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ExpressCard ID: EC100096 (A6020).
ExpressCard ID: EC100097 (A3120).

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This device complies with Part 15 of the FCC rules. Operations are subject to the following two conditions:

(1) This device may not be allowed to cause harmful interference.

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

Website: www.pc-ap.fujitsu.com

FC

DECLARATION OF CONFORMITY
according to FCC Part 15

i

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. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.

9. 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.

10. 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.

11. 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.

12. 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.

ii

13. **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.**

14. 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).

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FCC NOTICES

Notice to Users of Radios and Television

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.

• Increase the separation between the equipment and receiver.

• Connect the equipment into an outlet that is on a different circuit than the receiver.

• Consult the dealer or an experienced radio/ TV technician for help.

Shielded interconnect cables must be employed with this equipment to ensure compliance with the pertinent RF emission limits governing this device.

Notice to Users of the US Telephone Network

Your LifeBook notebook may be supplied with an internal modem which complies with Part 68 of the FCC rules. On this notebook is a label that contains the FCC Registration Number and the Ringer Equivalence Number (REN) for this equipment among other information. If requested, the user must provide their telephone company with the following information:

1. The telephone number to which the notebook is connected.

2. The Ringer Equivalence Number (REN) for this equipment.

3. That the equipment requires a standard modular jack type USOC RJ-11C which is FCC Part 68 compliant.

4. The FCC Registration Number.

This equipment is designed to be connected to the telephone network or premises wiring using a standard modular jack type USOC RJ-11C which is FCC Part 68 compliant and a line cord between the modem and the telephone network with a minimum of 26AWG.

The REN is used to determine the number of devices that you may connect to your telephone line and still have all of those devices ring when your number is called. Too many devices on one line may result in failure to ring in response to an incoming call. In most, but not all, areas the sum of the RENs of all of the devices should not exceed five (5). To be certain of the number of devices you may connect to your line, as determined by the RENs, contact your local telephone company.

If this equipment causes harm to the telephone network, your telephone company may discontinue your service temporarily. If possible, they will notify you in advance. If advance notice is not practical they will notify you as soon as possible. You will also be advised of your right to file a complaint with the FCC.

This fax modem also complies with fax branding requirements per FCC Part 68.

Your telephone company will probably ask you to disconnect this equipment from the telephone network until the problem is corrected and you are sure that the equipment is not malfunctioning.

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This equipment may not be used on coin-operated telephones provided by your telephone company. Connection to party lines is subject to state tariffs. Contact your state's public utility commission, public service commission or corporation commission for more information.

This equipment includes automatic dialing capability. When programming and/or making test calls to emergency numbers:

- Remain on the line and briefly explain to the dispatcher the reason for the call.
- Perform such activities in off-peak hours, such as early morning or late evening.

FCC rules prohibit the use of non-hearing aid compatible telephones in the following locations or applications:

- All public or semipublic coin-operated or credit card telephones.
- Elevators, highways, tunnels (automobile, subway, railroad or pedestrian) where a person with impaired hearing might be isolated in an emergency.
- Places where telephones are specifically installed to alert emergency authorities such as fire, police or medical assistance personnel.
- Hospital rooms, residential health care facilities, convalescent homes and prisons.
- Workstations for the hearing impaired.
- Hotel, motel or apartment lobbies.
- Stores where telephones are used by patrons to order merchandise.
- Public transportation terminals where telephones are used to call taxis or to reserve lodging or rental cars.
- In hotel and motel rooms as at least ten percent of the rooms must contain hearing aid compatible telephones or jacks for plug-in hearing aid compatible telephones which will be provided to hearing impaired customers on request.

CAUTION

● For safety, users should ensure that the electrical ground of the power utility, the telephone lines and the metallic water pipes are connected together. Users should NOT attempt to make such connections themselves but should contact the appropriate electric inspection authority or electrician. This may be particularly important in rural areas.

UL Notice

This unit requires an AC adapter to operate. Use only UL Listed Class 2 adapter, output rating 19VDC, 4.22A. Refer to the illustration below for the correct AC Adapter output polarity:

CAUTION

● To reduce the risk of fire, use only #26 AWG or larger telecommunications line cord.

For Authorized Repair Technicians Only

CAUTION

● For continued protection against risk of fire, replace only with the same type and rating fuse.

WARNING

● Danger of explosion if Lithium (CMOS) battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instruction.

Proper Disposal of Battery

Under federal, state or local law, it may be illegal to dispose of batteries by putting them in the rubbish bins or trash cans. Please take care of our environment and dispose of batteries properly. Check with your local government authority for details regarding recycling or disposing of unwanted batteries.

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NOTE ON USE REQUIRED HIGH SAFETY

This product is designed and manufactured for general use, including general office use, personal use, household use and ordinary industrial use.

This product is not designed for or intended for use under dangerous (fatal) conditions, unless extreme safety precautions are implemented.

Do not use this product without implementing high-level safety precautions.

Failure to follow this warning may result in death, personal injury, severe physical damage or other loss, if used in or near any or more of the following:

- nuclear reaction control system in a nuclear facility
- automatic flight control system in an airplane or other flight control system
- mass transport control system
- medical instruments for life support system
- missile launching control for weapon system

NOTE ON BACKUP DATA

Please make a backup of the Operating System, any software programs, and created files (and update regularly).

If you send this product to Fujitsu, or any of its affiliates, suppliers, service providers or resellers for repair, Fujitsu does not guarantee the data integrity. It is your responsibility to back data up beforehand.

Fujitsu does not assume any obligation for compensation for damages, data integrity, or restoration, etc., if your data is lost for any reason, except as written in the warranty.

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AUSTRALIAN WARNINGS
WARNING

FOR SAFETY REASONS, ONLY CONNECT EQUIPMENT WITH A TELECOMMUNICA- TIONS COMPLIANCE LABEL. THIS INCLUDES CUSTOMER EQUIPMENT PREVIOUSLY LA- BELLED 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.

viii

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.

ix

NOTE: Modem setting in Windows Vista

A. If you are located in Australia

1. Click Start select Control panel select "Phone and Modem Options".

2. Choose "Australia" in **What Country/region are you in now?** pull down menu bar.

3. Select Phone system as "Tone Dialing".
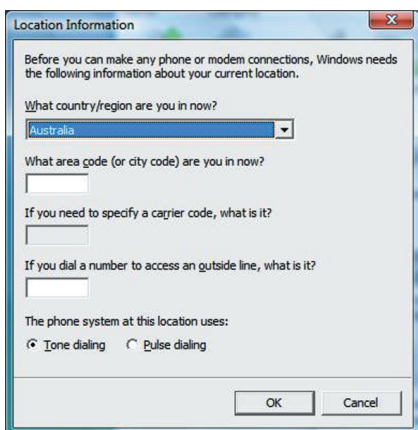
4. Click OK.

B. If you are located in New Zealand

1. Click start select Control panel select "Phone and Modem Options".

2. Choose "New Zealand in **What Country/region are you in now?** pull down menu bar.

3. Select Phone system as "Tone Dialing".

4. Click OK.
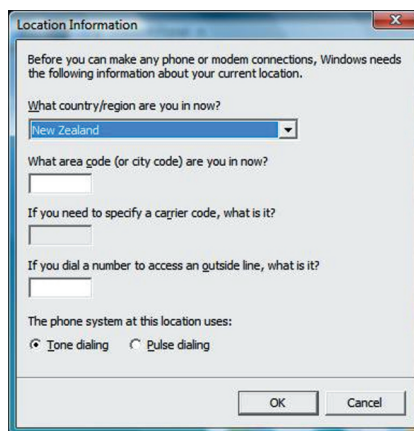
NOTE:

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

Table of Contents

NOTE:

A copy of LifeBook User's Manual is located in your Microsoft Windows OS or you can find it in Fujitsu's website at http://www.pc-ap.fujitsu.com/. You can use this LifeBook User's Manual to find out more information about the functions and features of your notebook.

xi
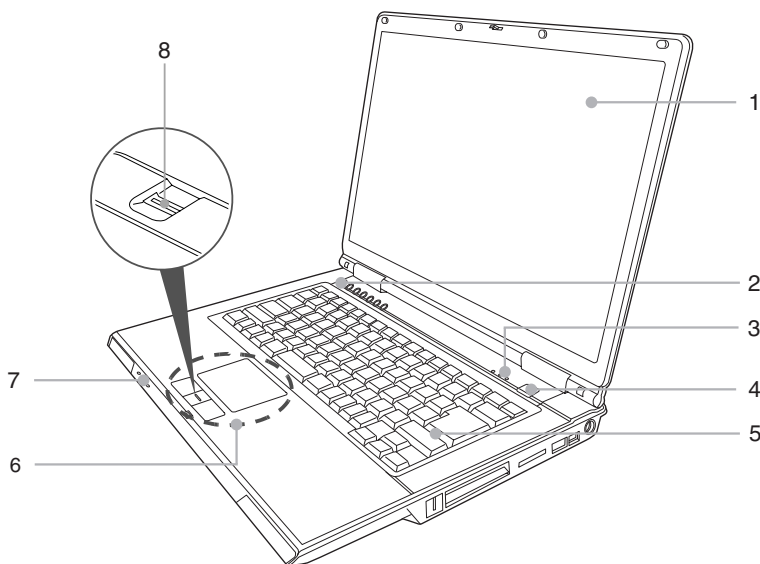
(This picture is for illustration purpose only and may look different from the actual unit)

NAMES OF THE PARTS AND THEIR FUNCTIONS

Front features of the notebook

1. LCD Panel

The display screen of the notebook.

✎ **POINT**

● The phenomena described below are characteristics of LCD panels and do not indicate that LCD panels are defective.

• The TFT color LCD screen of your notebook, composes of more than 2,350,000 picture elements (number of dots when the screen resolution is set at 1024 by 768 pixels). It was manufactured using advanced technologies. For technical reasons, LCD screen may have pixels that do not light and pixels that are always lit.

• LCD panels may display slight varying colors and uneven density.

1

2. LifeBook Application Panel

The LifeBook application panel provides one-touch application launch capability.

3. Status Indicator LED

This indicator displays operating status symbols that correspond to specific components of your notebook.

4. Power and Suspend/Resume Button

This button allows you to power on or off the notebook. You can use also this button to suspend notebook activity without turning off the power to it and to resume the notebook from suspend mode.

5. Spill Resistant Keyboard

A full-function keyboard with dedicated Windows keys.

⚠ **W A R N I N G**

Spill resistant keyboard does not imply the keyboard is water-proof. If liquid is spilled onto the keyboard, power off your notebook immediately and turn the notebook upside down to drain off the liquid.

6. Touch Pad with scroll buttons

It allows you to control the display cursor (mouse pointer).
The Scroll Buttons allow you to scroll up and down a document.

P O I N T

● Some applications may not allow you to scroll up and down a document using the scroll button.

7. Status Indicator LED

This indicator displays operating status symbols that correspond to specific components of your notebook.

8. Fingerprint Sensor or Scroll Buttons

Your notebook may be equipped with either Fingerprint Sensor or Scroll Buttons.
The Fingerprint Sensor provides an alternative way for Windows logon authentication as well as software application and web sites logon authentications. Please refer to the section on "Using Fingerprint Authentication" for more details. The Fingerprint Sensor also allows you to scroll up and down a document by sweeping your finger up or down the sensor.
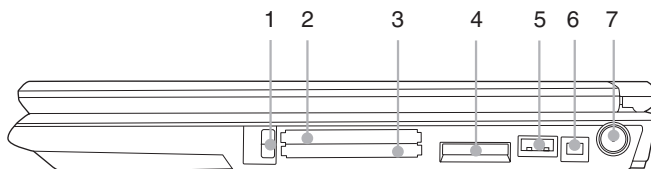The Scroll Buttons allow you to scroll up and down a document.

P O I N T

● Some applications may not allow you to scroll up and down a document.

2

(This picture is for illustration purpose only and may look different from the actual unit)

Exterior features: Side view

■ Right view of the notebook

1. ExpressCard™ and PC Card Eject Buttons

You press these buttons to eject the ExpressCard™ module and PC card installed in the card slots.

2. ExpressCard™ Slot

It allows you to connect ExpressCard™ module.
There are two sizes of ExpressCard™ module. One is 34mm wide (ExpressCard™/ 34) and the other is 54mm wide (ExpressCard™/54).
This LifeBook can support both sizes of ExpressCard™ accessory.

NOTE:
ExpressCard™ Compliance ID: EC100096 (A6020).
ExpressCard™ Compliance ID: EC100097 (A3120).

3. PC Card

It allows you to install an optional PC Card.

4. SD/MS/xD Card Slot

The Memory Stick/SD card slot allows you to install a flash memory card for data storage. This architecture allows you to transfer data from a variety of different digital devices, such as SD card, xD card and Memory Stick.

5. USB 2.0 Port

The USB 2.0 port allows you to connect Universal Serial Bus devices. USB 2.0 devices transfer data at up to 480Mbps and is backward compatible with USB 1.1 devices, which transfer data at up to 12Mbps.

6. IEEE 1394 Port

You can use this port to connect to a multimedia device with an IEEE 1394 port such as a digital video camera.

7. DC-IN Jack

You plug in the supplied AC adapter into this port to power your notebook and charge the battery.

3
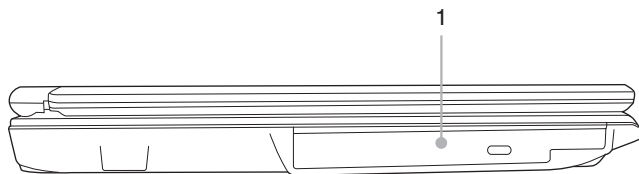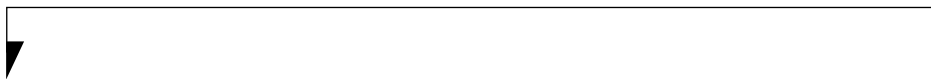
(This picture is for illustration purpose only and may look different from the actual unit)
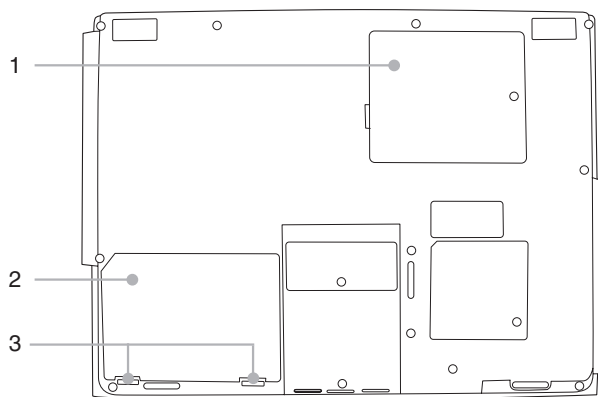
■ Left view of the notebook

1. Multi-Purpose Bay

Your notebook comes with an internal optical disk drive, which may vary between countries. Please check with your local distributor for actual configuration.

4

Exterior features: Bottom view of the notebook

(This picture is for illustration purpose only and may look different from the actual unit)

1. **Expansion RAM Module Slot**
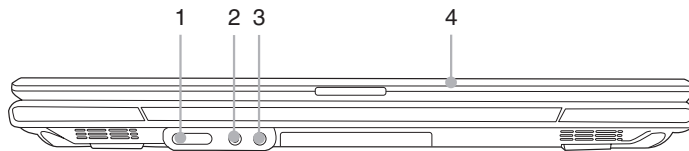
    The location of the expansion memory slot.

2. **Internal Battery Pack Bay**

    The location of the internal battery pack.

3. **Battery Release Latch**
    Slide and hold this latch before sliding the Battery Bay Lock Latch to unlock the battery.

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(This picture is for illustration purpose only and may look different from the actual unit)

Exterior features: Front view of the notebook

1. Wireless LAN/ Bluetooth* ON/OFF Switch

The switch allows you to turn on and off the Wireless LAN/ Bluetooth communications. Slide the switch to the right to turn it on, or slide the switch to the left to turn it off.

Remember to off this switch where the use of electronic devices is restricted, for example, in hospitals and on airplanes.

Turn off this switch if you intend to carry your notebook around. If you set your notebook in standby mode with this switch on, the notebook may resume operation unexpectedly when it is carried around. This may damage the hard disk.

* For model with Bluetooth.

2. HDA-Out

It allows jack sensing of the following audio output devices.

- **Headphone**
  It allows you to connect a Ø3.5mm headphone to it. There are commercially available headphones with different types of connector. Please check the compatibility of these headphones before purchase.

- **Line-out**
  It allows you to connect an external audio device e.g a pair of stereo speakers to it.

✍ IMPORTANT

- If this LifeBook come with an optical drive that can read DVD titles, then this drive is pre-set at factory to read DVD titles with region codes for specific Asia Pacific markets (e.g. code 3 for Asian, code 4 for Australia, code 6 for China).
- The first time you play a DVD title with a region code different from that of the DVD optical drive - the region code set at factory, you will be prompted to change the region code of the DVD optical drive. The region code of a DVD optical drive can be changed up to 4 times, after which it will be locked so that the DVD optical drive can only play DVD titles of the final region code set.

✎ POINT

- Do not leave this bay vacant. This may cause unexpected system failure.

3. HDA-In

It allows jack sensing of the following audio input devices.

- **Microphone**
  It allows you to connect a Ø3.5mm mono or stereo microphone to it.
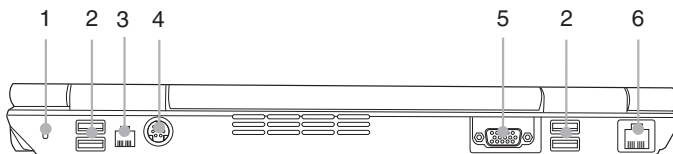
- **Line-in**
  It allows you to connect an external audio source to it e.g. an external CD player or a MP3 player.

4. Built-in Wireless LAN

The location of the dual Wireless LAN antenna.

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(This picture is for illustration purpose only and may look different from the actual unit)

Exterior features: Rear view of the notebook

1. Anti-theft Lock Slot

It allows you to attach an optional physical lock down device.

2. USB 2.0 Ports

The USB 2.0 ports allow you to connect Universal Serial Bus devices. USB 2.0 devices transfer data at up to 480Mbps and is backward compatible with USB 1.1 devices, which transfer data at up to 12Mbps.

3. LAN (RJ-45) Port

This port allows you to connect to a LAN (local area network) using an optional LAN cable. The port is compatible with 1000/100/10 Base-T networks.

4. Video Output (S-Video) Terminal

You can use this port to connect to a TV with S-video port for high quality video output using an optional S-video cable.

5. External VGA Port

The external VGA port allows you to connect an external display or CRT monitor.

6. Modem (RJ-11) Port

It allows you to connect your notebook internal modem to a phone line socket using a supplied RJ-11 cable.

7
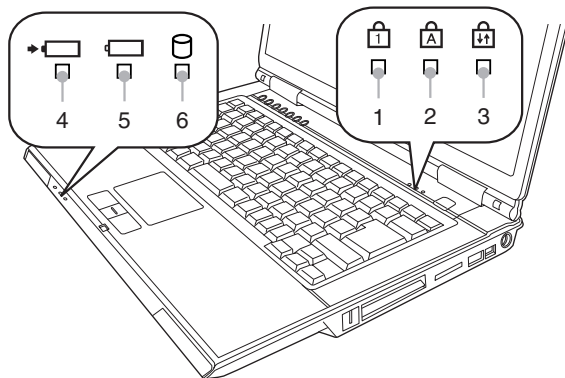
(This picture is for illustration purpose only and may look different from the actual unit)

STATUS INDICATOR LED

1. Num Lock Indicator (⬜)

This indicator lights up when the keyboard is locked in Num Lock mode. (You can use the keyboard as a ten-digit keyboard when the Num Lock mode is turned on).

You can toggle the Num Lock mode by using the [Num Lk] key.

2. Caps Lock Key (⬜)

You can toggle the Caps Lock mode by using the [CapsLock] key.

3. Scroll Lock Indicator (⬜)

This indicator turns on when the lock mode is turned on.

You can toggle the Scroll Lock button by using the [Scr Lk] key while holding down the [Fn] key.

4. Battery Charging Indicator (➔▭)

This indicator turns on when internal battery is being charged.

5. Battery Level Indicators

The standard Battery Level Indicator state the presence of stardard Li-ion battery. The indicator show the remaining power of the battery.

6. Disk Drive Access Indicator (⬀)

This indicator turns on when an internal hard disk drive or a removable disk drive is being accessed.

◆ P O I N T

● Do not power off the notebook when the disk drive access indicator is shown. Failure to do so corrupt data on the disk as well as the installed operating system.

8

RUNNING THE NOTEBOOK ON ITS BATTERY

Recharging the battery

1. **Connect the AC adapter to your notebook.**

   The moment you connect an AC adapter to your notebook, the notebook begins to charge the internal standard battery pack.

2. **When the indicator turns off after the battery is completely charged, disconnect the AC adapter from the notebbok.**

✎ P O I N T

- Before using the supplied battery pack for the very first time after purchase, remember to charge it fully. If a charged battery has not been recharged for more than a month, charge it fully before using it.

- When the battery is fully charged while the notebook is in power off mode, the Battery Level Battery Level LED indicator turns off.
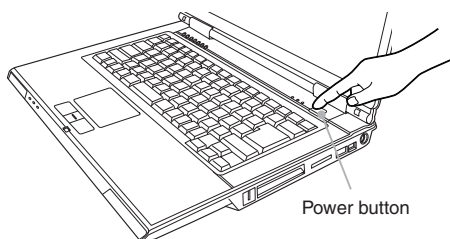
✎ P O I N T

- When the battery is 90% or more charged, it cannot be recharged even if the AC adapter is connected. The battery can be recharged when its power level (i.e. remaining battery life) is 89% or less.

- When a notebook is turned off, the Battery Level LED indicator goes off immediately if the battery is completely charged.

- The chargeability of the battery degrades when it is used in an extremely hot or cold place.

- When the battery is very hot, for example, immediately after long usage of the notebook, the battery protection feature may be activated to prevent the battery from being recharged. When the temperature decreases, the notebook automatically begins to charge the battery.

- When an optional modular bay battery is installed, it is charged along with the internal standard battery. (Optional modular bay battery is applicable to selected models only.)

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Running the notebook on its battery

This section describes the steps to run the notebook on its internal standard battery.

1. **Disconnect the AC adapter from your notebook and press the power button.**

Power button

(This picture is for illustration purpose only and may look different from the actual unit)

✎ P O I N T

- The power level of the battery decreases faster when it is used in a cold place.
- The chargeability of the battery decreases after it has been used over a long period of time. If the battery runs down very fast, replace it with a new battery.
- When an optional modular bay battery is installed, it is charged along with the internal standard battery. (Optional modular bay battery is applicable to selected models only.)

Checking the power level of the battery

■ **Checking the power level of the battery**

✎ P O I N T

- When the power is turned off, the status display LEDs are all OFF except for during battery charging.

1. **Built-in Battery Pack Charging Lamp (➡ 1)**

   This lamp indicates charging status of built-in battery when AC adaptor is connected to PC.

   - **Green lamp is lit**

     Charging completed or not charging due to no built-in battery pack installed.

   - **Orange lamp is lit**

     Charging

   - **Orange lamp flashes**

     Charging stopped (due to battery temperature alarm, etc. [Note 1])

   - **OFF**

     No charging due to disconnected AC adaptor.

2. **Built-in Battery Pack Level Indicator Lamp (1)**

   This lamp indicates remaining level of the built-in battery pack.

   - **Green lamp is lit**

     Remaining battery level: 100% − 50% [Note 2]

   - **Orange lamp is lit**

     Remaining battery level: 49 − 13% [Note 2]

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- **Red lamp is lit**

  Remaining battery level: 12% or below [Note 2]

- **Orange lamp flashes**

  Measuring remaining battery level (for 4 seconds after built-in battery pack is installed)

- **Red lamp flashes**

  Abnormal battery condition.

- **OFF**

  Built-in battery pack disconnected.

P O I N T

- Due to certain characteristics of Li-ion battery, the Battery Level Indicators may not correctly show the remaining power of the battery, especially under extreme temperature conditions.
- When the battery is 90% or more charged, it cannot be recharged even if the AC adapter is connected to the notebook. The battery can be recharged when its remaing power is 89% or less.

■ **Battery failure alert**

When the Battery Level LED indicator is not lit, it indicates that the battery cannot be charged properly.

P O I N T

- If the Battery Level LED indicator is not lit, turn off the notebook, remove the battery and reinstall it properly.

Low battery condition

When the battery is discharged to a very low level, the Battery Level LED indicator is lit Red. Immediately, connect the AC adapter to your notebook to recharge the battery.

P O I N T

- The use of a weak battery may result in lost of data you are currently working on. When the battery runs low, connect the AC adapter to your notebook as soon as an external power source is available or immediately save the data you are working on, exit all applications and turn off the notebook.
- Accessing data on the hard disk consumes a lot of power. Therefore when the battery is weak, connect an AC adapter to the notebook before accessing data on the hard disk.
- If a battery is weak and there is no system activity, the notebook may go into standby (i.e. suspend) mode. However, if there is system activity, the notebook will go into standby mode only after the system activity has completed its processing.
- The notebook will go into standby mode when the indicator reaches 3%. This is the default setting of the notebook.

NOTE 1:

Battery temperature alarm is to stop charging with battery protection function when temperature of built-in battery pack or extended built-in battery unit becomes too high or too low due to battery heat or cooling down of the battery.

NOTE 2:

Operational status or battery charging.

11

USING FINGERPRINT AUTHENTICATION*

With fingerprint authentication, you can omit entering a user name and a password by just sliding your finger onto the fingerprint sensor at the time of logging in homepages or logging on Windows. This chapter describes how to use fingerprint authentication.

* NOTE:

This is only applicable for LifeBook with Fingerprint Sensor.

To use fingerprint authentication, the user's fingerprints must be registered.

Characteristics of fingerprint authentication

■ Fingerprint authentication can be used in the following case.

• **Logging on to Windows**

When the user account of Windows is password-protected, only persons who know that password can log on to Windows using that account. However, you have to enter the password each time when you log on to Windows.

With use of fingerprint authentication, you can log on to Windows by only authenticating fingerprints that have previously been registered, thus omitting entering a password.

• **Recovery from the power-saving status**

If the computer is password-protected for the recovery from power-saving status, you have to enter a password each time when your computer is recovered from the power-saving status.

With use of fingerprint authentication, you can recover from the power-saving status by authenticating fingerprints that have previously been registered, thus omitting entering a password.

• **Canceling password-protected screen saver**

You can lock your computer if the screen saver is password-protected. However, you have to cancel this lock when canceling the screen saver.

With use of fingerprint authentication, just authenticating fingerprints that have previously been registered enables this lock to be canceled, thus omitting entering a password.

• **Logging into the homepage that requires an ID (user name) and a password**

To log into the homepage of which security is set up, you may have to enter log-in information such as an ID (user name) and a password.

With fingerprint authentication, you can log into these homepages by just authenticating fingerprints if log-in information is previously memorized for specific homepages.

Status for entering log-in information differs depending on homepages; direct entering log-in information into homepages, and indication of screens specific to entering. In either case, log-in using fingerprint authentication can be performed.

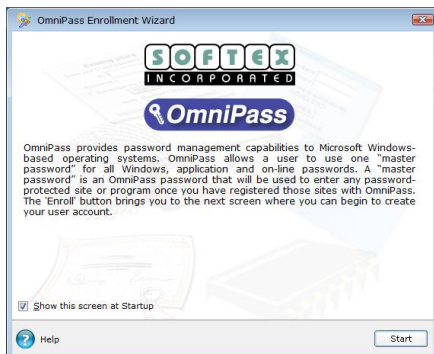**12**

OmniPass Enrollment Wizard

Figure 1: OmniPass Enrollment Wizard - Welcome

The OmniPass Enrollment Wizard guides the user through the process of enrolling an OmniPass user. If you do not see the screen at Startup, you can invoke the wizard by clicking on the Windows taskbar; select **All Programs**; select **Softex** and click on the **OmniPass Enrollment Wizard** (see Figure 1).

To continue, click **Start**. Input the User Name and Password (see Figure 2). The Domain field is the local computer name with the "Local Machine" appended to it. However, for domain user, they should select the appropriate domain name they belong to. Please check with your administrator. Click **Next** to proceed.

Figure 2: OmniPass Enrollment Wizard – User Name & Password
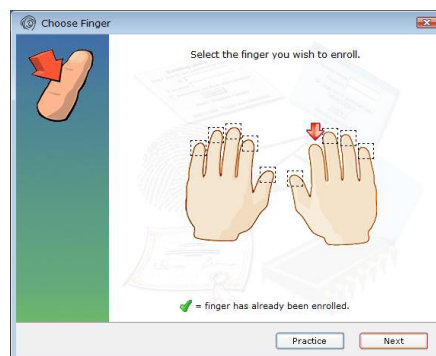

Figure 3: OmniPass Enrollment Wizard – Enrolling with OmniPass

Next, you are to select the finger that you wish to enroll in OmniPass (see Figure 3). Notice that the red arrow indicates the finger that you are currently enrolling in and the green check indicates the finger you have already enrolled with OmniPass. In the case of you choosing a finger with green check (already enrolled), OmniPass software allow you to enroll. However, it will overwrite the old fingerprint. Once you have selected the finger to enroll, click **Next**.

You can click on the **Practice** button to practice on the fingerprint enrolling especially for first time users.
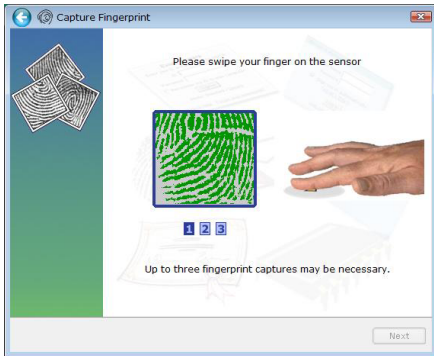
13

Figure 4: OmniPass Enrollment Wizard – Capturing Fingerprint

OmniPass will now capture the fingerprint of the finger selected for OmniPass enrollment. It will takes up to three fingerprint captures for the enrollment (see Figure 4).
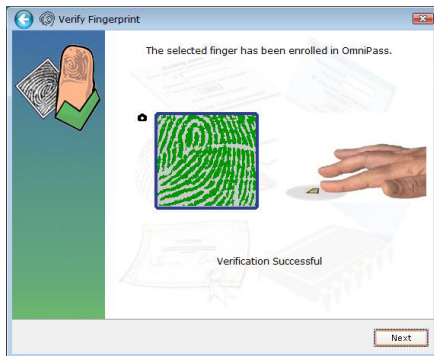

Figure 5: OmniPass Enrollment Wizard – Fingerprint Verification

After OmniPass has successfully capturing your fingerprint, you will need to verify the enrolled fingerprint (see Figure 5). You will need to repeat the action as you have done in the capturing fingerprint section done as shown in Figure 4.

As seen in Figure 5, upon successful verification, the window will show a green capture in the window and the text **Verification Successful** beneath the window. Click **Next** to proceed.

OmniPass recommends that you enroll at least two fingers (see Figure 6) and if you choose to enroll the second finger, please repeat the process as shown in Figure 3, Figure 4 and Figure 5.

Figure 6: OmniPass En rollment Wizard – OmniPass recommends at least two fingers
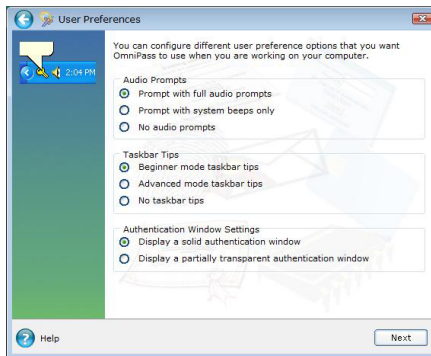

Figure 7: OmniPass Enrollment Wizard – Audio, Taskbar, Authentication Window Setting

In this section (see Figure 7), you can customize the OmniPass with your preferred audio prompt, taskbar tips as well as Authentication Window setting.
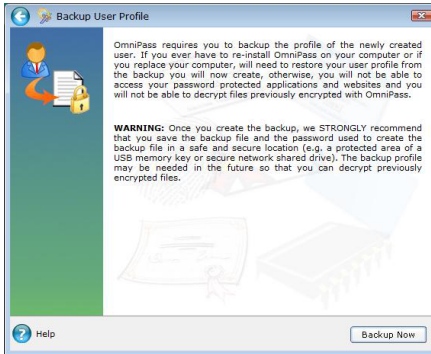
14

Figure 8: OmniPass Enrollment Wizard – Backup User Profile

To proceed, click **Next**. In this section of user enrollment, you are required to back up the newly created user profile (see Figure 8). The backup profile can be restored in the event you re-install OmniPass or replace your computer, otherwise you will not be able to access your password protected applications and websites. Besides that, you will not be able to decrypt the files previously encrypted with OmniPass. To proceed, click **Backup Now**.
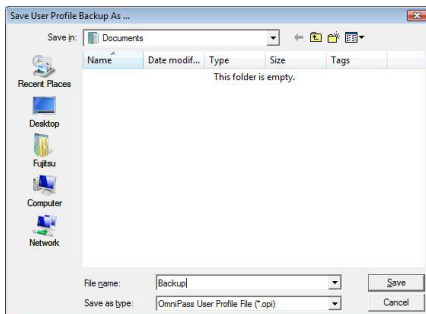

Figure 9: OmniPass Enrollment Wizard – Backup User Profile

You will be prompted to save the backup of the profile in your preferred location (see Figure 9) and a password for the backup file (see Figure 10). This password will be required when you are restoring this profile in the future.

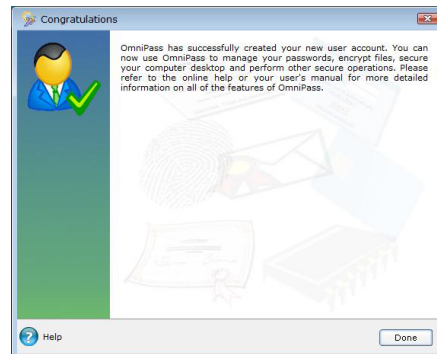*Figure 10: OmniPass Enrollment Wizard – Backup File Password*

Figure 11: OmniPass Enrollment Wizard – Congratulations

OmniPass has successfully created the new user account and now you are ready to use OmniPass to manage passwords, encrypted files etc.

OmniPass Password Replacement function

In this section of the OmniPass Password Replacement function, you will learn how you can teach OmniPass of your login credentials. You can authenticate with OmniPass the next time you gain access to the website where you have taught OmniPass with the set of login credentials. The description in the following section does not indicate exhaustive password replacement function that you can do.

Note: The password replacement functionality is not limited to restricted access websites only.

■ Register log-in information on homepages

To log into homepages of which security is set up, you may have to enter log-in information such as an ID (user name) and a password. With fingerprint authentication, you can log in these homepages by only sliding your finger onto the fingerprint sensor if log-in information is previously memorized for specific homepages. Register log-in information according to the following procedure.

Register log-in information on homepages

1. **Display a homepage you want log-in information to be registered.**
2. **Enter log-in information.**
   - When a screen specific for entering log-in information is indicated, enter the User Name and Password, do not press the "Sign-in" or "OK" button, etc.

3. **Right-click on the OmniPass icon 🔒 from the notification area in the lower right hand corner of the screen and selects "Remember Password."**

   - The mouse pointer will change into ⌗

4. **With the mouse pointer changed to ⌗, click on the area of log-in information entered in Step 2.**

5. **Next, you will be prompted to enter a Friendly Name for the website.**

   - It is recommended that you input a name that will reminds you which website you are logging on.

   - You can have different sets of login credentials associated with the same password-protected resource. However, please provide different friendly name to it. If you provide the same friendly name, OmniPass will overwrite the previous set of credentials associated with the password-protected resource.

   - OmniPass will be using the friendly name to choose one from the many credentials remembered for the same site.

   - **Automatically click the "OK" or "Submit" button for this password protected site once the user is authenticated**. When selected, you will be prompted to authenticate with OmniPass each time for an access to the password-protected website. Upon successful authentication, you will be logged on automatically.

   - **Automatically enter this password protected site when it is activated. Do not prompt for authentication** is a less secure option. If checked, OmniPass will allow you to log onto the password-protected website without prompting for authentication.
   WARNING: Should you leave your computer unattended, unlocked, with your OmniPass user logged in, anyone using your computer can browse to your password protected sites and gain automatic access.

   - Click **Finish** to complete the remember password procedure. The site location, credentials to access the site, and the OmniPass authentication settings for the site are now stored in OmniPass' secure database.

   - The OmniPass authentication settings (Settings for this Password Site) can always be changed in **Manage Vault** via **Manage Your Passwords** in **OmniPass Control Center**.
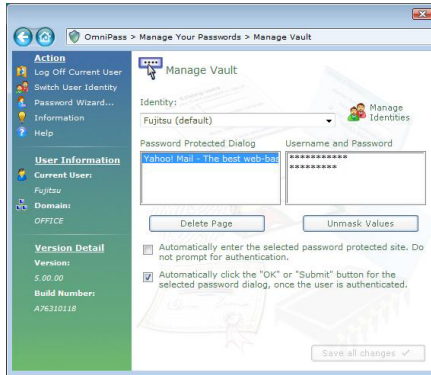
Password Management

You can manage your passwords through an interface in OmniPass. Double-click the OmniPass key in the system tray and click on **Manage Your Passwords**.

You will be prompted to authenticate with OmniPass before gaining access to the **Manage Vault**.


Under the **Password Protected Dialog**, you can choose the website remembered by OmniPass and manage the credentials by clicking **Unmask Values. Delete Page** is used to delete the credentials associated with the website but ceased to exist or expired. The two checkboxes determines whether you gain access with OmniPass authentication or logs you on directly upon entering the remembered site without any authentication.
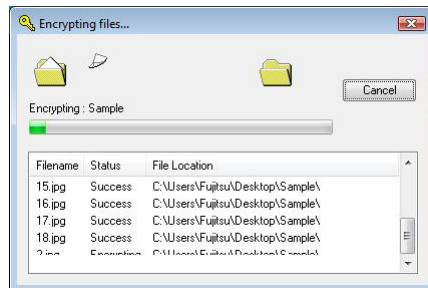
File and Folder Encryption

Besides managing passwords for the password-protected resources, OmniPass enables you to encrypt and decrypt files and folders in your system. Encryption is converting your data to a form in which unauthorized user cannot read. Once a file is encrypted, it needs to be decrypted so that the file can be read or accessed.
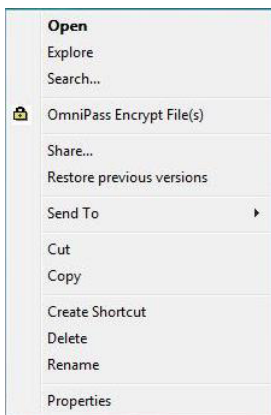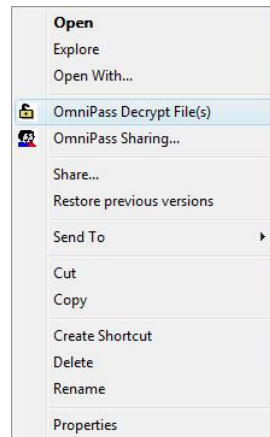

To encrypt a file or folder, right-click on it and selects **OmniPass Encrypt File(s)**. You will be prompted to authenticate with OmniPass for the encryption.

If you choose to encrypt a folder, the folder and all the files in this folder will be encrypted. Contents in **C:\Windows** and **C:\Program Files** and the folder where OmniPass is installed cannot be encrypted.


Encrypted file will have the extension ".opf" whereas the encrypted folder will have the extension ".opef".


To decrypt a file or folder, right-click and select **OmniPass Decrypt File(s)**. You will need to authenticate to OmniPass for the decryption process.

As mentioned earlier, when encrypting a folder, the folder and all the files in this folder will be encrypted. Files that are copied into this encrypted folder will also be encrypted. The files in this folder can be read and modified and they will be encrypted automatically once saved and closed as long as they remain in that folder. In order to decrypt a file in the encrypted folder, you can right-click on the file and select **Decrypt To…**.
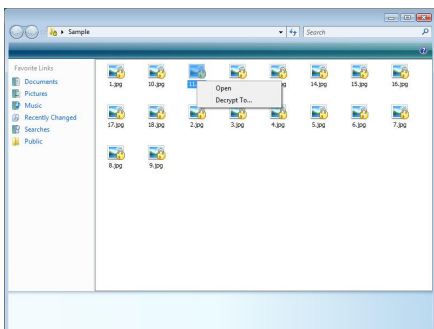
You need to select a target location for the file to be decrypted. However, the original encrypted file will still remain in the encrypted folder.
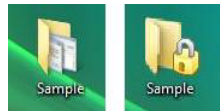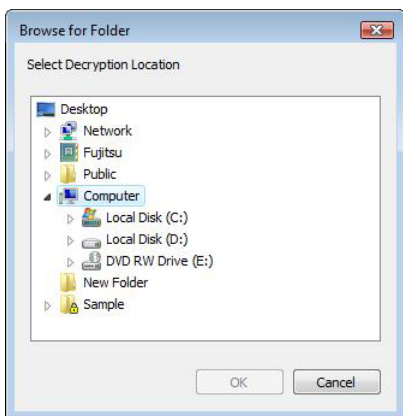
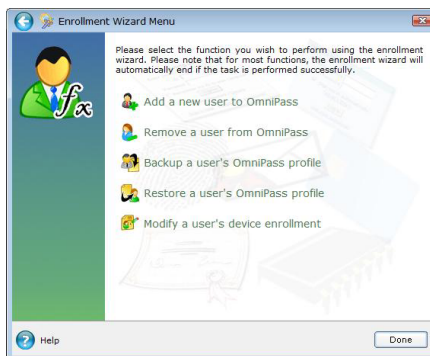Sample icon for encrypted file versus icon for non-encrypted file is shown above.

Backup and Restore OmniPass User Profiles

■ Backup OmniPass User Profile

Select **Backup a user's OmniPass profile** to back up the OmniPass user profile thru the OmniPass Enrollment Wizard.

You will need to authenticate to backup your profile and to save the profile (".opi") in the desired location upon successful authentication.

The user profile contains all your user specific OmniPass data. It is encrypted and password protected. However, this profile does not contain any of the encrypted data files. You can associate a password with the backup profile.

■ Restore OmniPass User Profile

To restore a user profile, select the **Restore a user's OmniPass profile** and select the profile to be restored.
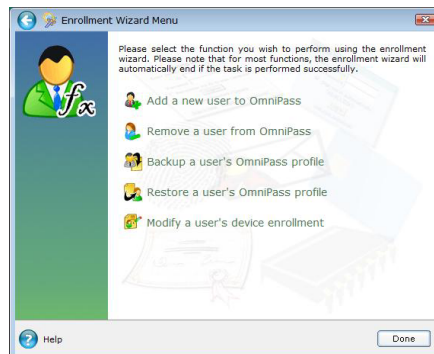
You may be prompted for a password for the backup profile if it is password-protected.

When selecting the .opi file in a restore, OmniPass will prompt you for authentication. The credentials that will allow a user profile to be imported are the Windows login credentials of the exported user. They are the credentials that had to be submitted when the user profile was exported. You will need **User Name**, **Password**, and **Domain**.

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OmniPass Control Center Overview

The OmniPass Control Center can be accessed by the following:-

• Clicking [icon] on the Windows taskbar; select **All Programs**; select **Softex**; click **OmniPass Control Center**

• Double-click on the Softex OmniPass in the Control Panel

• Right-click on the OmniPass icon [icon] from the notification area in the right corner of the screen and click **Open**.

There are five main portions in the OmniPass Control Center namely:-
• Manage Your Passwords
• Protect Your Files
• Change Your User Settings
• Change Your System Settings
• Run Enrollment Wizard

■ Manage Your Passwords

Please refer to **Password Management** section for the **Manage Your Passwords** portion of the Control Center.

■ Protect Your Files

In this portion of the OmniPass Control Center, **Protect Your Files** provides a Windows Explorer feel of the files and folders that you can encrypt and decrypt. However, files that are in use cannot be encrypted. This also includes system files and the folder OmniPass is installed. You will be prompted to authenticate with OmniPass for an encrypt/decrypt process.

Please refer to **File and Folder Encryption** section for more info.
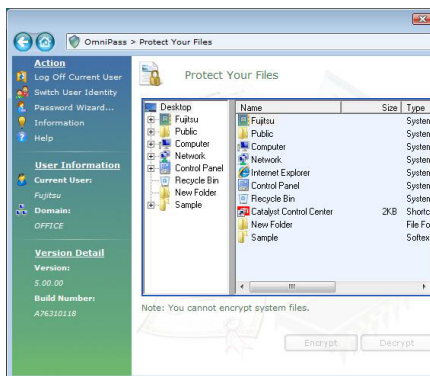
■ Change Your User Settings

With this selection, you can adjust your preferences such as: Audio setting, Taskbar tips, Authentication Window setting and File Encryption setting.
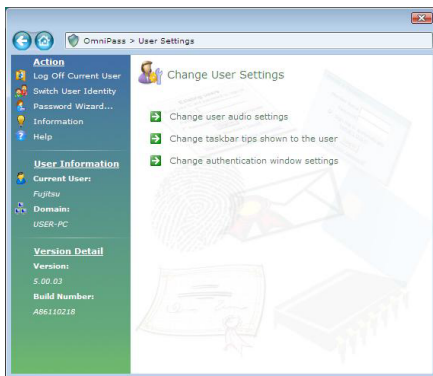
You can set how OmniPass can notify a user in the event of a successful login or denied access through the **Change user audio settings** and the **Change taskbar tips shown to the user** interfaces.

You also can set the appearance of the OmniPass Authentication window through the **Change authentication window settings**, whether you prefer a transparent or solid window.

■ Change Your System Settings

OmniPass system settings refer to the setting of your OmniPass software and the setting will apply to all the users who logs on to the system.
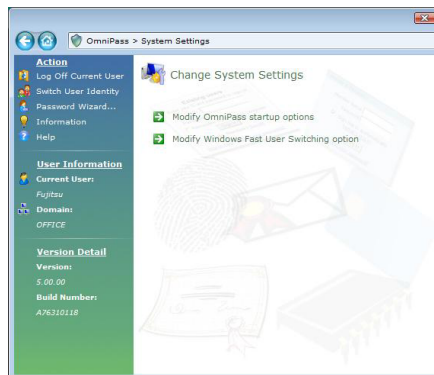
Through the **Modify OmniPass startup options**, you can determine whether a user is set to automatically logged on to OmniPass at startup, manually log on to OmniPass at startup or do not log on to OmniPass at startup.

The second selection: **Modify Windows Fast User Switching Option** allows Windows users to switch between their Windows desktops using OmniPass. This feature should only be enabled if your system is not protected by Ctl+Alt+Del at logon.

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■ Run Enrollment Wizard
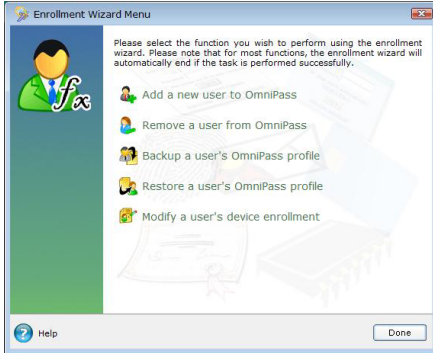
In this portion, you can add/remove user to/from OmniPass, backup/restore a user's OmniPass profile as well as to modify a user's device enrollment.

You will need to authenticate with OmniPass whenever you wish to modify the user's device enrollment. For an example, you can enroll more fingers with OmniPass and it is not limited to just one or two fingers.
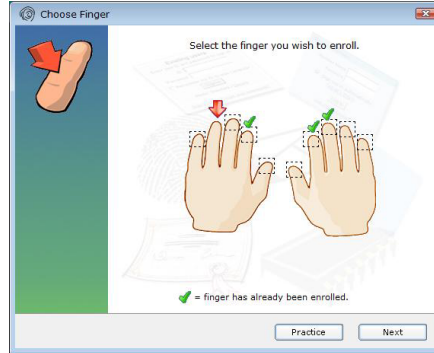
Note: The OmniPass guide indicated in this manual serves as a rough guide to the usage of the OmniPass software and the diagram may differ from the version installed in the user's system. Please refer to the user's manual in the OmniPass software for more information and details.

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Version Information

Version information on fingerprint authentication utility is displayed in the left-hand-side pane of the window.

Scrolling

The Fingerprint sensor now comes with a scrolling function. Taking advantage of the sensor's technology, users will be able to scroll up and down a document by swiping the finger upwards to scroll up and swiping down to scroll down.

25
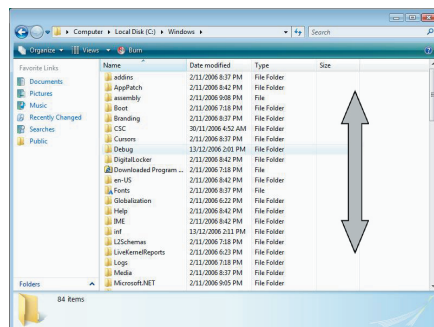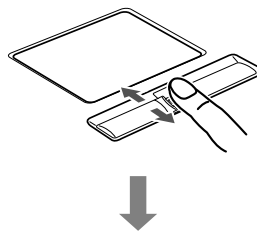
SHOCK SENSOR UTILITY

General information

The Shock Sensor Utility is designed to decrease the risk of damage to the computer's hard disk drive (HDD) in the event of excessive impact or vibration. Additionally, the Shock Sensor Utility has the ability to improve the security of the computer by automatically locking the computer with a password when it is carried. Note that the HDD protection and computer locking features are mutually exclusive; both cannot be selected at the same time.

Setting up the Shock Sensor Utility

1. Double-click the Shock Sensor Utility icon (🌀) in the Notification Area at the bottom-right of the screen. The [Shock Sensor Utility] window appears.

2. Click the [Setting] button (▤). The [Shock Sensor Utility Settings] window appears.
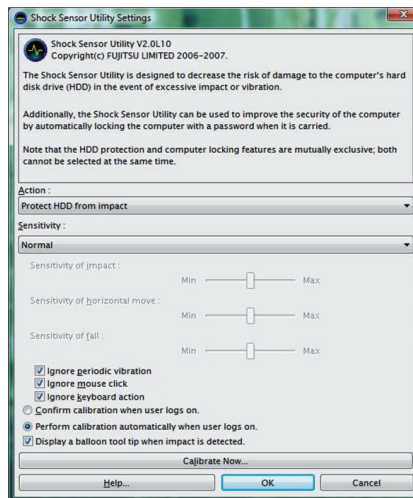
• **Action**
  Select the action you wish this utility to perform:
  – Protect HDD from impact
    HDD head is retracted when an impact to the computer is detected.
  – Lock computer when carried
    Lock the computer when it is being carried.
  – Nothing
    No action.

• **Sensitivity of impact/horizontal move/ fall/carry detection**
  Adjust the sensitivity of the acceleration sensor based on system motion or impact.

• **Ignore periodic vibration**
  If vibration is periodic, disregard it.

• **Ignore mouse click**
  When the mouse is clicked, sensitivity is temporarily lowered.

- **Ignore keyboard action**
  When the keyboard is used, sensitivity is temporarily lowered.

- **Confirm calibration when user logs on**
  Select [Confirm calibration when user logs on] if you want to recognize the current orientation as horizontal at logon.

- **Perform calibration automatically when user logs on**
  Select [Perform calibration automatically when user logs on] if the system is normally used on a horizontal surface.

- **Display a balloon tool tip when impact is detected**
  When this is selected, a message is displayed from the Shock Sensor Utility icon (☺) in the Notification Area when an impact is detected.

- **[Calibrate Now]**
  The calibration is executed. Please position the computer as horizontally as possible, then click the [Calibrate Now] button. The current horizontal position will be recognized as the true horizontal by performing the calibration.

3. Click the [OK] or [Cancel] button (▼). The [Setup] window closes.

Notes

Before using the Shock Sensor utility, please be aware of the following points.

- The Shock Sensor Utility does not completely protect the HDD of the computer.
- The Shock Sensor Utility does not provide the computer with absolute security.
- The computer may stop temporarily while HDD head is being retracted. To start the computer again, please keep it horizontal.
- The Shock Sensor Utility does not protect an external HDD; it only protects the HDD built into the computer.

- The Shock Sensor works only when a user is logged onto the computer. It does not work when the computer is shut down, when a user is not logged on, when in sleep mode, or while being shut down.
- The "Lock computer when carried" function is available only on certain models. This function can be selected from the menu of those models which support it.
- While the Shock Sensor Utility Settings window is displayed, the "Lock computer when carried" function does not work. Please close the window to use the function.

System Requirements

The Shock Sensor Utility runs under the following operating environment.

System	Requirements
OS	Microsoft® Windows Vista™ Ultimate Microsoft® Windows Vista™ Home Premium Microsoft® Windows Vista™ Home Basic Microsoft® Windows Vista™ Business Microsoft® Windows Vista™ Enterprise
Available hard disk space	3 MB or more

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DC Power Jack

DC Output Cable

AC Adapter

AC Cable
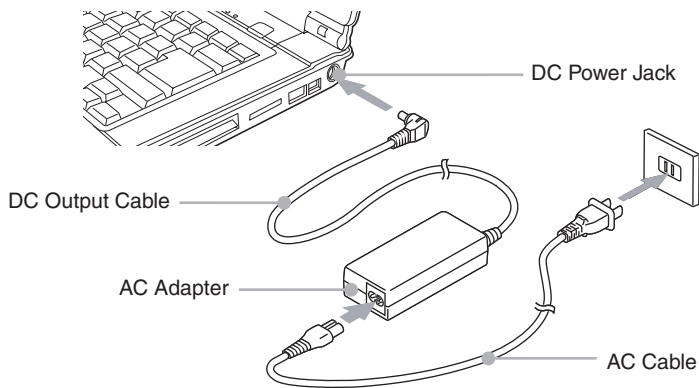
POWER SOURCES

Connecting the Power Adapter

The AC adapter provides power for operating your notebook and charging the batteries.

Connecting the AC Adapter

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

POINT

The Li-ion battery is not charged at the point of purchase. Remember to connect an AC adapter to your notebook to charge it when you use it for the first time.

Power On

Power/Suspend/Resume button

You can use the Power/Suspend/Resume button to turn on your notebook. Once you have connected an AC adapter to the notebook or charged the internal Lithium ion battery, you can power on your notebook.

✎ POINT

> When you turn on your notebook, be sure you have a power source connected to it. This means that at least one battery is installed and charged or that the AC adapter is connected and has power.

You can press the Power/Suspend/Resume button to turn off the notebook. After you have finished working on the notebook, you can either leave it in Standby (i.e. suspend) mode or turn it off.

⚠ CAUTION

> Do not carry the notebook around when it is still power on. Do not subject the notebook to shocks and vibrations. Failure to do so may damage the notebook.

When you power on your notebook, it will perform a Power On Self Test (POST) to check the internal parts and configuration for normal functionality. If an error is found, your notebook will emit an audio warning and/or show an error message.

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

Power Off

Before turning off the power, check that the Hard Disk Access, Optical Disk Drive Access and PC Card Slot Access indicators are off. If you power off the notebook when it is accessing the disk or PC Card, data may be lost or corrupted. To power off the notebook, always shut down the notebook properly using the Windows shutdown procedure.

⚠ CAUTION

> Remember to close all files, exit all applications and shut down the operating system prior to turning off the power using the power button. If documents are opened when the notebook is turned off, data may be lost and this may result in disk errors.

Remember to use the correct procedure to shut down the notebook. The proper procedure is:

1. Click the Start button and then click Shut Down or turn Off notebook.

2. Select the Shut Down option from within the Shut Down Windows dialog box.

3. Click OK to shut down your notebook.

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CHANGING THE INTERNAL BATTERY PACK

■ Changing the internal battery pack

1. **Turn off the notebook and disconnect the AC adapter from it.**

2. **Close the LCD panel and place your notebook upside down.**

IMPORTANT

● Close the LCD panel gently. Do not exert excessive pressure to it. Failure to do so may damage the LCD panel.

3. **Remove the battery pack.**

   While pressing the latches that lock the battery, push the battery outwards in the direction of the arrow as shown.

Battery Release Latches
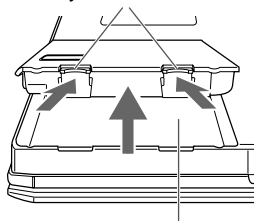
Battery Compartment

4. **Install a new battery pack.**

   Press the latches on the battery pack and align it to fit into the battery compartment of the notebook. When the battery falls in place, push the battery inwards as shown and release the latches.

Battery Release Latches
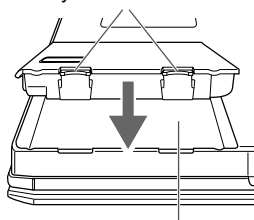
Battery Compartment

IMPORTANT

● After removing the internal battery pack, please take necessary precautions to prevent it from being shorted. For example, you can seal the connector ends with insulating tape. After removing the battery pack, do not mix it with other types of battery.

The internal battery pack contains recycle material.

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ADDING MEMORY MODULE
Where to install memory module

Your notebook has an expansion RAM module slot (slot 2) to add in one additional memory module.
The memory capacity of the notebook can be increased to a maximum of 4 GB (2048 MB x 2).

Preparing necessary items

- **Philips screwdriver**
  Use a screwdriver of appropriate size to remove the screws on the cover. Failure to do so may damage the head of the screws.

Memory compartment cover
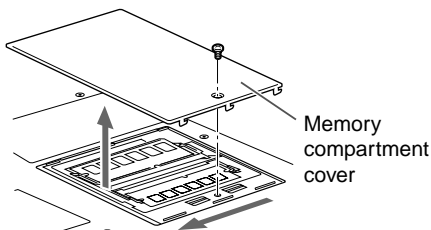
POINT

- Memory Module Configuration Table. The table below shows combinations of memory that can be installed on your notebook.

The installation of any combination of memory other than the combinations shown below can impair the functioning of your notebook.

Total capacity	Slot 1	Slot 2	Remarks
512MB	256 MB	256 MB	Dual Channel DDR2 667MHz
512 MB	512 MB		DDR2 667MHz
1 GB	512 MB	512 MB	Dual Channel DDR2 667MHz
1 GB	1 GB		DDR2 667MHz
2 GB	1 GB	1 GB	Dual Channel DDR2 667MHz
2 GB	2 GB		DDR2 667MHz
4 GB	2 GB	2 GB	Dual Channel DDR2 667MHz

This LifeBook is capable of operating in dual channel memory mode. To realize the full performance benefits of dual channel operations, we recommend you upgrade memory module using Fujitsu memory module such that the two memory modules in the memory slots are of the same capacity and specification.

Installing memory module

To install memory, perform these steps.

⚠ WARNING

- Before installing any memory module, remember to power off the notebook and disconnect the AC adapter from it.
- Keep small objects, such as a cover, caps and screws, out of the reach of babies and children. These small objects may suffocate a baby or child if they are swallowed accidentally. Should such an accident happen, consult a doctor immediately.

🔥 CAUTION

- Certain components around the memory slots are very hot when the notebook is powered on for a long period of time.
  To avoid possible burns, do not install or remove memory module immediately after turning off the notebook but wait for a while until its internal components cool down.

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1. **Turn off the notebook and disconnect the AC adapter from it.**

2. **Close the LCD panel and place the notebook upside down.**

3. **Remove the screw(s) securing the memory compartment slot cover and remove it.**

   Remove the battery compartment cover at the bottom of the notebook.

Memory compartment cover

4. **Install the memory module**

   Insert the memory module into the slot with the notch in the memory module aligned with the projection on the connector, and push the memory module down unit it locks in place with a click sound.
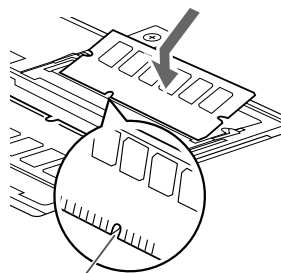
Notch in the memory module

5. **Attach the memory compartment cover and secure it with screws.**

   Attach the cover removed in step 3.

Memory compartment cover

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Checking the memory capacity

IMPORTANT

● If the memory is not installed correctly, an error message "Expansion memory error" may be displayed when you turn on the notebook. If such a message appears, turn off the notebook, remove the memory module and reinstall it.

1. **Turn on the notebook.**

2. **Click the Start button and select Control Panel.**

   The Control Panel window appears.

3. **Click System and Maintenance.**

4. **Click System.**

5. **Check whether the numeric value has increased by the size of the memory you have added.**

   The notebook specifications may vary between countries, please check with your local distributor for actual configuration.

POINT

● If the numeric value displayed does not agree with the memory capacity of your notebook, check the newly installed memory module.

● However, in the case of a system with integrated graphics solutions, or shared graphics solutions that utilizes a portion of a computer's system RAM, the total memory size available to the Operating System will be less than the size of installed memory module(s).

Changing memory module

The memory module installed on your notebook can be replaced with a larger size of memory.

1. **Turn off the notebook and disconnect the AC adapter from it.**

2. **Close the LCD panel and place the notebook upside down.**

3. **Remove the screw(s) securing the memory compartment cover and remove it.**

   Remove memory compartment cover at the bottom of the notebook.

Memory compartment cover

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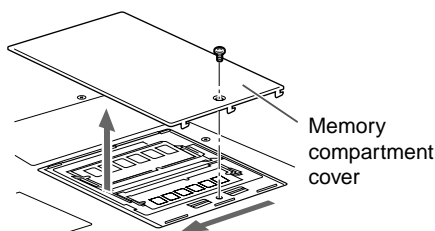
4. Remove the memory module.

Displace the hook on each side from the memory module. The memory module comes up slightly. Pull the memory module diagonally up to detach it from the slot.

5. Install a new memory module.

Insert the memory module diagonally into the slot with the notch in the memory module aligned with the projection on the connector. Push memory module down until it clicks into place.

Notch in the memory module

6. Attach the memory compartment cover.

Attach the cover removed in step 3.

Memory compartment cover
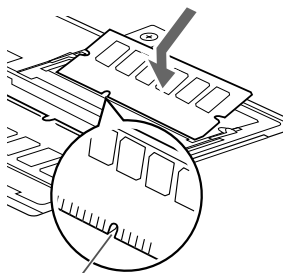
POINT

● After you have installed or remove a memory module, check the memory capacity of you notebook to verify that the memory module is installed properly.

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TROUBLESHOOTING

Your Fujitsu LifeBook notebook is sturdy and undergoes stringent reliability tests. 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 notebook.

2. Make sure the AC adapter is plugged into your notebook 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 notebook. Make sure it has been off at least 10 seconds before you turn it back 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.

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.

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 notebook for configuration and serial numbers.

Specific Problems

Using the Troubleshooting Table

When you have problems with your LifeBook notebook, try to find the symptoms under the Problem column of the troubleshooting table. You will find a description of common causes for that symptom under the column Possible Cause. Follow the instructions on the Possible Solution column to resolve the problem. All possible causes or solutions may not apply to your notebook.

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Troubleshooting Table

Problem	Possible Cause	Possible Solution
Audio Problem		
There is no sound coming from the built-in speakers.	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 notebook.	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 speakers have been muted using the Volume icon in the system tray.	Click on the Volume icon in the tool tray on the bottom right of the screen. (It looks like a speaker). If the Mute box is checked, click on it to uncheck it.
DVD/CD-RW/CD-ROM Drive Problems		
LifeBook notebook fails to recognize DVD/CD-RW/ CD-ROM's.	Protective sheet is still in the DVD/CD-RW/CD-ROM drive tray.	Remove the protective sheet from the DVD/CD-RW/CDROM drive tray.
	DVD/CD-RW/CD-ROM is not pushed down onto raised center circle of the drive.	Open DVD/CD-RW/CD-ROM tray and re-install DVD/CD-RW/CD-ROM properly.
	DVD/CD-RW/CD-ROM tray is not latched shut.	Push on the front of the DVD/CD-RW/CD-ROM tray until it latches.
	Incorrect DVD Player or no DVD Player software is installed.	Install DVD Player software.

Problem	Possible Cause	Possible Solution
DVD/CD-RW/CD-ROM Drive Problems		
LifeBook notebook fails to recognize DVD/CD-RW/ CD-ROM's. (continued)	Wrong drive designator was used for DVD/CD-RW/CD-ROM in the application.	Verify 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 DVD/ CD, drive designations are automatically adjusted.
	Windows DVD/CD-RW/CD-ROM auto insertion function is disabled.	Start the DVD/CD-RW/CD-ROM from the desktop or application software or re-enable the Windows DVD/CD-RW/CD-ROM auto insertion function.
	DVD/CD-RW/CD-ROM is dirty or defective.	Wipe DVD/CD-RW/CD-ROM with a non-abrasive CD cleaning cloth and reinsert. If it still does not work, replace a new DVD/CD-RW/CD-ROM in the drive.
The DVD/CD-RW/CD-ROM Access indicator on the Status Indicator Panel blinks at regular intervals when no DVD/CD-RW/CD-ROM is in the tray or the optical drive is not installed.	The Windows DVD/CD-RW/CD-ROM auto insertion function is active and is checking to see if a DVD/CD-RW/CD-ROM is ready to run.	This is normal. However, you may disable this feature.

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Problem	Possible Cause	Possible Solution
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-insert.
	The floppy disk drive may not be properly installed.	Remove and re-install 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 notebook.	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 notebook has gone into Suspend mode.	Push the Power/Suspend/Resume button.
	Your application has locked out your keyboard.	Try to use your integrated pointing device to restart your system.

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Problem	Possible Cause	Possible Solution
Keyboard or Mouse Problems		
You have installed an external keyboard or mouse, and it does not seem to work.	Your external device is not properly installed.	Re-install 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 optional 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 notebook.
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 re-install 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.

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Problem	Possible Cause	Possible Solution
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 re-install the card.
	The card may have been installed while an application was running, so your notebook is not aware of its installation.	Close the application and restart your notebook.
	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 the activated PC Card.	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 notebook and nothing seems to happen.	The installed primary battery is completely discharged, there is no optional second battery installed or there is no Power adapter (AC 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 primary 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 or batteries are low.	Check the Status Indicator Panel to determine the presence and condition of the batteries. Use a Power adapter to operate until a battery is charged or install a charged battery.
	The power adapter (AC adapter) is not plugged in properly.	Verify that your adapter is connected correctly.

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Problem	Possible Cause	Possible Solution
Power Failures		
You turn on your LifeBook notebook and nothing seems to happen. (continued)	The power adapter (AC 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 (AC adapter) is faulty.	Try a different power adapter or install a charged optional second battery.
Your LifeBook notebook 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 on the keyboard, or move the mouse to restore operation. If that fails, push the Power/Suspend/Resume button. Check your power management settings, or close your applications and go to the Power Options menu to adjust the timeout values to better suit your needs.
	You are operating on battery power only and have ignored a low battery alarm until the batteries are all power drained empty and your machine has gone into Dead Battery Suspend mode.	Install a power adapter or a charged battery and then push the Power/Suspend/Resume button.
	You have a battery failure.	Verify the condition of the batteries using the Status Indicator Panel, and replace or remove battery that is shorted.
	Your power adapter has failed or lost its power source.	Make sure the adapter is plugged in and the outlet has power.

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Problem	Possible Cause	Possible Solution
Power Failures		
Your LifeBook notebook 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 DVD/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.
	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 notebook to normal operating temperature. The Charging icon on the Status Indicator panel will flash when the battery is outside its operating range.

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Problem	Possible Cause	Possible Solution
Shutdown and Startup Problems		
The Suspend/Resume button does not work.	The 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 as 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.
An error message is displayed on the screen during the notebook (boot) sequence.	Power On Self Test (POST) has detected a problem.	See the Power On Self Test (POST) messages to determine the meaning and severity of the problem. Not all messages are errors; some are simply status indicators.

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Problem	Possible Cause	Possible Solution
Shutdown and Startup Problems		
Your notebook 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.
Your system display won't turn on when the system is turned on or when the system has resumed.	The system may be password-protected.	Check the status indicator panel to verify that the Security icon is blinking. If it is blinking, enter your password.
Video Problems		
The built-in display is blank when you turn on your LifeBook notebook.	Something is pushing on the Closed Cover switch.	Clear the Closed Cover switch.

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Problem	Possible Cause	Possible Solution
Video Problems		
The built-in display is blank when you turn on your LifeBook notebook. (continued)	The notebook 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 time-outs may be set for very short intervals and you failed to notice the display come on and go off again.	Press any button the keyboard, or move the mouse to restore operation. If that fails, push the Power/Suspend/Resume button. (The display may be shut off by Stanby mode, Auto Suspend or Video Timeout)
The LifeBook notebook 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.
The display goes blank by itself after you have been using it.	The notebook 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 on the keyboard, or move the mouse to restore operation. If that fails, push the Power/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.
	The power management time-outs may be set for very short intervals and you failed to notice the display come on and go off again.	Press any button on the keyboard, or move the mouse to restore operation. If that fails, push the Power/Suspend/Resume button. (The display may be shut off by Standby Mode, Auto Suspend or Video Timeout)
	Something is pushing on the Closed Cover switch.	Check the Closed Cover switch.

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Problem	Possible Cause	Possible Solution
Video Problems		
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 600/1024 x 768 pixel resolution display and display compression is enabled.	Display compression gives a clearer but smaller display for applications that do not support 800 x 600/1024 x 768 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.)
The Display is dark when on battery power.	The Power Management utility default is set on low brightness to conserve power.	Press [Fn] + [F7] to increase brightness or double- click on the battery gauge and adjust Power Control under battery settings.
You have connected an external monitor and it does not display any information.	Your BIOS setup is not set to enable your external monitor.	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.)
	Your external monitor 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.
You have connected an external monitor and it does not come on.	Your external monitor is not compatible with your LifeBook notebook.	See your monitor documentation and the External Monitor Support portions of the Specifications section.
Miscellaneous Problems		
An error message is displayed on the screen during the operation of an application.	Application software often has its own set of error message displays.	See your application manual and help display screens for more information. Not all messages are errors. Some may simply be status messages.