key to indicate their secondary functions.

Critical Point

- If you are using the optional external numerical keypad, pressing the [NumLk] key will activate the external key-pad. The indicator will come on, however it will not change any of the functionality of your keyboard keys.

Windows Keys

Your LifeBook has three Windows keys, consisting of two Start keys and an Application key. The two Start keys display the Start menu. This button functions the same as your on-screen Start menu button. The Application key functions the same as your right mouse button and displays shortcut menus for the selected item. (Please refer to your Windows documentation for additional information regarding the Windows keys.)

Cursor Keys

The cursor keys are the four arrow keys on the keyboard which allow you to move the cursor up, down, left and right in applications. In programs such as Windows Explorer, it moves the “focus” (selects the next item up, down, left, or right).

Function Keys

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

The [FN] key provides extended functions for the LifeBook and is always used in conjunction with another key.

- [FN+F4]: Pressing [F4] while holding down [FN] allows you to toggle between an internal mouse (touchpad) and an external mouse (PS/2-type).
- [FN+F5]: Pressing [F5] while holding [FN] allows you to toggle between video compensation and no compensation. (Video compensation controls spacing on the display. When it is enabled, displays with less than 800 x 600 pixel resolution will still cover the entire screen.)
- [FN+F6]: Pressing [F6] repeatedly while holding [FN] will lower the brightness of your display.
- [FN+F7]: Pressing [F7] repeatedly while holding [FN] will increase the brightness of the display.
- [FN+F10]: Pressing [F10] while holding [FN] allows you to change your selection of where to send your display video. Each time you press the combination of keys you will step to the next choice. The choices, in order, are: built-in display panel only, both built-in display panel and external monitor or external monitor only.

5. Volume Control

Your Fujitsu LifeBook has multiple volume controls which interact with each other.



CAUTION

- Any software that contains audio files will also contain a volume control of its own. Both the main LifeBook volume control and the software volume control will interact with each other, but it should be noted that if you set your software volume to Off, you will override the main volume control setting and the software setting will control the maximum knob setting.

Controlling The Volume

There is the hardware volume control located on the LifeBook itself, and the volume control set from within the Volume Control on the Taskbar. In addition to those, there are also application volume controls that are set individually within each program.

Each source discussed above puts an upper limit on the volume level that must then be followed by the other sources. For example:

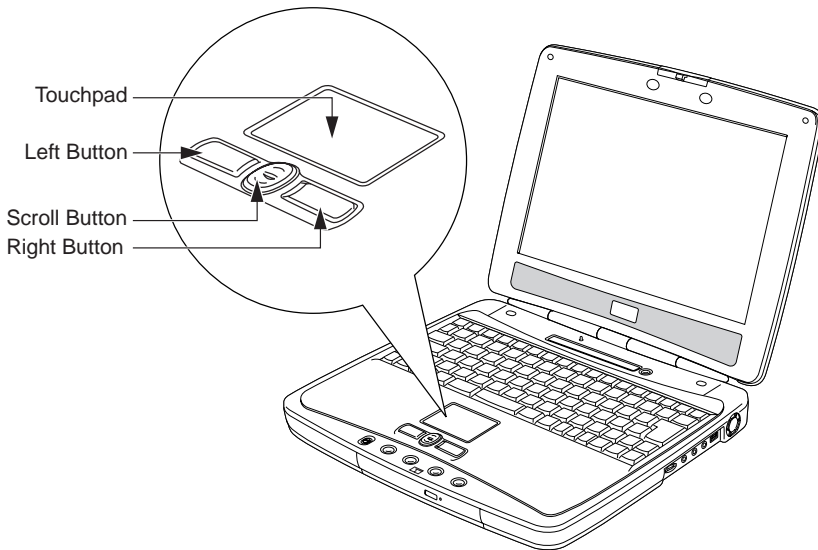
- Your hardware volume control is all the way down, therefore your individual software application's volume control has no effect on the volume.

We recommend that you use the hardware volume controls to set the upper limit for the sound level and then make fine adjustments with the Volume Control on the Taskbar and individual application software.

Setting The Hardware Volume Control

1. Turn the volume control knob to the right of your LifeBook to increase the volume.
2. Turn the volume control knob to the left to decrease the volume.

6. Touchpad Pointing Device



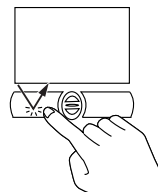
The Touchpad pointing device comes built into your Fujitsu LifeBook. It is used to control the movement of the pointer to select items on your display panel. The Touchpad is composed of a cursor control, a left and right button, and a scrolling button. The cursor control works the same way a mouse does, and moves the cursor around the display. It only requires light pressure with the tip of your finger. The left and right buttons function the same as mouse buttons. The actual functionality of the buttons may vary depending on the application that is being used. The scrolling button allows you to navigate quickly through pages, without having to use the scroll bars.

Critical Point

- An external mouse can be connected to the USB port on your LifeBook, and used simultaneously with the Touchpad. However, if you boot the system with an external mouse connected, the Touchpad will be disabled or enabled depending on the specifications in your BIOS settings.
- To toggle between the internal mouse and an external mouse, press [F4] while holding down the [FN] button.

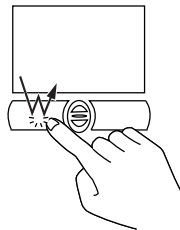
Clicking

Clicking means pushing and releasing a button. To left-click, move the cursor to the item you wish to select, press the left button once, and then immediately release it. To right-click, move the mouse cursor to the item you wish to select, press the right button once, and then immediately release it. You also have the option to perform the clicking operation by tapping lightly on the Touchpad once.



Double-Clicking

Double-clicking means pushing and releasing the left button twice in rapid succession. This procedure does not function with the right button. To double-click, move the cursor to the item you wish to select, press the left button twice, and then immediately release it. You also have the option to perform the double-click operation by tapping lightly on the Touchpad twice.

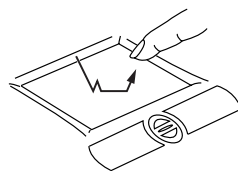


Critical Point

- If the interval between clicks is too long, the double-click will not be executed.
- Parameters for the Touchpad can be adjusted from the Mouse Properties dialog box located in the Windows Control Panel.

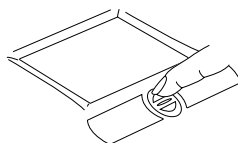
Dragging

Dragging means pressing and holding the left button, while moving the cursor. To drag, move the cursor to the item you wish to move. Press and hold the left button while moving the item to its new location and then release it. Dragging can also be done using the Touchpad. First, tap the Touchpad twice over the item you wish to move making sure to leave your finger on the pad after the final tap. Next, move the object to its new location by moving your finger across the Touchpad, and then release your finger.



Scrolling

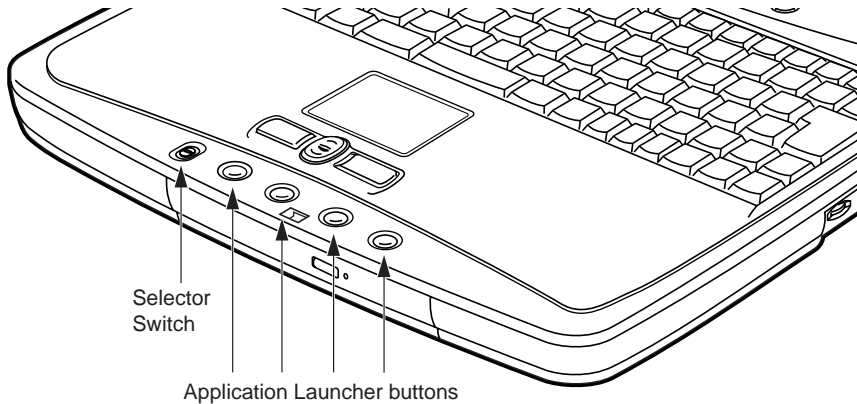
Using the Scrolling button allows you to navigate through a document quickly without using the window's scroll bars. This is particularly useful when you are navigating through on-line pages. To use the Scrolling button, press the crescent shape at the top or bottom of the button to scroll up or down a page. When you have reached the desired section of the page, release the button.



Touchpad Control Adjustment

The Windows Control Panel allows you to customize your Touchpad with selections made from within the Mouse Properties dialog box.

7. LifeBook Application Panel



A unique feature of your Fujitsu LifeBook is the LifeBook Application Panel. This panel allows you to operate the media player drive as an independent audio media player or launch applications with the touch of one button.

Critical Point

- LifeBook Application Panel uses the date and time settings of your LifeBook. If the date and time are incorrect, you can adjust this setting in the Windows Control Panel.
- The media player that your LifeBook uses is determined by the configuration of your system.

Your LifeBook is pre-installed with software utilities that let you operate and configure your LifeBook Application Panel. These utilities are found under the Start menu, under Programs, then under LifeBook Application Panel. They include a Media Player, Application Panel Setup, Application Panel Guide, Activate Panel and Deactivate Panel. The LifeBook Application Panel system makes your LifeBook more than just another notebook computer.

The panel consists of the following elements:

Selector Switch

Located at the far left of the panel, this switch allows you to select the function of the panel—either as an Application Launcher, a Media Player, or as a lock. Set the switch to the middle position when the Application Launcher buttons are not being used.

Application Launch Media Player Buttons

When the selector switch is in the Application position, pressing any of the buttons will launch a user-defined application. When the selector switch is in the Media Player position, the buttons operate the media player, and when the selector switch is in the Lock position, the buttons are disabled and do nothing when pressed.

Configuring Your LifeBook Application Panel

When you start Windows 98 Second Edition or Me, the LifeBook Application Panel 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 the LifeBook Application Panel is active.

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

To configure your LifeBook Application Panel with Application Panel Setup:

1. Click on **Start**.
2. Click on **Programs**.
3. Click on **LifeBook Application Panel**.
4. Click on **Application Panel Setup**.

The Application Panel Setup utility will appear. There are tabs that correspond to the application buttons on the LifeBook Application Panel. When you receive your LifeBook, these buttons are pre-configured to launch specific programs.

Critical Point

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

To change an application associated with one of the buttons, click on the tab for the button you would like to reconfigure. Click on Browse from the 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.

One of the buttons may be preconfigured to launch your Windows 98 Second Edition or Me default Internet browser. In order to reconfigure it to launch a different 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 click on the application you wish to launch with this button.
4. Click OK.

The button will now launch the new application. If you want to return to launching your Windows 98 Second Edition or Me 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.

At the bottom of each application setup page are two selectable options. The first will enable/disable the button when your LifeBook is in Standby mode, and the second will enable/disable the button when your LifeBook is in the pseudo-off state. You can enable/disable either or both of these functions simply by clicking on the option.

Critical Point

- If you choose to have the buttons work when the LifeBook is in standby, they will function even if hit accidentally, and will turn on your LifeBook even if you are not present or using your LifeBook. This could deplete your battery, and you will need to recharge it before using the LifeBook. As a precaution, move the selector switch to the Lock position when you are away from your LifeBook.

When you have finished with Application Panel Setup, click on OK, and the new settings will take effect. You can reconfigure your LifeBook Application Panel as often as you like.

Using The Media Player

The media player enables you to use your LifeBook's media player drive as an audio media player in stand-by mode or in suspend mode. As long as the power switch is on, the media player will function.

Critical Point

- If you shut down from Windows while the media player is playing an audio CD, it will stop.
- You cannot go into Suspend Mode or Hibernation (Save-to-Disk) Mode while the Media Player is playing a CD.

There is no configuration required for media player operation. The buttons are pre-configured to work like a normal media player. When the selector switch is in the bottom position, the buttons will operate as follows:

- Stop/Eject: This is the first button to the right of the Selector switch. If you press it once, it will stop an audio CD that is playing. If you press it twice, it will eject the audio CD.
- Play/Pause: This is the second button to the right of the Selector switch. Press this button to start playing an audio CD starting at Track 1. While the audio CD is playing, press it to pause. Press it again to continue.

Critical Point

- If you press the play button and nothing happens, you either have the Selector switch set to the Application or Lock position, there is no audio CD in the media player drive, or you have a CD other than an audio CD in the drive.
- Because of the Windows CD auto-insertion function, audio CDs will start playing immediately after they are inserted if your LifeBook is On. This will not happen if you are using the Media Player in Suspend or Pseudo-off modes.

- Fast Backward: This is the third button to the right of the Selector switch. Press this button once to skip one track back.
- Fast Forward: This is the fourth button to the right of the Selector switch. Press this button once to skip forward one track.

Desktop Control Panel

Your LifeBook includes a desktop control panel for your LifeBook's desktop that you can use at any time. You may use this panel to operate the media player when you have the Selector switch in the Application or Lock position.

To use the desktop control panel:

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

The desktop control panel will appear in the upper right corner of your screen. To close the panel:

1. Click on the "x" button.

To minimize the panel:

2. Click on the "-" button.

You can select from four appearances for your desktop control panel. Simply double click on the track display area of the panel, and a menu will appear which will allow you to select from a pull down menu. On the same pop-up are two other options: "Always on top" and "Continuous Play". If you click on "Always on top" the desktop controls will always be seen on your screen, no matter what other application you are running. If you click on "Continuous Play", your Media Player will automatically start over at the beginning of the CD in the drive as soon as it finishes the last track.

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

Critical Point

- If you have your display set to 256 colors, the basic display will appear no matter which one you select. You will need to set your display colors to more than 256 in order to select other display appearances.
- When you close the Media Player's desktop control panel, it will stop the audio Media Player. Simply press the Play button if you would like to continue listening, and the Media Player will restart at track 1. The Selector switch must be in the Media Player position.

Deactivating and Activating the LifeBook Application Panel

To deactivate the LifeBook Application Panel, follow these easy steps:

1. Click on **Start**.
2. Click on **Programs**.
3. Click on **LifeBook Application Panel**.
4. Click on **Deactivate Panel**.

To reactivate, follow the same procedure, except for step 4. Click on Activate Panel instead.

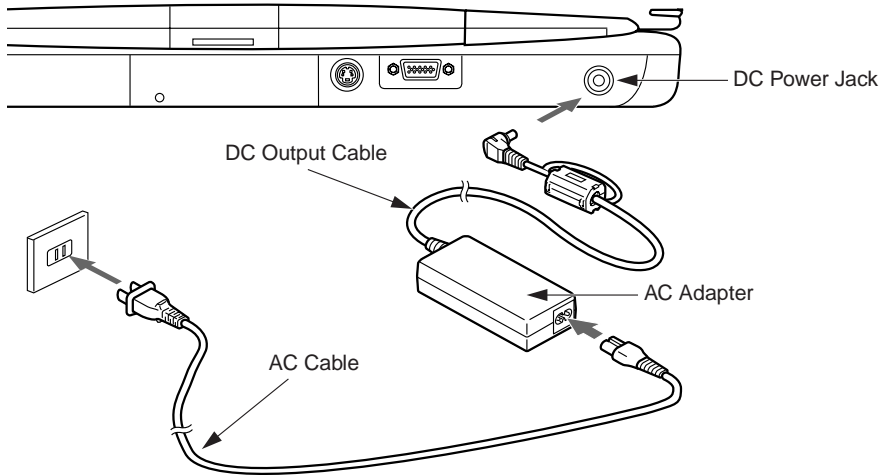
Critical Point

- Every time you start Windows 98 Second Edition or Me, the LifeBook Application Panel is activated, even if you deactivated it before you shut down.

Application Panel Setup

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

8. Power Sources



Your Fujitsu LifeBook has three possible power sources: a primary Lithium ion battery, an AC adapter or an optional Auto/Airline adapter.

Connecting The Power Adapters

The AC adapter or optional Auto/Airline adapter provides power for operating your LifeBook and charging the batteries.

Connecting the AC Adapter

1. Plug the DC output cable into the DC power jack of your LifeBook.
2. Plug the AC adapter into an AC electrical outlet.

Connecting the Optional Auto/Airline Adapter

1. Plug the DC output cable into the DC power jack on your LifeBook.
2. Plug the Auto/Airline adapter into the cigarette lighter of an automobile with the ignition key in the On or Accessories position.
OR
3. Plug the Auto/Airline adapter into the DC power jack on an airplane seat.

Switching from AC Adapter Power or the Auto/Airline Adapter to Battery Power

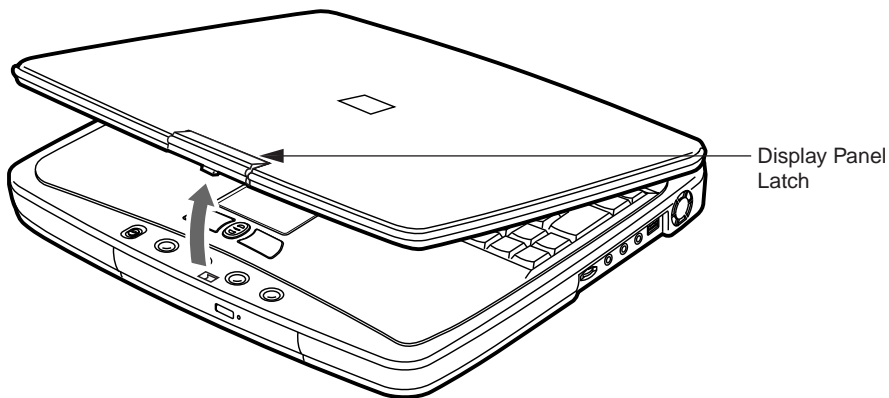
1. Be sure that you have at least one charged battery installed.
2. Remove the AC adapter or the Auto/Airline adapter.



CAUTION

- The Lithium ion battery is not charged upon purchase. Initially, you will need to connect either the AC adapter or the Auto/Airline adapter to use your LifeBook.

9. Display Panel



Your Fujitsu LifeBook contains a display panel that is backlit for easier viewing in bright environments and maintains top resolution through the use of active-matrix technology.

Opening The Display Panel

1. Slide the latch located at the top of the display panel to the right. This releases the locking mechanism and raises the display slightly.
2. Lift the display backwards, being careful not to touch the screen, until it is at a comfortable viewing angle.

Adjusting Display Panel Brightness

Once you have turned on your LifeBook, you may want to adjust the brightness level of the screen to a more comfortable viewing level. There are two ways to adjust the brightness, keyboard and power management utility.

Keyboard

Adjusting the brightness using the keyboard changes the setting only temporarily.

- [FN+F6]: Pressing repeatedly will lower the brightness of your display.
- [FN+F7]: Pressing repeatedly will increase the brightness of the display.

Critical Point

- If using AC power, your brightness setting is set to its highest level by default. If using battery power, your brightness settings is set to approximately mid-level by default.

Power Management Utility

Adjusting the brightness using the Power Management Utility changes the setting permanently.

1. Double-click the Power Management Utility icon in the lower right corner of your display. This will open the BatteryAid Properties dialog box.
2. Select the Fujitsu BatteryAid (2/2) tab and adjust your LCD Backlighting to the desired level.
3. Click OK or Apply to permanently change the settings.

You may need to readjust the brightness level periodically depending on your operating environment.

Critical Point

- The higher the brightness level, the more power the LifeBook will consume and the faster your batteries will discharge. For maximum battery life, set the brightness to as low a level as possible.

Closing The Display Panel

1. Holding the edge of your display panel, pull it forward until it is flush with the body of your LifeBook.
2. Push down until you hear a click. This will engage the locking mechanism and prevent your display panel from opening unexpectedly.

10. Starting Your LifeBook

Power On

Suspend/Resume/Power On Button

The suspend/resume/power on switch is used to turn on your LifeBook from its off state. Once you have connected your AC adapter or charged the internal Lithium ion battery, you can power on your LifeBook.



CAUTION

- When you turn on your LifeBook be sure you have a power source. This means that at least one battery is installed and charged, or that the AC or Auto/Airline adapter is connected and has power.

To turn on your LifeBook from its off state, press the suspend/resume/on button, located adjacent to the status indicator panel. When you are done working you can either leave your LifeBook in Suspend mode, or you can turn it off.



CAUTION

- Do not carry your LifeBook around with the power on or subject it to shocks or vibration, as you risk damaging your LifeBook.

When you power on your LifeBook, it will perform a Power On Self Test (POST) to check the internal parts and configuration for correct functionality. If a fault is found, your LifeBook will emit an audio warning and/or an error message will be displayed. Depending on the nature of the problem, you may be able to continue by starting the operating system or by entering the BIOS setup utility and revising the settings.

After satisfactory completion of the Power On Self Test (POST), your LifeBook will load your operating system.



CAUTION

- Never turn off your LifeBook during the Power On Self Test (POST) or it will cause an error message to be displayed when you turn your LifeBook on the next time.

Boot Sequence

The procedure for starting-up your Fujitsu LifeBook is termed the Bootup sequence and involves your LifeBook's BIOS. When your LifeBook is first turned on, the main system memory is empty, and it needs to find instructions to start up your LifeBook. This information is in the BIOS program. Each time you power up or restart your LifeBook, it goes through a boot sequence which displays a Fujitsu logo until your operating system is loaded. During booting, your LifeBook is performing a standard boot sequence including a Power On Self Test (POST). When the boot sequence is completed without a failure and without a request for the BIOS Setup Utility, the system displays the operating system's opening screen.

The boot sequence is executed when:

- You turn on the power to your LifeBook.
- You restart your LifeBook from the Windows Shut Down dialog box.
- The software initiates a system restart. Example:
When you install a new application.
- You reset the system by pressing the three keys [CTRL+ALT+DEL].

Bios Setup Utility

The BIOS Setup Utility is a program that sets up the operating environment for your LifeBook. Your BIOS is set at the factory for normal operating conditions, therefore there is no need to set or change the BIOS' environment to operate your LifeBook.

The BIOS Setup Utility configures:

- Device control feature parameters, such as changing I/O addresses and boot devices.
- System Data Security feature parameters, such as passwords.

Entering the BIOS Setup Utility

To enter the BIOS Setup Utility do the following:

1. Turn on or restart your LifeBook.
2. Press the [F2] key once the Fujitsu logo appears on the screen. This will open the main menu of the BIOS Setup Utility with the current settings displayed.
3. Press the [RIGHT ARROW] or [LEFT ARROW] key to scroll through the other setup menus to review or alter the current settings.

BIOS Guide

A guide to your LifeBook's BIOS is available online. Please visit our service and support Web site at www.fujitsu-pc-asia.com. Once there, click on the Technical Support link, and select your LifeBook series from the 30 pull-down menu. Once you have done that, select BIOS Guides from the pull-down menu, then select the BIOS guide for your LifeBook model.

Critical Point

- If your data security settings require it, you may be asked for a password before the BIOS main menu will appear.

Booting The System With Windows 98 Second Edition Or Me

We strongly recommend that you not attach any external devices and do not put a DVD/CD in your drive until you have gone through the initial power on sequence.

When you turn on your LifeBook for the first time, it will display a Fujitsu logo on the screen. If you do nothing the system will read the hard drive for the operating system software, flash the LifeBook configuration information on the screen, and then the Windows 98 Second Edition or Me Welcome will begin.

Designed to accommodate the needs of many users, in many different countries, Windows 98 Second Edition or Me needs to be configured the first time you use them. Windows 98 Second Edition and Me have three parts:

- **Getting Started:** You have the opportunity to enter custom information for your configuration file and setup your modem so that your LifeBook will be prepared to dial out.
- **Registration:** Easy online registration for Windows 98 Second Edition or Me with Microsoft.
- **Windows License Agreement and Final Settings:** You have the opportunity to review the Windows 98 Second Edition or Me License Agreement and then your configuration file will be generated.

Critical Point

- You may click Cancel at any time within this process to shut down Windows 98 Second Edition or Me. You may restart this process at any time in the future, but you must complete it in order to use your computer.

Getting Started

Read the instructions on the screens carefully and fill in the information as directed. You will be asked for such items as the language you wish to use, the country in which you live, your first and last name, and about how you dial out from where you will be using your LifeBook. For the modem settings, enter your current location information where you will be using your LifeBook. If you are not connected to a phone line and plan to register at a later time, you may click the Skip button, and you will go directly to the condition of use page.

Once you have set up your LifeBook to dial out, Windows 98 Second Edition or Me will make a free telephone call to test the settings. If the call is unsuccessful, you will be returned to the phone settings page where you may try to fix them. If you are unable to fix the settings please contact Fujitsu PC Service and Support. If you would simply like to move on, and register at a later time, you may click the Skip button, and you will go directly to the Condition of Use page.

Registration

If your connection is successful, you will go to the Registration Confirmation page. On this page simply enter the requested information, and then check the box at the bottom to register your copy of Windows 98 Second Edition or Me with Microsoft. Once you have finished, click the Next button to continue.

Critical Point

- If you do not register at this time you can do it later simply by double-clicking on the LifeBook Registration icon on your desktop and following the instructions.

You will then go through the Fujitsu registration process. Follow the instructions on the screens, and enter all of the necessary information. Be as specific as possible so that if you need help the service and support team will be able to serve you better.

Final Settings

The first part of your final settings is the Windows End User License Agreement. Read the agreement carefully. When you finish reading you must accept or reject the terms of the agreement and then click on the Next button.

Critical Point

- If you reject the terms of the license agreement you will be asked to review the license agreement for information on returning Windows 98 Second Edition or Me or to shut down your LifeBook.
- You cannot use your LifeBook until you have accepted the License Agreement. If you stop the process your LifeBook will return to the beginning of the Windows Welcome Process, even if you shut your LifeBook down and start it up again.

11. Power Management

Your Fujitsu LifeBook has many options and features for conserving battery power. Some of these features are automatic and need no user intervention, such as those for the internal modem. However, others depend on the parameters you set to best suit your operating conditions, such as those for the display brightness. Internal power management for your LifeBook may be controlled from settings made in your operating system, pre-bundled power management application, or from settings made in BIOS setup utility.

Besides the options available for conserving battery power, there are also some things that you can do to prevent your battery from running down as quickly. For example, you can create an appropriate power saving profile, put your LifeBook into Suspend mode when it is not performing an operation, and you can limit the use of high power devices. As with all mobile, battery powered computers, there is a trade-off between performance and power savings.

Suspend/Resume/Power On Button

When your LifeBook is active, the Suspend/Resume/Power On button can be used to manually put your LifeBook into Suspend mode. Push the Suspend/Resume/Power On button when your LifeBook is active, but not actively accessing anything, and immediately release the button. You will hear two short beeps and your system will enter Suspend mode.

If your LifeBook is suspended, pushing the Suspend/Resume/Power On button will return your LifeBook to active operation. You can tell whether or not your system is in Suspend mode by looking at the Power indicator. If the indicator is visible and not flashing, your LifeBook is fully operational. If the indicator is both visible and flashing, your LifeBook is in Suspend mode. If the indicator is not visible at all, the power is off or your LifeBook is in Hibernation (Save-to-Disk) mode. (See Hibernation Feature)

Suspend Mode

Suspend or Standby mode in Windows 98 Second Edition or Me saves the contents of your LifeBook's system memory during periods of inactivity by maintaining power to critical parts. This mode will turn off the CPU, the display, the hard drive, and all of the other internal components except those necessary to maintain system memory and allow for restarting. Your LifeBook can be put in Suspend mode by:

- Pressing the Suspend/Resume/Power On button when your system is turned on.
- Selecting Standby from the Windows Shut Down menu.
- Timing out from lack of activity.
- Allowing the battery to reach the Dead Battery Warning condition.

Your LifeBook's system memory typically stores the files on which you are working, opens applications information, and any other data required to support the operations in progress. When you resume operation from Suspend mode, your LifeBook will return to the point where it left off. You must use the Suspend/Resume/Power On button to resume operation, and there must be an adequate power source available, or your LifeBook will not resume.

CAUTION

- If you are running your LifeBook on battery power, be aware that the battery continues to discharge while your LifeBook is in Suspend mode, though not as fast as when fully operational.

Hibernation (Save-to-Disk) Feature

The Hibernation (Save-to-Disk) feature saves the contents of your LifeBook's system memory to the hard drive as a part of the Suspend/Resume mode. You can enable or disable this feature.

Enable or Disable the Hibernation Feature

The default settings are not enabled. To enable or disable the Hibernation feature, follow these steps:

1. From the Start menu, select Settings, and then select Control Panel.
2. From the Control Panel, select Power Options.
3. Select the Hibernation tab. Select the box to enable or disable this feature.

Using the Hibernation Feature

1. From the Start menu, select Settings, then select Control Panel.
2. From the Control Panel, select Power Options.
3. Select the Advanced tab. Select Hibernate from the pull down menu for Power buttons.

Critical Point

- Disabling the Suspend/Resume/Power On button prevents it from being used to put your LifeBook in Suspend or Hibernation (Save-to-Disk) mode. The resume function of the button cannot be disabled.



CAUTION

- The Suspend or Hibernation (Save-to-Disk) mode should not be used with certain PC Cards. Check your PC Card documentation for more information.

Critical Point

- If your LifeBook is actively accessing information when you enter the Suspend or Hibernation (Save-to-Disk) mode, changes to open files are not lost. The files are left open and memory is kept active during Suspend mode or the memory is transferred to the internal hard drive during Hibernation (Save-to-Disk) mode.
- When PC Cards or external devices are in use, Save-to-Disk mode cannot return to the exact state prior to suspension, because all of the peripheral devices will be re-initialized when the system restarts.
- The main advantage of using the Hibernation (Save-to-Disk) function is that power is not required to maintain your data. This is particularly important if you will be leaving your LifeBook in a suspended state for a prolonged period of time. The drawback of using Hibernation (Save-to-Disk) mode is that it lengthens the power down and power up sequences and resets peripheral devices.
- Windows 98 only: Hibernation (Save-to-Disk) mode requires allocating a significant amount of hard drive capacity for saving all system memory, which reduces your usable disk space. When you purchase your LifeBook it will have space allocated for the memory installed. If you upgrade the original system by adding a memory upgrade module without changing the size of your Hibernation (Save-to-Disk) allocation you will get an error message when you try to activate Hibernation (Save-to-Disk) mode and it will not work. Use the PHDISK Utility to increase the size of the Hibernation (Save-to-Disk) file, SAVE2DSK.BIN. You can download the Hibernation (Save-to-Disk) File Allocation information from our Web site at www.fujitsupc.com. If you need help, contact your support representative for recommendations.

Standby Mode

Standby mode is one of the power management parameters. When Standby mode is activated, your LifeBook shuts off the display and turns off the hard drive when there is no activity (keystroke, pointer action, sound generation, video display change, modem transmission or reception, etc.) on your LifeBook for the user-selected Standby time-out period. Any activity will cause your LifeBook to return to normal operation automatically. This feature is independent of the Suspend/Resume/Power On button.

Display Timeout

The Video Timeout is one of the power management parameters. This feature saves power by turning off the display if there is no keyboard or pointer activity for the user selected timeout period. Any keyboard or pointer activity will cause the display to restart automatically. This feature is independent of the Suspend/Resume/Power On button and can be enabled and disabled in Windows and BIOS setup utility.

Hard Disk Timeout

The Hard Disk Timeout is another one of the power management parameters. This feature saves power by turning off the hard drive if there is no hard drive activity for the user selected timeout period. Any attempt to access the hard drive will cause it to restart automatically. This feature is independent of the Suspend/Resume/Power On button and can be enabled and disabled in Windows and BIOS setup utility.

Windows 98 Second Edition Or Me Power Management

The Power Management icon located in the Windows 98 Second Edition or Me Control Panel allows you to configure some of the power management settings. For example, you can use the Power Management to set the timeout values for turning off the display and hard disks whether you are running the LifeBook on battery power or one of the adapters. The settings may also be changed in the BIOS.

Restarting The System

If your system is on and you need to restart it, be sure that you use the following procedure.

1. Click the Start button, and then click Shut Down.
2. Select the Restart option from within the Windows Shut Down dialog box.
3. Click OK to restart your LifeBook. Your LifeBook will shut down and then reboot.



CAUTION

- Turning off your LifeBook without exiting Windows or turning on your LifeBook within 10 seconds of the LifeBook being shut off may cause an error when you start the next time.

Power Off

Before turning off the power by choosing Shut Down from the Windows 98 Second Edition or Me Start menu, check that the Hard Drive, media player drive, PC Card and Floppy Disk Drive Access indicators are all Off. If you turn off the power while accessing a disk or PC Card there is a risk of data loss. To assure that your LifeBook shuts down without error, use the Windows shut down procedure.



CAUTION

- Never turn your LifeBook off while an application is running. Be sure to close all files, exit all applications, and shut down your operating system prior to turning off the power with the power switch. If files are open when you turn the power off, you will lose any changes that have not been saved, and may cause disk errors.

Using the correct procedure to shut down from Windows, allows your LifeBook to complete its operations and turn off power in the proper sequence to avoid errors. The proper sequence is:

1. Click the Start button, and then click Shut Down.
2. Select the Shut Down option from within the Windows Shut Down dialog box.
3. Click OK to shutdown your LifeBook.

If you are going to store your LifeBook for a month or more see Care and Maintenance Section.

SECTION

2

1. Lithium ion Battery

Your Fujitsu LifeBook has a Lithium ion battery that provides power for operating your LifeBook when no external power source is available. The battery is durable and long lasting, but should not be exposed to extreme temperatures, high voltages, chemicals or other hazards.

The Lithium ion battery operating time may become shorter if it is used under the following conditions:

- When used at temperatures that exceeds a low of 5°C or a high of 35°C. Extreme temperatures not only reduce charging efficiency, but can also cause battery deterioration. The Charging icon on the Status Indicator panel will flash when you try to charge a battery that is outside its operating temperature range.
- When using a high current device such as a modem, DVD, or hard drive, using the AC adapter will conserve your battery life.

CAUTION

- Actual battery life will vary based on screen brightness, applications, features, power management settings, battery condition and other customer preferences. Media player drive or hard drive usage may also have a significant impact on battery life. The battery charging capacity is reduced as the battery ages. If your battery is running low quickly, you should replace it with a new one.
- Do not leave a faulty battery in your LifeBook. It may damage your AC adapter, optional Auto/Airline adapter, another battery or your LifeBook itself. It may also prevent operation of your LifeBook by draining all available current into the bad battery.
- Under federal, state, or local law it may be illegal to dispose of batteries by putting them in the trash. Please take care of our environment and dispose of batteries properly. Check with your local government authority for details regarding recycling or disposing of old batteries.

Recharging The Batteries

If you want to know the condition of the primary Lithium ion battery, check the Battery Level indicator located on the Status Indicator panel. The indicator changes as the battery level changes.

The Lithium ion battery is recharged internally using the AC adapter or Auto/Airline adapter. To recharge the battery make sure the battery that needs to be charged is installed in your LifeBook and connect the AC or Auto/Airline adapter.

Critical Point

- Make sure that the Battery Charging indicator and the percentage charge is shown inside the Battery Level icon on the Status Indicator Panel.

There is no memory effect on the Lithium ion battery, therefore you do not need to discharge the battery completely before recharging. The charge times will be significantly longer if your LifeBook is in use while the battery is charging. If you want to charge the battery more quickly, put your LifeBook into Suspend mode, or turn it off while the adapter is charging the battery.

CAUTION

- Using heavy current devices such as a Modem or frequent media player accesses may prevent charging completely.

Low Battery State

When the battery is running low, a low battery notification message will appear. If you do not respond to the low battery message, the batteries will continue to discharge until they are too low to operate. When this happens, your LifeBook will go into Suspend mode. There is no guarantee that your data will be saved once the LifeBook reaches this point.

CAUTION

- Once the low battery notification message appears, you need to save all your active data and put your LifeBook into Suspend mode until you can provide a new power source. You should provide a charged battery, an AC power adapter, or Auto/Airline adapter as soon as possible.
- When you are in Suspend mode there must always be at least one power source active. If you turn off the power with the power switch, or remove all power sources while your LifeBook is in Suspend mode, any data that has not been saved to the hard drive will be lost.

Dead Battery Suspend mode shows on the Status indicator just like the normal Suspend mode. Once your LifeBook goes into Dead Battery Suspend mode you will be unable to resume operation until you provide a source of power either from an adapter, or a charged battery. Once you have provided power, you will need to press the Suspend/Resume button to resume operation. In the Dead Battery Suspend mode, your data can be maintained for some time, but if a power source is not provided promptly, the Power indicator will stop flashing and go out, meaning that you have lost the data that was not stored. Once you provide power, you can continue to use your LifeBook while an adapter is charging the battery.

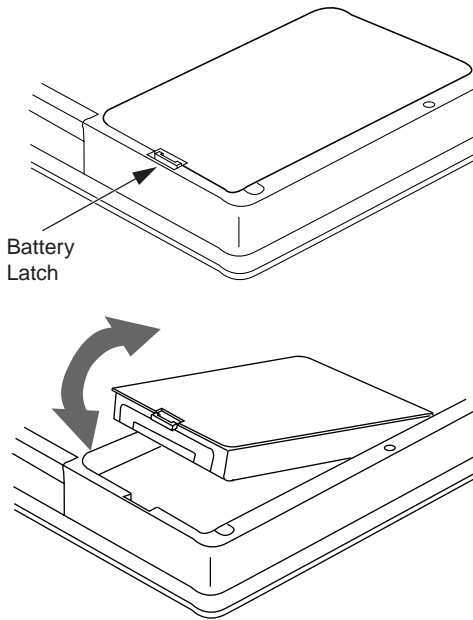
Shorted Batteries

The Status Indicator panel uses a symbol inside the battery outline of the Battery Level indicator to display the operating level available in that battery. If this display shows a Shorted Battery, it means that the battery is damaged and must be replaced so it does not damage any other parts of your LifeBook.

Replacing The Battery

With the purchase of an additional battery, you can have a fully charged spare to swap with one that is not charged.

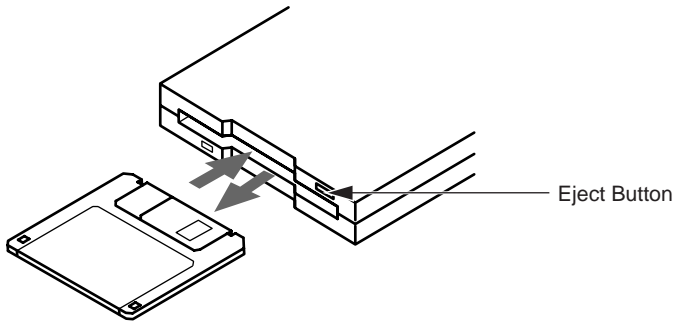
1. Have a charged battery ready to install.
2. Shut down your LifeBook and disconnect the AC adapter.
3. Press the battery release latch while lifting the battery.
4. Remove the battery from the bay.
5. Slide the new battery into the bay. The pins will automatically align with the connector.
6. Press the battery down until the battery release latch snaps into place.
7. Plug in the AC adapter and turn the power on.



CAUTION

- If the Lithium ion battery connector is not fully seated, you may not be able to use your LifeBook or charge your battery.

2. External USB Floppy Disk Drive



Your LifeBook has an external USB floppy disk drive which can read and write information on removable 1.44MB and 720KB floppy disks.

Critical Point

- Your LifeBook is preconfigured to boot from a USB floppy drive. Reference the BIOS manual for further information on changing the default boot drive.

Loading A Disk

To load a disk into your disk drive, follow these easy steps:

1. Position the disk so that its label is facing upwards and the shutter side is pointing towards the drive.
2. Push the disk into the drive until the Eject button pops out and you hear a click.

Critical Point

- When there is no disk in the drive, the Eject button is flush with your LifeBook.

Ejecting A Disk

To eject a disk from the disk drive, follow these easy steps:

1. Check that the Floppy Disk Drive Access indicator is inactive.
2. Press the Eject button. This will push your disk partially out of the drive.
3. Remove the disk.

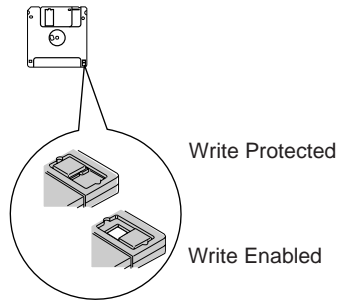
CAUTION

- If you eject the disk while the Floppy Disk Drive Access indicator is active, there is a risk of damaging the data on the disk, the disk itself or even the disk drive.

Preparing A Disk for Use

Before you can use a new disk, it needs to be prepared so your LifeBook knows where to store information. This preparation is called formatting or initializing a disk. You will need to format new disks, unless they are preformatted. (Please refer to your operating system manual for step-by-step instructions on formatting a disk)

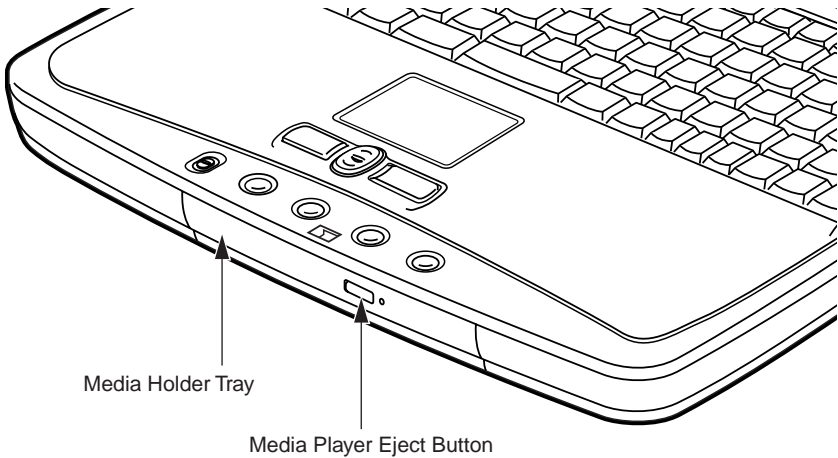
To prevent accidental erasure of the data stored on a disk, slide the “write protect” tab until a small hole is exposed. This sets the disk into a protected state where nothing can be added or removed. If you want to add or remove data on a protected disk, slide the “write protect” tab to close the small hole.



CAUTION

- Formatting a floppy disk that already contains data will erase all of the information on the disk.

3. Media Player Drive



Your Fujitsu LifeBook contains a media player drive which is either DVD player or a CD-RW player. A DVD player gives you access to movie, software, and audio DVD/CDs. A CD-RW player allows you to access software or audio CDs, and to write data onto recordable CDs.

Media Player Software

DVD Model only: With the media player drive and Media Player software you can play DVD movies on your LifeBook. The media player includes controls which allow you to take full advantage of the features of a DVD movie, as well as standard features such as fast forward, fast reverse, pause, etc.

CD-RW Model only: With the media player drive, you can read audio CDs, and write data onto a recordable CD-R or CD-RW disc.

If you should need to install your Media Player software, refer to the applicable readme file on the Driver Applications CD-ROM.

Critical Point

- You should periodically check the Fujitsu Web site at www.fujitsu-pc-asia.com for current updated drivers.



CAUTION

- Do not operate your media player drive unless your LifeBook is sitting on a flat surface. Using a drive when the system is not level may damage the drive or prevent proper operation.
- Prolonged use of the media player drive, such as watching a DVD movie, will substantially reduce your battery life.

Loading A DVD, CD, CD-R, OR CD-RW (“MEDIA”)

To load a disc into your media player drive, follow these steps:

1. Push and release the eject button on the front of the media player drive to open the holder tray. The tray will come out of the LifeBook a short distance.
2. Gently pull the tray out until a media disc can easily be placed in the tray.

CAUTION

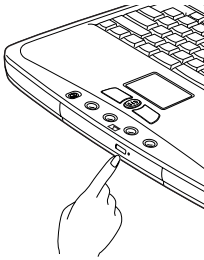
- There may be a protective sheet in the tray from when it was shipped; please make sure it is removed before operating the drive.

3. Place the media into the tray, label side up, with the hole in the center of the disc. Snap the disc onto the raised circle in the center of the tray.
4. Gently push the holder tray back in until you hear a click.

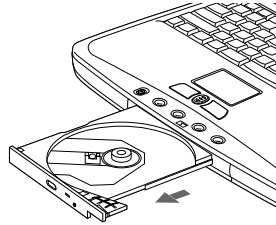
Critical Point

- If you have disabled the Auto Insert Notification Function, you will have to start the drive from your desktop, since your LifeBook will not automatically recognize that media has been loaded.

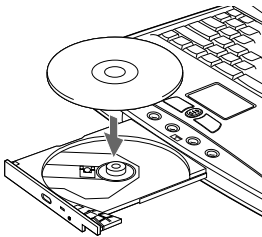
1



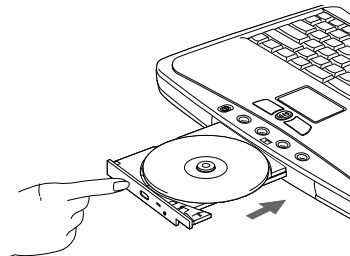
2



3



4



Removing Media

1. Push and release the eject button on the front of the media player drive. This will stop the drive and the holder tray will come out of the LifeBook a short distance.
2. Gently pull the tray out until the disc can easily be removed from the tray.
3. Carefully remove the media disc from the holder tray.
4. Gently push the holder tray back in until you hear a click.

Using The Media Player Software

Critical Point

- Depending upon its configuration, your system may not have the media player software pre-installed. If it is not installed, reference the documentation that accompanies the media application.
- For details on using your media player, go to the Start menu and select Programs, InterVideo DVD, then select either InterVideo DVD Help or Inter-Video DVD Readme.

Starting a DVD Movie (DVD Models only)

1. Insert the DVD movie into the media player drive of your LifeBook. If the CD AutoRun feature activates, skip Step 2.
2. From the Start menu, select Programs, then select InterVideo WINDVD and click InterVideo WINDVD or double-click on the InterVideo WINDVD icon on the desktop. This will launch the DVD movie.
3. Click OK to close the About DVD Player Performance dialog box and the movie will begin.

Opening the Media Player Control Panel

With most DVD-ROMs, you have the option of altering how the movie should play and what you wish to view. You can do this by using the Media Player control panel and the mouse.

1. Right-click on the movie screen to open a dropdown menu for options.
2. Select View, then Player for all the controls available. This will open the control panel into the bottom of the screen.

Using the Media Player Control Panel

The Media Player software allows you to watch the movie much like a VCR player. You have the option to pause, rewind, fast-forward and stop the movie at any point.

1. To Pause the movie, click the **||** button.
2. To Rewind the movie, click the **◀◀** button to rewind to a specific portion of the movie, or the **◀◀|** button to return to the opening screen.
3. To Fast-forward the movie, click the **▶▶** button to forward to a specific portion of the movie, or the **▶▶|** button to jump to the ending credits.
4. To Stop the movie, click the **■** button.

Exiting the Media Player

1. Click on the **X** located in the upper right corner of the title bar. This will open a Media Player dialog box.
2. Click Yes to stop and exit the movie, or No to close the Media Player dialog box and return to the movie.

Using Dolby™ Headphone

The Dolby Headphone utility lets you enjoy multi-channel sound sources, such as movies, with realistic surround sound using your conventional stereo headphones.

Dolby Headphone is a signal processing system that enables your stereo headphones to realistically portray the sound of a five-speaker playback system.

Critical Point

- Media discs which do not have the Dolby Surround 5:1 symbol will not support Dolby Headphone.
- After making changes to the Dolby Headphone feature and clicking OK, wait at least ten seconds before making another change in order to allow the system to stabilize.

To use the Dolby Headphone feature, perform the following steps:

1. Double click the InterVideo WinDVD icon on your desktop.
2. On the toolbar that appears, click the Properties button (the fourth button from the left, with the image of a wrench).
3. On the Properties window, select the Dolby Headphone tab.
4. To enable Dolby Headphone, check the Enable Dolby Headphone box. To change the type of surround sound, select one of the radio buttons listed under Room Filter Setting.
5. Click OK. The Dolby Headphone feature will now be enabled until you disable it by unchecking Enable Dolby Headphone.

Using The Media Player On Battery Power

Since media player drives consume a lot of power, your overall battery life will be shorter when operating the media player drive continuously (such as watching a DVD movie) than during standard operation. Many movies run-times are longer than your LifeBook can support on a single battery. If you are watching a DVD movie on battery power you may need to swap in an additional, charged battery or attach AC power during the movie to view it in its entirety.



CAUTION

- Prolonged use of the media player drive, such as watching a DVD movie, will substantially reduce your LifeBook's battery life.
- Many movie run-times are longer than your system can support on a single battery. If you are watching a DVD movie on battery power you may need to swap in an additional, charged battery or attach AC power during the movie to view it in its entirety.

Critical Point

- An additional fully-charged battery is highly recommended if you will be watching DVD movies on battery power.

To Watch a Movie on Battery Power:

1. Have an additional full-charged battery or your AC adapter ready for use.
2. Start watching your DVD movie.
3. When the low battery warning occurs, immediately stop the movie and exit the media player.

**CAUTION**

- If you do not stop the media player quickly and the LifeBook attempts to auto-suspend (critical battery low state) the LifeBook will shutdown improperly. If this occurs, you will need to perform a hard reset and follow the instruction, if any, presented to you before the system will reboot.

4. Manually place your LifeBook into suspend mode by depressing the Suspend button and replace the discharged battery with an additional full-charged battery. Or if you do not have an additional battery, you may attach AC power as soon as you see the low battery warning.
5. Resume your LifeBook by pressing the Suspend button again. This step is not required if you attached AC power without entering suspend mode.
6. Restart your media player, locate and skip to the chapter of the movie you were last watching.
7. Continue watching your DVD movie.

Critical Point

- Some shorter DVD movies may not require you to swap batteries or attach AC power to complete them. However, it is best to be prepared since actual battery life while operating the media player drive cannot be guaranteed.

Auto Insert Notification Function

The Auto Insert Notification function allows your LifeBook to automatically start a DVD/CD as soon as it is inserted in the media player drive and the tray is closed. Your LifeBook will begin playing an audio DVD/CD or will start an application if the DVD/CD includes an auto run file.

Disabling Auto Insert Notification Function

To disable the Auto Insert Notification function, follow these easy steps:

1. Save all data and close all open applications.
2. From the Start menu, select Settings, and then select Control Panel.
3. Double-click the System icon. This will open the System Properties dialog box.
4. Select the Device Manager tab to display the device lists for your LifeBook.
5. Click on the + to the left of the CD player drive icon. The treeview will expand to show the media player drive manufacturer's name and model number.
6. Double-click on the media player drive manufacturer's name and model number. This will open the media player drive manufacturer's name and model number dialog box.
7. Select the Settings tab and then remove the check mark in the Auto Insert Notification box to turn it off.
8. Click OK.
9. Click Close in the System Properties dialog box, then click Yes in the System Settings Change pop-up window when it asks you to restart your machine and activate this change.

The Auto Insert Notification function can be re-activated by repeating this process and placing a check mark in the Auto Insert Notification box to turn it back on.

4. MiniDisc Recorder

Your LifeBook has an Optical Digital Audio Out Port to which you can connect an optional MiniDisc recorder. The optical digital audio out port is located on the right-hand side of your LifeBook.



CAUTION

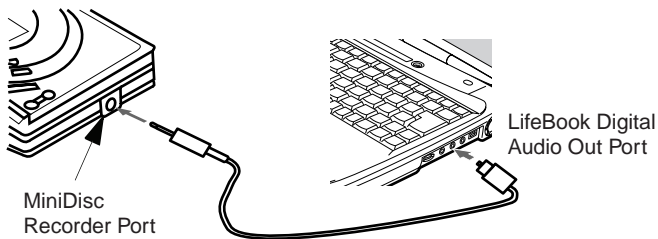
- The optical digital port emits a bright light; do not stare into the optical digital port, or you could cause damage to your eyes.

Critical Point

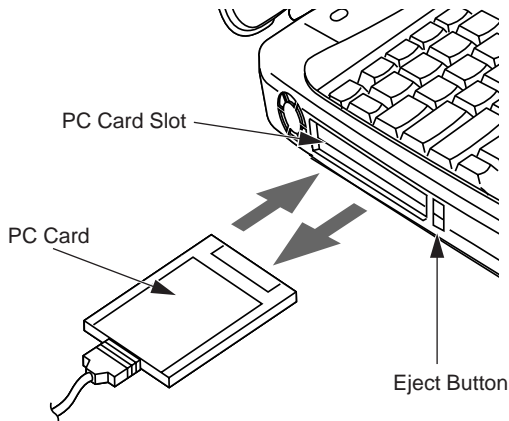
- MiniDisc recorder operation is dependent upon the individual vendor's instructions. Be sure to thoroughly review any documentation that comes with your player before using your device.

Connecting An Optical Digital Cable

To connect a minidisc recorder, install the cable as illustrated. Install the connector with the long plug into the player, as instructed in the vendor's user instructions. Connect the other end of the optical digital cable to the Optical Digital Audio Out port on your LifeBook. The Optical Digital Audio Out port is the middle round port on the right-hand side of your LifeBook.



5. PC Cards



Your Fujitsu LifeBook supports Type I, Type II and Type III PC Cards, which can perform a variety of functions depending on which type of PC Card you install. You can install one or two PC Cards at a time, depending on its type. Type I and Type II PC Cards can be installed together, while Type III PC Cards must be installed alone.

Some available PC Cards:

- Fax/data modem cards (Type II).
- Local area network (LAN) cards (Type II).
- IDE solid-state disk cards (Type II).
- SCSI cards (Type II).
- ATA cards (Type III).
- Other PC Cards that conform to PCMCIA 2.1 or CardBus standards.

For further information, refer to the instructions supplied with your PC Card.

Installing PC Cards

PC Cards are installed in the PC Card slot. To install a PC Card(s), follow these easy steps:

WARNING

- Installing or removing a PC Card(s) during your LifeBook's shutdown or bootup process may damage the card and/or your LifeBook.
- Do not insert a PC Card into a slot if there is water or any other substance on the card as you may permanently damage the card, your LifeBook, or both.

1. See your PC Card manual for specific instructions on the installation of your card. Some PC Cards may require your LifeBook to be Off while installing them.
2. Make sure there is no PC Card currently in the slot. If there is, see Removing PC Cards.
3. If either of the eject buttons is extended, press it in until it clicks.
4. Insert your PC Card into the slot with the product label facing up.
5. Push the card firmly into the slot until it is seated in the connector.

Removing PC Cards

To remove a PC Card(s), follow these easy steps:

1. See your PC Card manual for specific instructions on removing your card. Some PC Cards may require your LifeBook to be in Suspend Mode or Off while removing them.



CAUTION

- Windows has a shutdown procedure for PC Cards that must be followed before removing a card. (Please review your operating system manual for the correct procedure)

Critical Point

- If the dialog box states that the device cannot be removed, you must save all of your open files, close any open applications and shut down your LifeBook. Once your LifeBook has been shutdown, you must turn Off the power using the power switch.
2. Unlock the PC Card from the slot by first pressing the eject button associated with the slot in which the card is located. When pressed, the button will pop out.
 3. Firmly press the button again until it is flush with the LifeBook. This will eject the card slightly out of the slot allowing you to remove the card.



CAUTION

- If the PC Card(s) has an external connector and cable, do not pull the cable when removing the card.

6. Memory Upgrade Module

Your Fujitsu LifeBook comes with 64MB of high speed Synchronous Dynamic RAM (SDRAM) factory installed. To increase your LifeBook's memory capacity, you may install an additional memory upgrade module. The memory upgrade must be a dual-in-line (DIMM) SDRAM module.

CAUTION

- Do not remove any screws from the memory upgrade module compartment, except the ones specifically shown in the directions for installing and removing the memory upgrade module.

Installing A Memory Upgrade Module

To install a memory upgrade module follow these steps:

WARNING

- You must turn off power before installing the memory upgrade module.

1. Turn off power to your LifeBook using the power switch, and remove any power adapter (AC or auto/airline).
2. Turn your LifeBook face down on a clean work surface.
3. Using a Phillips head screwdriver, remove the screw securing the RAM Expansion cover. Remove the cover.

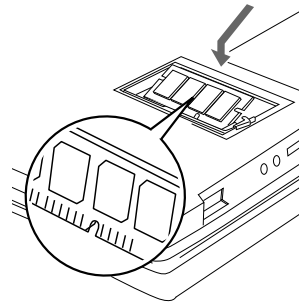
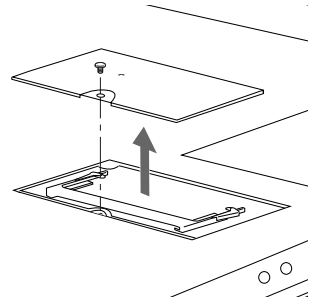
CAUTION

- The memory upgrade module can be severely damaged by electrostatic discharge (ESD). Be sure you are properly grounded when handling and installing the module.

4. Align the connector edge of the memory upgrade module, chip side up, with the connector slot in the compartment.
5. Insert the memory upgrade module at a 45° angle and press it firmly onto the connector.
6. Press the memory upgrade module down into the compartment until it locks underneath the retaining clip. You will hear a click when it is properly in place.
7. Replace the cover over the memory tray and reinstall the screw.

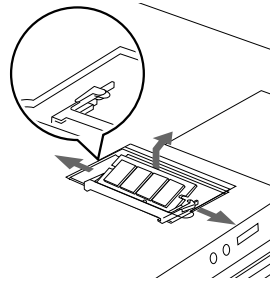
Critical Point

- The memory upgrade module is not something you routinely remove from your LifeBook. Once it is installed, you should leave it in place unless you want to increase system memory capacity.



Removing A Memory Upgrade Module

1. Perform steps 1 through 3 of Installing a Memory Upgrade Module.
2. Pull the clips sideways away from each side of the memory upgrade module at the same time.
3. While holding the clips out, remove the module from the slot by lifting it up and pulling towards the back of your LifeBook.
4. Store the memory upgrade module in a static guarded sleeve.
5. Replace the cover by following step 7 of Installing a Memory Upgrade Module.



Critical Point

- After changing your memory module configuration, you must complete the Resetting the Hibernation (Save-to-Disk) Parameters procedure in order for the Hibernation (Save-to-Disk) mode to operate properly on your LifeBook.

Checking The Computer Recognition Of New Memory Capacity

Once you have changed the system memory capacity by either adding or removing a memory upgrade module, be sure to check that your LifeBook has recognized the change.

You can check the memory capacity by looking at the main menu of the BIOS setup:

1. Turn on the power to your LifeBook using the power switch.
2. Allow the system to start booting and press the F2 key once the Fujitsu logo appears on the screen. This will open the main menu of the BIOS setup with the current settings displayed. Use the right arrow key to select Info in the BIOS Setup menu.

The System Memory and the Extended Memory capacity, as detected by your LifeBook during the Power On Self Test (POST), are displayed at the bottom of the Info menu screen. The chart below shows you the possible displays that can be shown on the main menu screen.

Critical Point

- If the total memory displayed is incorrect, check that your memory upgrade module is properly installed. (If the module is properly installed and the capacity is still not correctly recognized, see the Troubleshooting section)

Installed			Displayed	
On Board	Slot 1	Total RAM Installed	System Memory	Extended Memory
64MB	0	64MB	640K	63MB
64MB	32MB	96MB	640K	95MB
64MB	64MB	128MB	640K	127MB
64MB	128MB	192MB	640K	191MB

7. Device Ports

Your Fujitsu LifeBook comes equipped with multiple ports to which you can connect an external device including: disk drives, keyboards, modems, printers, etc.

Modem (RJ-11) Telephone Jack

The modem (RJ-11) telephone jack is used for an internal modem. To connect the telephone cable follow these easy steps:

1. Align the connector with the port opening.
2. Push the connector into the port until it is seated.
3. Plug the other end of the telephone cable into a telephone outlet.



WARNING

- The internal modem is not intended for use with Digital PBX systems. Do not connect the internal modem to a Digital PBX as it may cause serious damage to the internal modem or your entire LifeBook. Consult your PBX manufacturer's documentation for details. Some hotels have Digital PBX systems. Be sure to find out BEFORE you connect your modem.



CAUTION

- The internal modem is designed to the ITU-T V.90 standard. Its maximum speed of 53000bps is the highest allowed by FCC, and its actual connection rate depends on the line conditions. The maximum speed is 33600bps at upload.

Universal Serial Bus Port

The Universal Serial Bus port (USB) allows you to connect USB devices such as external game pads, pointing devices, keyboards and/or speakers. In order to connect a USB device follow these easy steps:

1. Align the connector with the port opening.
2. Push the connector into the port until it is seated.



CAUTION

- Due to the ongoing changes in USB technology and standards, not all USB devices and/or drivers are guaranteed to work.

Microphone Jack

The microphone jack allows you to connect an external mono microphone. Your microphone must be equipped with a 1/8"(3.5 mm) mono mini-plug in order to fit into the microphone jack of your LifeBook. In order to connect a microphone follow these easy steps:

1. Align the connector with the port opening.
2. Push the connector into the port until it is seated.

Stereo Line-In Jack

The stereo line-in jack allows you to connect an external audio source to your LifeBook, such as an audio cassette player. Your audio device must be equipped with a 1/8" (3.5 mm) stereo mini-plug in order to fit into the stereo line-in jack of your LifeBook. In order to connect a external audio source follow these easy steps:

1. Align the connector with the port opening.
2. Push the connector into the port until it is seated.

Critical Point

- The stereo line-in jack will not support an external microphone.



CAUTION

- Turn down the audio volume when connecting electronic devices to the line-in jack. The internal speakers might break if unexpected large sounds are inputted.

Optical Digital Audio-Out Connector

The optical digital audio-out connector allows you to download digital audio to MiniDisc recorders. It uses SPDIF (Sony Philips Digital Interface) format. Please use the following setting when using the digital audio-out connector.

1. Click on Start, Settings and then click on Control Panel.
2. Select Yamaha Ds-XG Audio Configuration.
3. Click on the SPDIF tab and click ON (Digital Sources Only). If you don't see this setting, the optical digital is always on by default.



WARNING

- Do not look into the connector. There is a beam coming out from the SPDIF connector, so do not look into the connector when inserting the cable.

Critical Point

- The frequency of the digital sound output from the SPDIF output connector is fixed to 48KHz. If a sampling rate convertor is not installed in your connecting digital electronic device (e.g., MD player), recording is not possible. Please see the user manuals for the electronic devices for further details.
- The sound recorded through connecting a digital electronic device (e.g., MD player) to the SPDIF output connector cannot be used as digital output. All output data from the SPDIF output connector has copyright protection information included.



CAUTION

- Please be careful, as there are several types of cables for connecting a digital electronic device (e.g. MD player) to the digital audio-out connector, depending on the connector type. The connector on your computer is a Optical Mini Plug (3.5mm diameter mini plug).

S-Video Out Port

The S-Video port allows you to connect and use directly any S-Video device, such as a VCR or television. The S-Video standard provides for a higher quality picture than NTSC or PAL. In order to connect an S-Video device, follow these easy steps:

1. Align the connector with the port opening.
2. Push the connector into the port until it is seated.

Headphone Jack

The headphone jack allows you to connect headphones or powered external speakers to your LifeBook. Your headphones or speakers must be equipped with a 1/8" (3.5 mm) stereo mini-plug. In order to connect headphones or speakers follow these easy steps:

1. Align the connector with the port opening.
2. Push the connector into the port until it is seated.

Critical Point

- If you plug headphones into the headphone jack, you will disable the built-in stereo speakers.

External Monitor Port

The external monitor port allows you to connect an external monitor. In order to connect an external monitor follow these easy steps:

1. Align the connector with the port opening.
2. Push the connector into the port until it is seated.
3. Tighten the two hold-down screws, located on each end of the connector.



CAUTION

- Pressing the [FN] + [F10] keys allows you to change your selection of where to send your display video. Each time you press the key combination, you will step to the next choice, starting with the built-in display panel only, moving to the external monitor only, finally moving to both the built-in display panel and an external monitor.

SECTION

3

1. Troubleshooting

Your LifeBook is sturdy and subject to few problems in the field. However, you may encounter simple setup or operating problems that you can solve on the spot, or problems with peripheral devices that you can solve by replacing the device. The information in this section helps you isolate and resolve some of these straightforward problems and identify failures that require service.

Identifying The Problem

If you encounter a problem, go through the following procedure before pursuing complex troubleshooting.

1. Turn off your LifeBook.
2. Make sure the AC adapter is plugged into your LifeBook and to an active AC power source.
3. Make sure that any card installed in the PC Card slot is seated properly. You can also remove the card from the slot, thus eliminating it as a possible cause of failure.
4. Make sure that any devices connected to the external connectors are plugged in properly. You can also disconnect such devices, thus eliminating them as possible causes of failure.
5. Turn on your LifeBook. Make sure it has been off at least 10 seconds before you turn it on.
6. Go through the boot sequence.
7. If the problem has not been resolved, refer to the Troubleshooting Table, that follows, for more detailed troubleshooting information.

Critical Point

- If you keep notes about what you have tried, your support representative may be able to help you more quickly by giving additional suggestions over the phone.



CAUTION

- Do not return a failed LifeBook to your supplier until you have talked to a support representative.

8. If you have tried the solutions suggested in the Troubleshooting Table without success, contact your support representative.

Before you place the call, you should have the following information ready so that the customer support representative can provide you with the fastest possible solution:

- Product name
- Product configuration number
- Product serial number
- Purchase date
- Conditions under which the problem occurred
- Any error messages that have occurred
- Hardware configuration
- Type of device connected, if any

See the Configuration Label on the bottom of your LifeBook for configuration and serial numbers.

Troubleshooting Table

Using the Troubleshooting Table

When you have problems with your LifeBook, try to find the symptoms under the Problem column of the troubleshooting table for the feature giving you difficulty.

You will find a description of common causes for that symptom under the column Possible Cause and what, if anything, you can do to correct the condition under Possible Solutions. All possible causes or solutions may not apply to your LifeBook.

Problem	Possible Cause	Possible Solution
Audio Problems		
There is no sound coming from the built-in speakers.	The volume is turned too low.	Adjust the volume control on your LifeBook.
	The software volume control is set too low.	Adjust the sound volume control settings in your software, operating system and applications.
	Headphones are plugged into your LifeBook.	Plugging in headphones disables the built-in speakers, remove the headphones.
	BIOS audio settings are incorrect.	Set the BIOS setup utility to the default values within the Multimedia Device Configuration menu.
	Software driver is not configured correctly.	Refer to your application and operating system documentation for help.
	The system audio has been muted.	While holding down the [Fn] key on the keyboard, press the [F3] key.
CD-ROM Drive Problems		
LifeBook fails to recognize CDs.	CD is not pushed down onto raised center circle of the drive.	Open CD-ROM tray and re-install CD properly.
	CD-ROM tray is not latched shut.	Push on the front of the CD-ROM tray until it latches.
	Setup utility is set to something other than CD-ROM or Auto for the Secondary Master Controller.	Revise BIOS settings for the Secondary Master Controller.
	Wrong drive designator was used for CD in the application.	Verify that the drive designator used by the application is the same as the one used by the operating system. When the operating system is booted from a CD, drive designations are automatically adjusted.
	Windows CD Auto Insert Notification function is disabled.	Start the CD from the desktop or application software or re-enable the Windows CD Auto Insert Notification function.
	CD is dirty or defective.	Wipe CD with a non-abrasive CD cleaning cloth and re-insert. If it still will not work try another CD in the drive
The CD-ROM Access indicator on the Status Indicator Panel blinks at regular intervals when no CD is in the tray.	The Windows CD Auto Insert Notification function is active and is checking to see if a CD is ready to run.	This is normal. However, you may disable this feature.

Problem	Possible Cause	Possible Solution
Port Replicator Problems		
LifeBook does not turn on while in Port Replicator.	Port Replicator is not plugged in.	Provide power to the Port Replicator.
	LifeBook is not properly seated in the Port Replicator.	Remove and re-seat your LifeBook in your Port Replicator.
Floppy Disk Drive Problems		
You cannot access your floppy disk.	You tried to write to a write protected floppy disk.	Eject the floppy disk and set it to write enable.
	Floppy disk is not loaded correctly.	Eject floppy disk, check orientation and re-inserts.
	BIOS setup utility states Diskette Controller: Disabled.	Revise the setup utility Main menu settings to enable Diskette Controller.
	The floppy disk drive may not be properly installed.	Remove and reinstall your floppy disk drive.
	Security is set to protect access to floppy disk data.	Verify your password and security settings.
Hard Drive Problems		
You cannot access your hard drive.	The setup utility is incorrectly set for your internal (Primary Master) or optional second hard drive (Primary Slave).	Revise BIOS settings to set both Primary Master and Primary Slave correctly.
	The wrong drive designator was used by an application when a bootable CD-ROM was used to start the LifeBook.	Verify drive designator used by application is in use by the operating system. When the operating system is booted from a CD, drive designations are automatically adjusted.
	Security is set so your operating system cannot be started without a password.	Verify your password and security settings.
Keyboard or Mouse Problems		
The built-in keyboard does not seem to work.	The LifeBook has gone into Suspend mode.	Push the Power and Suspend/Resume button.
	Your application has locked out your keyboard.	Try to use your integrated pointing device to restart your system. If this fails, turn your LifeBook off using the power switch, wait 10 seconds or more, and then turn it back on.

Problem	Possible Cause	Possible Solution
You have installed an external keyboard or mouse, and it does not seem to work.	Your external device is not properly installed.	Reinstall your device.
	Your operating system software is not setup with the correct software driver for that device.	Check your device and operating system documentation and activate the proper driver.
	Your mouse or keyboard is connected to the wrong PS/2 port on the Port Replicator.	Plug the mouse into the PS/2 Mouse port and the external keyboard or numeric key pad into the PS/2 Keyboard port.
You have connected an external keyboard or a mouse and it seems to be locking up the system.	Your operating system software is not setup with the correct software driver for that device.	Check your device and operating system documentation and activate the proper driver.
	Your system has crashed.	Try to restart your LifeBook. If that fails, turn off the power using the power switch, wait at least 10 seconds, and then power on.
Memory Problems		
Your Power On screen, or Main menu of the BIOS setup utility information, does not show the correct amount of installed memory.	Your memory upgrade module is not properly installed.	Remove and reinstall your memory upgrade module.
	You have a memory failure.	Check for Power On Self Test (POST) messages.
Modem Problems		
Messages about modem operation.	Messages about modem operation are generated by whichever modem application is in use.	See your application software documentation for additional information.
Parallel, Serial, and USB Device Problems		
You have installed a parallel port device, a serial port device or a USB device. Your LifeBook does not recognize the device, or the device does not seem to work properly.	The device is not properly installed.	Remove and reinstall the device.
	The device may have been installed while an application was running, so your LifeBook is not aware of its installation.	Close the application and restart your LifeBook.
	Your software may not have the correct software driver active.	See your software documentation and activate the correct driver.

Problem	Possible Cause	Possible Solution
You have installed a parallel port device, a serial port device or a USB device. Your LifeBook does not recognize the device, or the device does not seem to work properly.	You may have the wrong I/O address selected for your device.	See your device documentation and software documentation to determine the required I/O address. Change the settings in the BIOS setup utility.
	Your device and another device are assigned the same I/O address.	Check all I/O addresses located within the BIOS setup utility and any other installed hardware or software to make sure there are no duplications.
	Parallel port is set to output only.	Check parallel port setting in the BIOS and set to bi-directional or ECP.
PC Card Problems		
A card inserted in the PC Card slot does not work or is locking up the system.	The card is not properly installed.	Remove and reinstall the card.
	The card may have been installed while an application was running, so your LifeBook is not aware of its installation.	Close the application and restart your LifeBook.
	Your software may not have the correct software driver active.	See your software documentation and activate the correct driver.
	You may have the wrong I/O address selected for your PC Card device.	See your PC Card documentation to determine the required I/O address. Change the settings in the BIOS.
	Your PC Card device and another device are assigned the same I/O address.	Check all I/O addresses located within the BIOS setup utility and any other installed hardware or software to make sure there are no duplications.
Power Failures		
You turn on your LifeBook and nothing seems to happen.	The installed battery is completely discharged, or there is no Power adapter installed.	Check the Status Indicator Panel to determine the presence and condition of the batteries. Install a charged battery or a Power adapter.
	The battery is installed but is faulty.	Use the Status Indicator panel to verify the presence and condition of the batteries. If a battery is indicating a short, remove that battery and operate from another power source or replace that battery.
	The battery is low.	Check the Status Indicator Panel to determine the presence and condition of the battery. Use a Power adapter to operate until a battery is charged or install a charged battery.
	The power adapter is not plugged in properly.	Verify that your adapter is connected correctly.

Problem	Possible Cause	Possible Solution
You turn on your LifeBook and nothing seems to happen.	The Power adapter has no power from the AC outlet.	Move the AC cord to a different outlet, check for a line switch or tripped circuit breaker for the AC outlet.
	The Power adapter is faulty.	Try a different Power adapter or install a charged optional second battery.
Your LifeBook turns off all by itself.	The power management parameters are set for auto timeouts which are too short for your operating needs.	Press any button or key on the keyboard, or move the mouse to restore operation. If that fails, push the Power and Suspend/Resume button. Check your power management settings, or close your applications and go to the Power Savings menu of the setup utility to adjust the timeout values to better suit your operation needs.
	You are operating on battery power only and have ignored a low battery alarm until the batteries are all at the dead battery state and your machine has gone into Dead Battery Suspend mode.	Install a power adapter and then push the Power and Suspend/Resume button.
	You have a battery failure.	Verify the condition of the batteries using the Status Indicator panel, and replace or remove any batteries that are shorted.
	Your power adapter has failed or lost its power source.	Make sure the adapter is plugged in and the outlet has power.
Your LifeBook will not work on battery alone.	The installed batteries are dead.	Replace the battery with a charged one or install a Power adapter.
	No batteries are installed.	Install a charged battery.
	The batteries are improperly installed.	Verify that the batteries are properly connected by re-installing them.
	Your installed batteries are faulty.	Verify the condition of the batteries using the Status Indicator panel and replace or remove any batteries that are shorted.
The batteries seem to discharge too quickly.	You are running an application that uses a great deal of power due to frequent hard drive access or CD-ROM access, use of a modem card or a LAN PC card.	Use both the primary battery and an optional second battery and/or use a power adapter for this application when at all possible.

Problem	Possible Cause	Possible Solution
The batteries seem to discharge too quickly.	The power savings features may be disabled.	Check the power management and/or setup utility settings in the Power Savings menu and adjust according to your operating needs.
	The brightness is turned all the way up.	Turn down the brightness adjustment. The higher the brightness the more power your display uses.
	The batteries are very old.	Replace the batteries.
	The batteries have been exposed to high temperatures.	Replace the batteries.
	The batteries are too hot or too cold.	Restore the LifeBook to normal operating temperature. The Charging icon on the Status Indicator panel will flash when the battery is outside its operating range.
Shutdown and Startup Problems		
The Power and Suspend/Resume button does not work.	The Power and Suspend/Resume button is disabled from the Advanced submenu of the Power menu of the setup utility.	Enable the button from the setup utility.
	You did not hold the button in long enough.	Hold the button longer. This may need to be a few seconds if your application is preventing the CPU from checking for button pushes.
	There may be a conflict with the application software.	Close all applications and try the button again.
The system powers up, and displays power on information, but fails to load the operating system.	The boot sequence settings of the setup utility are not compatible with your configuration.	Set the operating source by pressing the [ESC] key while the Fujitsu logo is on screen or use the [F2] key and enter the setup utility and adjust the source settings from the Boot menu.
	You have a secured system requiring a password to load your operating system.	Make sure you have the right password. Enter the setup utility and verify the Security settings and modify them accordingly.
	Internal hard drive was not detected.	Use the BIOS setup utility or Primary Master submenu, located within the Main menu, to try to auto detect the internal hard drive.

Problem	Possible Cause	Possible Solution
An error message is displayed on the screen during the LifeBook (boot) sequence.	Power On Self Test (POST) has detected a problem.	See the POST messages to determine the meaning and severity of the problem. Not all messages are errors; some are simply status indicators.
Your LifeBook appears to change setup parameters when you start it.	BIOS setup changes were not saved when you made them and exited the BIOS setup utility returning it to previous settings.	Make sure you select Save Changes And Exit when exiting the BIOS setup utility.
	The BIOS CMOS hold-up battery has failed.	Contact your support representative for repairs. This is not a user serviceable part but has a normal life of 3 to 5 years.
Video Problems		
The built-in display is blank when you turn on your LifeBook.	Something is pushing on the Closed Cover switch.	Clear the Closed Cover switch.
	The LifeBook is set for an external monitor only.	Pressing [F10] while holding down the [Fn] key allows you to change your selection of where to send your display video. Each time you press the combination of keys you will step to the next choice. The choices, in order are: built-in display only, external monitor only, both built-in display and external monitor.
	The angle of the display and the brightness settings are not adequate for your lighting conditions.	Move the display and the brightness control until you have adequate visibility.
	The power management timeouts may be set for very short intervals and you failed to notice the display come on and go off again.	Press any button or key on the keyboard, or move the mouse to restore operation. If that fails, push the Power and Suspend/Resume button. (The display may be shut off by Standby mode, Auto Suspend or Video Timeout.)
The LifeBook turned on with a series of beeps and your built-in display is blank.	Power On Self Test (POST) has detected a failure which does not allow the display to operate.	Contact your support representative.

Problem	Possible Cause	Possible Solution
The display goes blank by itself after you have been using it.	The LifeBook has gone into Video timeout, Standby mode, Suspend mode or Save-to-Disk mode because you have not used it for a period of time.	Press any button or key on the keyboard, or move the mouse to restore operation. If that fails, push the Power and Suspend/Resume button. Check your power management settings, or close your applications and go to the Power Savings menu of the setup utility to adjust the timeout values to better suit your operation needs.
	Something is pushing on the Closed Cover switch.	Check the Closed Cover switch.
	The power management timeouts may be set for very short intervals and you failed to notice the display come on and go off again.	Press any button or key on the keyboard, or move the mouse to restore operation. If that fails, push the Power and Suspend/Resume button. (The display may be shut off by Standby Mode, Auto Suspend or Video Timeout.)
The Built-in Display does not close.	A foreign object, such as a paper clip, is stuck between the display and the keyboard.	Remove all foreign objects from the keyboard.
The Built-in Display has bright or dark spots.	If the spots are very tiny and few in number, this is normal for a large LCD display.	This is normal; do nothing.
	If the spots are numerous or large enough to interfere with your operation needs.	Display is faulty; contact your support representative.
The application display uses only a portion of your screen and is surrounded by a dark frame.	You are running an application that does not support 800 x 600 pixel resolution display and display compression is enabled.	Display compression gives a clearer but smaller display for applications that do not support 800 x 600 pixel resolution. You can fill the screen but have less resolution by changing your display compression setting, (See the Video Features submenu, located within the Advanced menu of the BIOS.)

Problem	Possible Cause	Possible Solution
<p>You have connected an external monitor and it does not display any information.</p>	<p>Your BIOS setup is not set to enable your external monitor.</p>	<p>Try toggling the video destination by pressing [Fn] and [F10] together, or check your BIOS setup and enable your external monitor. (See the Video Features submenu, located within the Advanced Menu of the BIOS.)</p>
	<p>Your external monitor is not properly installed.</p>	<p>Reinstall your device.</p>
	<p>Your operating system software is not setup with the correct software driver for that device.</p>	<p>Check your device and operating system documentation and activate the proper driver.</p>
	<p>Your external monitor is not compatible with your LifeBook.</p>	<p>See your monitor documentation and the External Monitor Support portions of the Specifications section.</p>
<p>Miscellaneous Problems</p>		
<p>An error message is displayed on the screen during the operation of an application.</p>	<p>Application software often has its own set of error message displays.</p>	<p>See your application manual and help displays screens for more information. Not all messages are errors some may simply be status.</p>

Power On Self Test Messages

The following is an alphabetic list of error-and-status messages that Phoenix BIOS and/or your operating system can generate and an explanation of each message. Error messages are marked with an *. The most common errors are marked with a #. If an error message is displayed that is not in this list, write it down and check your operating system documentation both on screen and in the manual. If you can find no reference to the message and its meaning is not clear, contact your support representative for assistance.

nnnn Cache SRAM Passed

Where nnnn is the amount of system cache in kilobytes successfully tested by the Power On Self Test. (This can only appear if you have an SRAM PC Card installed.)

*** Diskette drive A error or Diskette drive B error**

Drive A: or B: is present but fails the BIOS Power On Self Test diskette tests. Check to see that the drive is defined with the proper diskette type in the Setup Utility, and that the diskette drive is installed correctly. If the disk drive is properly defined and installed, avoid using it and contact your support representative.

*** Extended RAM Failed at offset: nnnn**

Extended memory not working or not configured properly. If you have an installed memory upgrade module, verify that the module is properly installed. If it is properly installed, you may want to check your Windows Setup to be sure it is not using unavailable memory until you can contact your support representative.

nnnn Extended RAM Passed

Where nnnn is the amount of memory in kilobytes successfully tested.

*** Failing Bits: nnnn The hex number nnnn**

This is a map of the bits at the memory address (in System, Extended, or Shadow memory) which failed the memory test. Each 1 (one) in the map indicates a failed bit. This is a serious fault that may cause you to lose data if you continue. Contact your support representative.

*** Fixed Disk x Failure or Fixed Disk Controller Failure (where x = 1-4)**

The fixed disk is not working or not configured properly. This may mean that the hard drive type identified in your setup utility does not agree with the type detected by the Power On Self Test. Run the setup utility to check for the hard drive type settings and correct them if necessary. If the settings are OK and the message appears when you restart the system, there may be a serious fault which might cause you to lose data if you continue. Contact your support representative.

*** Incorrect Drive A type – run SETUP**

Type of floppy drive A: not correctly identified in Setup. This means that the floppy disk drive type identified in your setup utility does not agree with the type detected by the Power On Self Test. Run the setup utility to correct the inconsistency.

*** Incorrect Drive B type – run SETUP**

Type of floppy drive B: not correctly identified in Setup. This means that the floppy disk drive type identified in your setup utility does not agree with the type detected by the Power On Self Test. Run the setup utility to correct the inconsistency.

*** Invalid NVRAM media type**

Problem with NVRAM access. In the unlikely case that you see this message you may have some display problems. You can continue operating but should contact your support representative for more information.

*** Keyboard controller error**

The keyboard controller test failed. You may have to replace your keyboard or keyboard controller but may be able to use an external keyboard until then. Contact your support representative.

*** Keyboard error**

Keyboard not working. You may have to replace your keyboard or keyboard controller but may be able to use an external keyboard until then. Contact your support representative.

*** Keyboard error nn**

BIOS discovered a stuck key and displays the scan code for the stuck key. You may have to replace your keyboard but may be able to use an external keyboard until then. Contact your support representative.

*** Monitor type does not match CMOS – Run SETUP**

Monitor type not correctly identified in Setup. This error probably means your BIOS is corrupted, run the setup utility and set all settings to the default conditions. If you still get this error, contact your support representative.

*** Operating system not found**

Operating system cannot be located on either drive A: or drive C:. Enter the setup utility and see if both the fixed disk, and drive A: are properly identified and that the boot sequence is set correctly. Unless you have changed your installation greatly, the operating system should be on drive C:. If the setup utility is correctly set, your harddrive may be corrupted and your system may have to be reinstalled from your back up media.

*** Parity Check 1 nnnn**

Parity error found in the system bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays ????. This is a potentially data destroying failure. Contact your support representative.

*** Parity Check 2 nnnn**

Parity error found in the I/O bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays ????. This is a potentially data destroying failure. Contact your support representative.

*** Press <F1> to resume, <F2> to SETUP**

Displayed after any recoverable error message. Press the [F1] key to continue the boot process or the [F2] key to enter Setup and change any settings.

*** Previous boot incomplete – Default configuration used**

Previous Power On Self Test did not complete successfully. The Power On Self Test will load default values and offer to run Setup. If the previous failure was caused by incorrect values and they are not corrected, the next boot will likely fail also. If using the default settings does not allow you to complete a successful boot sequence, you should turn off the power with the Power Switch and contact your support representative.

*** Real time clock error**

Real-time clock fails BIOS test. May require board repair. Contact your support representative.

*** Shadow RAM Failed at offset: nnnn**

Shadow RAM failed at offset nnnn of the 64k block at which the error was detected. You are risking data corruption if you continue. Contact your support representative.

nnnn Shadow RAM Passed

Where nnnn is the amount of shadow RAM in kilobytes successfully tested.

*** System battery is dead – Replace and run SETUP**

The BIOS CMOS RAM memory hold up battery is dead. This is part of your BIOS and is a board mounted battery which requires a support representative to change. You can continue operating but you will have to use setup utility default values or reconfigure your setup utility every time you turn off your LifeBook. This battery has an expected life of 2 to 3 years.

System BIOS shadowed

System BIOS copied to shadow RAM.

*** System CMOS checksum bad – run SETUP**

BIOS CMOS RAM has been corrupted or modified incorrectly, perhaps by an application program that changes data stored in BIOS memory. Run Setup and reconfigure the system.

*** System RAM Failed at offset: nnnn**

System memory failed at offset nnnn of in the 64k block at which the error was detected. This means that there is a fault in your built-in memory. If you continue to operate, you risk corrupting your data. Contact your support representative for repairs.

nnnn System RAM Passed

Where nnnn is the amount of system memory in kilobytes successfully tested.

*** System timer error**

The timer test failed. The main clock that operates the computer is faulty. Requires repair of system board. Contact your support representative for repairs.

UMB upper limit segment address: nnnn

Displays the address of the upper limit of Upper Memory Blocks, indicating released segments of the BIOS memory which may be reclaimed by a virtual memory manager.

Video BIOS shadowed

Video BIOS successfully copied to shadow RAM.

Emergency CD-ROM Tray Release

If for some reason the eject button fails, you can open the CD-ROM tray with a paper clip or similar tool inserted into the eject hole in the far right side of the front of the tray. Straighten one side of a paper clip and push it gently into the hole. The tray will pop out a short distance.

Modem Result Codes

The operating system and application software that is factory installed detects the modem characteristics and provides the necessary command strings to operate the modem. The internal modem operation is controlled by generic AT commands from the operating system and application software. The standard long form result codes may, in some cases, be displayed on your screen to keep you informed of the actions of your modem. The operating system and application software may suppress display of the result codes.

Examples of result codes are:

- OK
- NO CARRIER
- NO DIALTONE
- CONNECT 53000 (Connection complete at 53,000 bps.)
- ERROR
- FAX
- RING (This means an incoming call.)
- BUSY
- NO ANSWER

When using the internal modem with applications that are not factory installed refer to the application documentation.

Recovery CD

Included with your LifeBook are the Emergency Recovery CD and Drivers CD.

The Emergency Recovery CD contains the following:

- A backup copy of the software originally installed on your Fujitsu I Series LifeBook.

The Drivers CD contains the following:

- Sets of device drivers and Fujitsu Applications (in specific directories) that are unique to your LifeBook configuration.
- Read-me files that provide information and installation instructions.

Restoring Your Pre-installed Software from CD-ROM

The Emergency Recovery CD enables restoration of your LifeBook disk drive contents as they were originally shipped from the factory. Most often this is necessary if files or software programs (only those files/programs that came pre-installed) become corrupt or accidentally erased.

You have two options available when performing recovery:

1. Recover Hard Drive without Format. This choice replaces all the original factory installed files and program structures without eliminating your data files. You will have to reinstall any software that was not included with the computer when you bought it, however your data will be intact as long as the installation of the additional programs is performed in the same manner.
2. Format and Recover Hard Drive. This choice removes all the information on the hard disk. If you choose this option, you will lose any software you have installed and any other files you created since you setup your computer. You will have to re-install any software that was not included with the computer when you bought it.

Critical Point

- It is recommended that you back-up all data files prior to performing either of the recovery options.



CAUTION

- User data and user installed software CANNOT be recovered from the Emergency Recovery CD.

To Run the Emergency Recovery Program

To use this portion of the CD-ROM, your LifeBook must Boot up (upon power up or full system reset/restart) from the CD-ROM drive.

1. Insert the Emergency Recovery CD in the CD-ROM drive.
2. If your LifeBook is running when you insert the CD, exit your operating system and power down the LifeBook.
3. Start (power up) your LifeBook.
4. At this point, you must either change your BIOS setup configuration through the [F2] key to have the computer boot from the CD-ROM "first" (if you have not previously done so), or you can use the [ESC] key during this boot-up sequence and select the CD-ROM from the menu that will appear.
5. If correctly configured to boot from the Recovery CD-ROM, you will notice your system running a full virus scan of the hard drive and then reach the Emergency Recovery Welcome screen. If this is not what is displayed, check to see that the Recovery CD is installed in the CD-ROM drive and repeat the previous steps, starting with step 2. If you received a message "This program may not be used on your computer" you are using the wrong Recovery CD for the model of LifeBook. Contact Fujitsu PC Service and Support to obtain the correct CD.
6. Read the information displayed on the Welcome screen, then click OK.
7. Select one of the two icons displayed in the Emergency Recovery menu and follow the instructions.
8. When recovery is complete, remove the Recovery CD, replace it in its sleeve and store it in a safe location.
9. Restart your LifeBook.
10. Reset your boot device priority in the BIOS setup as desired.

Your LifeBook now has all of the software installed that was included when you received it from the factory. You must now load any programs which you purchased and installed after you received your LifeBook. If you chose the Format and Recover Hard Drive option, you should now restore your data files. If you performed the Recover Hard Drive without Format, your data files will still exist (within their original directory structures).

Critical Point

- Once the process is complete and you restart your LifeBook, you will be required to perform all the setup steps as when the computer was first purchased.
- As long as there is no bootable disk in the CD-ROM drive or the floppy disk drive, your LifeBook will boot from the hard drive regardless of the BIOS Boot Device Priority setting.

Drivers CD and Applications Restore CD

The Drivers CD and Application CD can be used to selectively re-install drivers and/or applications that may have been un-installed or corrupted. Please refer to installation instructions located in the Drivers CD and Applications Restore CD. You can also consult our Web site at www.8fujitsu.com.

Critical Point

- Look for and open files with the extensions.DOC and .TXT.

2. Care and Maintenance

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

Caring for your LifeBook

- Your LifeBook is a durable but sensitive electronic device. Treat it with respect and 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 LifeBook:
 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 LifeBook will not boot after it has dried out, call your support representative.
- Do not use your LifeBook in a wet environment (near a bathtub, swimming pool).
- Always use the AC adapter and batteries that are approved for your LifeBook.
- Avoid exposure to sand, dust and other environmental hazards.
- Do not expose your LifeBook to direct sunlight for long periods of time as temperatures above 140° F (60° C) may damage your LifeBook.
- 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 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.
- Do not touch the screen with any sharp objects.

Cleaning your LifeBook

- Always disconnect the power plug. (Pull the plug, not the cord.)
- Clean your LifeBook 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

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

Travelling with your LifeBook

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

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

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 loose 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 through the AC adapter whenever possible.
- If your LifeBook is running on battery power all day, connect it to the AC adapter overnight to recharge the battery.
- Keep brightness to the lowest level comfortable.
- Set the power management for maximum battery life.
- Put your LifeBook in Suspend mode when it is turned on and you are not actually using it.
- Limit your CD-ROM access.
- Disable the Windows CD Auto Insert function.
- Always use fully charged batteries.
- Eject PCMCIA cards when not in use.

Floppy Disks And Drives

Caring for your Floppy Disks

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

Caring for your Floppy Disk Drive

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

CDs

Caring for your CDs

CDs are precision devices and will function reliably if given reasonable care.

- Always store your CDs in its case when it is not in use.
- Always handle CDs by the edges and avoid touching the surface.
- Avoid storing any CDs in extreme temperatures.
- Do not bend CDs or set heavy objects on them.
- Do not spill liquids on CDs.
- Do not scratch CDs.
- Do not put a label on CDs.
- Do not get dust on CDs.
- Never write on the label surface with a ballpoint pen or pencil. Always use a felt pen.
- If a 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 CDs.
- If a CD is dirty, use only a 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 CD-ROM Drive

Your 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 CD-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 LifeBook.
- 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.

3. Specifications

This section provides the hardware and environmental specifications for your LifeBook. Specifications of particular configurations will vary.

Microprocessor

Intel Celeron Microprocessor

Memory

System Memory
64MB SDRAM

Cache Memory

128KB On-die L2 cache

Expansion Memory Options

Extend system memory up to 192MB

BIOS Memory

512 KB Flash ROM
256 Bytes CMOS RAM

Video

Built-in color flat-panel TFT active matrix LCD display with simultaneous display capability.

Video Color and Resolution

12.1" SVGA TFT

- Internal: 800 x 600 pixel resolution, 256K colors
- External: 1600 x 1200 pixel resolution, 64k colors
- Simultaneous Video

Video RAM

4MB Embedded SDRAM

Video

Zoomed Video support via bottom PC Card Slot

Audio

- SoundBlaster Pro-compatible 32-bit stereo PCM/FM sound chip
- Spatializer 3D-Stereo multiple speaker effect support
- Stereo headphone jack, 1 Vrms, or less, minimum impedance 32 Ohms
- Two built-in speakers, 28 mm diameter (Stereo)
- Stereo line in jack, 880 m Vrms or less, minimum impedance 10K ohms

Features

Pointing Device

Touchpad pointing device with scrolling button

LifeBook Application Panel

One Touch Panel: 4-button application launcher for Internet, e-mail and software while LifeBook is in On state.

Communications

Modem: Internal V.90 standard 56K* fax/modem (ITU V.90, 56K data, 14.4K fax)

* Actual data transfer rate over telephone lines varies and is less than 56Kbps due to the current FCC regulations and line conditions.

Theft Prevention Lock

Lock slot for use with physical restraining security systems. The Kensington lock system is recommended.

Pre-installed Software

Windows 98 Second Edition Models or Me Models

- Microsoft Windows 98 Second Edition
- Microsoft Internet Explorer
- PMSets 98 by Fujitsu Limited
- LifeBook Application Panel

Windows 2000 Professional Models

- Microsoft 2000 Professional
- Microsoft Internet Explorer
- LifeBook Application Panel

Device Ports

- Combination PC Card slot for one Type III/two Type I/II cards: PCMCIA Standard 2.1 with CardBus support; Zoomed Video support via Slot 1
- One 6-pin mini DIN PS/2 compatible connector, for external keyboard, external mouse or external numeric keypad
- One 25-pin D-SUB two-way Centronics type connector for parallel input/output devices; Bi-directional, output only or ECP
- One 15-pin D-SUB connector for VGA external monitor (see Display specifications)
- One 9-pin D-SUB connector for RS-232C serial input/output devices
- One connector for USB (Universal Serial Bus) input/output devices
- One modular modem (RJ-11) connector
- One stereo headphone jack (See Audio specifications)

Keyboard

Built-in keyboard with all functions of 87 key PS/2 compatible keyboards.

- Total number of keys: 87
- Function keys: 12, F1 through F12
- Feature extension key: Fn
- Windows keys: 3, two Start keys and an application key
- Key pitch: 19 mm
- Key stroke: 3 mm
- Built-in Touchpad pointing device with left and right buttons

External Keyboard Support

PS/2 compatible

External Numeric Keypad Support

PS/2 compatible

External Mouse Support

PS/2 compatible

Management Standard

DMI 2.0-ready, WfM 1.1a-enabled

Power

Batteries

Main 6 cell Lithium ion battery, rechargeable, 10.8V, 3600 mAh

AC Adapter

Autosensing 100-240V AC, 53W, supplying 19V DC to the LifeBook. Fujitsu model includes an AC cable.

Power Management

Conforms to ACPI (Advanced Configuration & Power Interface)

Electrostatic Discharge (ESD)

9 kV

Dimensions And Weight

Overall Dimensions

12.13" x 10.96" x 1.81" (308 mm x 273.5 mm x 39.5 mm)

Weights

Approx. 6.62 lbs

Environmental Requirements

Temperature

Operating: 5° to 35° C (41° to 95° F)

Non-operating: -15° to 60° C (5° to 140° F)

Humidity

Operating: 20% to 85%, relative, non-condensing

Non-operating: 8% to 85%, relative, non-condensing

Altitude

Operating: 10,000 feet (3,048 m) maximum

4. Glossary

AC Adapter

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

Active-Matrix Display

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

APM

Advanced Power Management.

Auto/Airline Adapter

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

BIOS

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

Bit

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

bps

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

Boot

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

Bus

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

Byte

8 bits of parallel binary information.

Cache Memory

A block of memory built into the micro-processor which is much faster to access than your system RAM and used in specially structured ways to make your overall data handling time 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 requires very low level power to operate.

COMM Port

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

Command

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

Configuration

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

CRT

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

Data

The information a system stores and processes.

DC

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

Default Value

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

DIMM

Dual-in-line memory module.

LAN

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

LCD

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

Lithium ion Battery

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

LPT Port

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

MB

Megabyte.

Megahertz

1,000,000 cycles per second.

Memory

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

MHz

Megahertz.

MIDI

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

Modem

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

Monaural

A system using one channel to process sound from 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 mouse, 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 form 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 from 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 from brushing hair on a dry day.

Extended Memory

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

FCC

Federal Communication Commission.

Floppy Disk

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

GB

Gigabyte.

Hard drive

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

Hexadecimal

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

I/O

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

I/O Port

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

IDE

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

Infrared

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

IR

An abbreviation for infrared.

IrDA

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

IRQ

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

KB

Kilobyte.

Program

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

PS/2

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

RAM

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

RAM Module

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

Reset

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

Restart

See Reset.

Resume

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

ROM

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

SDRAM

Synchronous Dynamic Random Access Memory.

Serial Port

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

Shadow RAM

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

SMART

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

SRAM

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

Status Indicator

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

Stereo (audio)

A system using two channels to process sound from two different sources.

Stroke (keyboard)

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

Suspend

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

SVGA

Super VGA.

S-Video

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

System Clock

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

TFT

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

UL

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

VGA

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

VRAM

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

WFM

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

Write Protect

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

XGA

Extended VGA.

Zip Drive

A 100MB read/rite removable media disk drive.

Zoomed Video

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

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