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Starting Your Tablet PC

POWER ON

The Suspend/Resume button is used to turn on your LifeBook T Series Tablet PC from its off state. Once you have connected your AC adapter or charged the internal Lithium ion battery, you can power on your Tablet PC. *(See figure 2-4 on page 11 for location)*

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

Press the Suspend/Resume button to start your system. When you are done working you can either leave your Tablet PC in Standby mode, See "Standby Mode" on page 36, or you can turn it off. See "Power Off" on page 38

When the system display is closed, the Suspend/Resume button is disabled. This feature prevents the system from being accidentally powered up when not in use.

When you Power On your Tablet PC, 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 Tablet PC will emit an audio warning and/or an error message will be displayed. See "Power On Self Test Messages" on page 65 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 Tablet PC will load your operating system.

Never turn off your Tablet PC during the Power On Self Test (POST) or it will cause an error message to be displayed when you turn your Tablet PC on the next time. *See "Power On Self Test Messages" on page 65*

BOOT SEQUENCE

The procedure for starting-up your Tablet PC is termed the Bootup sequence and involves your Tablet PC's BIOS. When your Tablet PC is first turned on, the main system memory is empty, and it needs to find instructions to start up your Tablet PC. This information is in the BIOS program. Each time you power up or restart your Tablet PC, it goes through a boot sequence which displays a Fujitsu logo until your operating system is loaded. During booting, your Tablet PC 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 Tablet PC.
- You restart your Tablet PC from the Windows Shut Down dialog box.
- The software initiates a system restart. Example: When you install a new application.

BIOS SETUP UTILITY

The BIOS Setup Utility is a program that sets up the operating environment for your Tablet PC. 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 Tablet PC.

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 Tablet PC.
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 Tablet PC's BIOS is available online. Please visit our service and support Web site at **us.fujitsu.com/computers**. Once there, select Support, then select Tablet PCs under User's Guides. Select LifeBook Tablet PC BIOS Guides from the pull-down menu for your Tablet PC series. If you are unsure of your Tablet PC's BIOS number, refer to your packing slip.

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

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BOOTING THE SYSTEM

We strongly recommend that you not attach any external devices until you have gone through the initial power-on sequence.

When you turn on your LifeBook T Series Tablet PC for the first time, it will display a Fujitsu logo on the screen. If you do nothing the system will load the operating system, and then the Windows Welcome will begin.

Designed to accommodate the needs of many users, in many different countries, Windows needs to be configured the first time you use them. Windows has two parts:

- Getting Started: You have the opportunity to set up your modem so that your Tablet PC will be prepared to dial out.
- Windows License Agreement and Final Settings: You have the opportunity to review the Windows License Agreement.

You may click Cancel at any time within this process to shut down Windows. 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 Tablet PC. For the modem settings, enter your current location information where you will be using your Tablet PC. 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 Tablet PC to dial out, Windows 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 Service and Support. *See "Fujitsu Contact Information" on page 3* 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 with Microsoft. Once you have finished, click the **Next** button to continue.

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.

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

ACTIVATING ADDITIONAL UTILITIES

The first time you boot up your system, you will see a Click Me! icon on the system desktop.

When you double-click the Click Me! icon, your system will automatically add appropriate utilities based on your system's configuration.

The ClickMe! icon disappears after it has been run the first time.

REGISTERING YOUR LIFEBOOK T SERIES TABLET PC

How do I register?

To register your system, visit our Web site at: us.fujitsu.com/computers.

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Power Management

Your LifeBook T Series Tablet PC 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 Tablet PC 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 Tablet PC battery from running down as quickly. For example, you can create an appropriate power saving profile, put your Tablet PC into Standby 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.

Power Mode	System Activity	Events causing system to enter mode state
Fully On Mode	System is running. CPU, system bus, and all other interfaces operate at full speed.	▪ From Standby mode: System operation resumed (Suspend/Resume button pressed, resume on modem ring, resume on time). ▪ From Hibernation mode: Suspend/Resume button pressed. ▪ From Off mode: Suspend/Resume button pressed.
Standby Mode (Suspend-to-RAM)	Resume system logic remains powered and RAM remains powered to maintain active data. All other devices are turned off.	▪ Standby timeout occurs. ▪ Suspend request issued by software or by pressing the Suspend/Resume button. ▪ Low battery.
Hibernation Mode (Suspend-to-Disk)	Windows saves desktop state (including open files and documents) to hard disk. CPU stops. All other devices are turned off.	▪ Suspend timeout occurs. ▪ Clicking Start -> Shut Down -> Hibernate (It may be necessary to Enable Hibernate Support from Windows Power Options.) ▪ Low battery condition
Power Off	System is fully powered off except for logic components required for Suspend/Resume button and real-time clock operation.	▪ System shutdown. ▪ Low battery condition

Table 3-1. System Power States

SUSPEND/RESUME BUTTON

When your Tablet PC is active, the Suspend/Resume button can be used to manually put your Tablet PC into Standby mode. Push the Suspend/Resume button when your Tablet PC is active, but not actively accessing anything, and immediately release the button. You will hear two short beeps and your system will enter Standby mode. *(See figure 2-6 on page 14 for location)*.

If your Tablet PC is suspended, pushing the Suspend/Resume button will return your Tablet PC to active operation. You can tell whether or not your system is in Standby mode by looking at the Power indicator. *See "Power Indicator" on page 15.* If the indicator is visible and not flashing, your Tablet PC is fully operational. If the indicator is both visible and flashing, your Tablet PC is in Standby mode. If the indicator is not visible at all, the power is off or your Tablet PC is in Hibernate mode *(See Hibernate Mode)*

STANDBY MODE

Standby mode in Windows saves the contents of your Tablet PC'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 Tablet PC can be put in Standby mode by:

- Pressing the Suspend/Resume 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.
- Closing the system cover.

Your Tablet PC's system memory typically stores the file(s) on which you are working, open application(s) information, and any other data required to support the operation(s) in progress. When you resume operation

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from Standby mode, your Tablet PC will return to the point where it left off. To resume operation, you must use the Suspend/Resume button to resume operation, and there must be an adequate power source available, or your Tablet PC will not resume.

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

HIBERNATE MODE

The Hibernate mode saves the contents of your Tablet PC's system memory to the hard drive as a part of the Suspend/Resume mode. Your Tablet PC is pre-configured to perform this function. The Hibernate mode can also be configured through the system BIOS to run in other ways depending on what you need to accomplish. *See "BIOS Setup Utility" on page 34.*

- Standby or Hibernate modes should not be used with certain PC Cards. Check your PC Card documentation for more information.
- Disabling the Suspend/Resume button prevents it from being used to put your Tablet PC in Standby or Hibernate mode. The resume function of the button cannot be disabled.
- If your Tablet PC is actively accessing information when you enter Standby or Hibernate mode, changes to open files are not lost. The files are left open and memory is kept active during Standby mode or the memory is transferred to the hard drive during Hibernate 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 peripheral devices will be re-initialized when the system restarts.
- The main advantage of using Hibernate mode is that power is not required to maintain your data. This is very important if you will be leaving your Tablet PC in a suspended state for a prolonged period of time. The drawback of using Hibernate mode is that it lengthens the power down and power up sequences and resets peripheral devices.

Using Hibernate Mode

Hibernate default setting is enabled for Windows XP.

To **enable or disable the Hibernation feature** follow these easy steps:

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

To **use Hibernate mode** with your system:

1. Click on the **Start** button, click **Shut Down**.
2. Select **Hibernate** option from the "What do you want the computer to do" list.

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 button and can be enabled and disabled in Windows Power Management.

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 button and can be enabled and disabled in Windows.

WINDOWS POWER MANAGEMENT

The Power Options icon located in the Windows Control Panel allows you to configure some of the power management settings. For example, you can use the Power Options to set the timeout values for turning off the display and hard disks whether you are running the Tablet PC on battery power or one of the adapters.

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**. Your Tablet PC will shut down and reboot.

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Turning off your Tablet PC without exiting Windows or turning on your Tablet PC within 10 seconds of the Tablet PC 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 Start menu, check that the Hard Drive, CD-ROM, PC Card and the Floppy Disk Drive Access indicators are all Off. *(See Figure 2-9 on page 15)* If you turn off the power while accessing a disk or PC Card there is a risk of data loss. To assure that your Tablet PC shuts down without error, use the Windows shut down procedure.

Using the correct procedure to shut down from Windows, allows your Tablet PC 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**.

If you are going to store your Tablet PC for a month or more see the Care and Maintenance section.

4 User-Installable Features

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Lithium ion Battery

Your LifeBook T Series Tablet PC has a Lithium ion battery that provides power for operating your Tablet PC 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 lower than 41° F (5° C) or higher than 95° F (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. *See "Battery Charging Indicator" on page 16.*
- When using a high current device such as a modem, CD-ROM drive, or hard drive, using the AC adapter will conserve your battery life.

- Do not leave a faulty battery in your Tablet PC. It may damage your AC adapter, optional Auto/Airline adapter, another battery or your Tablet PC itself. It may also prevent operation of your Tablet PC 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. If you cannot find this information elsewhere, contact your support representative at 1-800-8Fujitsu.

Actual battery life will vary based on screen brightness, applications, features, power management settings, battery condition and other customer preferences. CD-ROM 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.

RECHARGING THE BATTERY

If you want to know the condition of the 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 Tablet PC and connect the AC or Auto/Airline adapter.

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 longer if your Tablet PC is in use while the battery is charging. If you want to charge the battery more quickly, put your Tablet PC into Standby mode, or turn it off while the adapter is charging the battery. *See "Power Management" on page 36.*

Using heavy current devices such as a modem or frequent CD-ROM and PCMCIA powered external device accesses may prevent charging completely.

Low Battery State

When the battery is running low, your Tablet PC will beep every 15 seconds and the Battery Level indicator will flash. If you do not respond to the low battery alarm, the batteries will continue to discharge until they are too low to operate. When this happens there will be a multiple beep alarm and the Battery Level indicator will show a dead battery. Your Tablet PC will then go into Standby mode to try and protect your data for as long as possible. There is no guarantee that your data will not be lost once the Tablet PC reaches this point.

- You may not be able to hear the alarm if the volume control is set too low or is turned off by the hardware or software. However, you will be able to see the Battery Level indicator flash. Once the low battery alarm occurs you must save all your data and put your Tablet PC into Standby mode until you can provide a new power source. You should provide a charged battery or AC or Auto/Airline Adapter as soon as possible.
- When you are in Standby mode there must always be at least one power source active. If you remove all power sources while your Tablet PC is in Standby mode, any data that has not been saved to the hard drive will be lost.

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Dead Battery Suspend mode shows on the Status indicator just like the normal Standby mode. Once your Tablet PC 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 Tablet PC 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. *(See figure on page 15)* 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 Tablet PC.

REPLACING THE BATTERY

Your LifeBook T Series Tablet PC comes with one battery pack; you might want to consider purchasing a spare. By keeping a spare battery fully charged, you can immediately swap with one that is not charged.

There are two ways to swap batteries: cold-swapping and warm-swapping. Cold-swapping means swapping batteries when the system has been powered down; warm-swapping is performed when the system is in Standby mode.

Cold-swapping batteries

To cold-swap batteries in your battery compartment, follow these easy steps: *(Figure 4-1)*

1. Have a charged battery ready to install.
2. Shut down your tablet and disconnect the AC adapter.
3. Press the battery release latches to open the compartment.
4. Remove the battery from the compartment.
5. Slide the new battery into the compartment.
6. Close the compartment and the battery release latches will click into place.
7. Plug in the AC adapter and turn the power on.

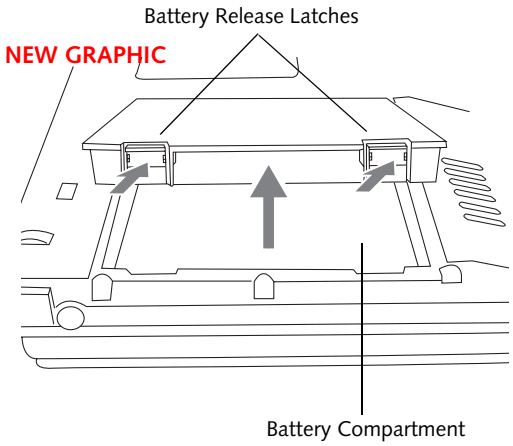

Figure 4-1. Removing the Battery

Warm-swapping Batteries

To warm-swap batteries in your battery compartment follow these easy steps: *(Figure 4-1)*

You have only a few minutes to perform a warm-swapping before the internal bridge battery runs out of power. Have the charged battery nearby when performing a warm battery swap.

1. Close any open files and put your Tablet PC into Standby mode.
2. Press the battery release latches to open the compartment.
3. Remove the battery from the compartment.
4. Slide the new battery into the compartment.
5. Close the compartment and the battery release latches will click into place.
6. Press the Suspend/Resume button to return your Tablet PC to normal operation.

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

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Memory Upgrade Module

Your Fujitsu LifeBook T Series Tablet PC comes with a minimum of 256 MB of high speed Double Data Rate Synchronous Dynamic RAM (DDR SDRAM), 333 MHz factory installed. To increase your system's memory capacity, you may install an additional memory upgrade module. The memory upgrade must be a dual-in-line (DIMM) SDRAM module. To ensure 100% compatibility, purchase the SDRAM module only from the Fujitsu web store at us.fujitsu.com/computers.

- If you are installing a 1 GB memory upgrade module by itself or with a smaller module, it must be installed in slot 1 *(Figure 4-2)*. TBD - TRUE?
- Do not remove any screws from the memory upgrade module compartment except those specifically shown in the directions for installing and removing the module.

INSTALLING MEMORY UPGRADE MODULES

1. Turn off power to your LifeBook Tablet PC and remove any power adapter (AC or auto/airline).
2. Make sure that all the connector covers are closed.
3. Turn the Tablet PC bottom side up, and remove the screws of the memory upgrade module compartment. *(Figure 4-2)*
4. Remove the cover.

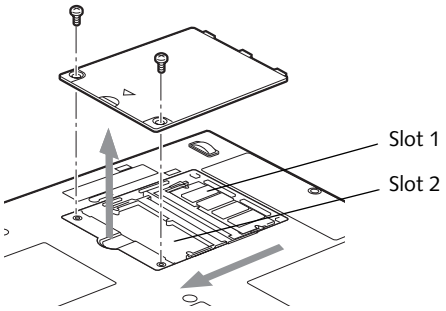

Figure 4-2. Opening the Memory Upgrade Compartment

5. Remove the memory upgrade module from the static guarded sleeve. As noted above, if you are installing a 1 GB memory module by itself or with a smaller module, it must be installed in slot 1.
6. Align the memory upgrade module with the component side up. Align the connector edge of the memory upgrade module with the connector slot in the compartment. *(Figure 4-3)*
7. Insert the memory upgrade module at a 45° angle. Press the connector edge of the module firmly down and into the connector until it lodges under the retaining clip. You will hear a click when it is properly in place.

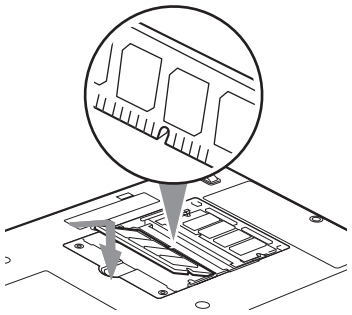

Figure 4-3. Installing a Second Memory Module

8. Replace the cover. *(Figure 4-4)*
9. Replace the screws.

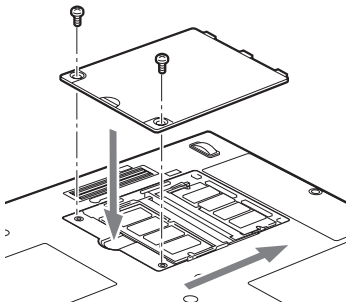

Figure 4-4. Replacing the Memory Compartment Cover

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

TO REMOVE A MEMORY UPGRADE MODULE

1. Perform steps 1 through 4 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 rear of your tablet. *(Figure 4-5)*

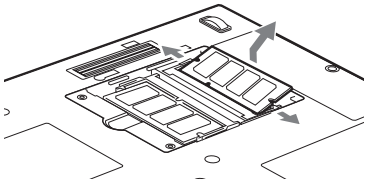

Figure 4-5. Removing a Memory Upgrade Module

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4. Store the memory upgrade module in a static guarded sleeve.
5. Replace the cover. *(Figure 4-4)*
6. Replace the screws.

CHECKING THE 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 tablet has recognized the change.

Your Tablet PC uses Dynamic Video Memory Technology (DVMT), which allows the video driver to dynamically determine the amount of memory that is used. Your Tablet PC can use a maximum of 64 MB of system memory for video functions.

You can check the memory capacity by clicking [Start] -> Control Panel, then double-clicking the System icon. Select the General tab and check the amount of memory under "Computer."

The amount of memory displayed should be approximately the total of all memory modules installed. There may be a discrepancy of 8 MB which is allocated for fixed video memory.

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 Troubleshooting on page 58.*

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Figure 2-2 Flexible Bay

Flexible Bay Devices

Your Fujitsu Tablet PC contains a Flexible Bay. The Flexible Bay can house an optical drive, a Lithium ion battery, and a weight saver. *(Figure 2-2)*

Your Flexible Bay will have one of the following devices installed.

- Modular Super-Multi DVD drive: This allows you to access movies, software, and audio DVD/CDs and record to DVD, CD, and DVD-RAM discs.
- Modular DVD/CD-RW combo drive: This allows you to access movies, software, and audio DVD/CDs as well as to write to CDs.
- Modular Lithium ion battery: This is a rechargeable battery that can be used to power your Tablet PC when an adapter is not connected.
- Weight Saver: This is used to fill the bay when no device is needed.

REMOVING AND INSTALLING MODULAR DEVICES

There are two ways to remove and install modular devices in the Flexible Bay:

- Cold-swapping: swapping devices while your Tablet PC is powered off.
- Hot-swapping: swapping devices while your system is active using the Unplug/Eject icon from your taskbar. Note that if the weight saver is installed rather than a modular device, it is not necessary to use BayManager when removing it.

You should never leave your Flexible Bay empty when the tablet is in operation. If left empty, dust or foreign matter may accumulate inside the tablet.

Cold-swapping

To cold-swap modular devices in your Flexible Bay follow these easy steps: *(Figure 2-3)*

1. Close any open files.
2. Shut down your Tablet PC.
3. Pull out the Flexible Bay eject lever. This will push your device out slightly, allowing you to remove it.
4. Slide your device out until it is clear of the bay. This will require light force.

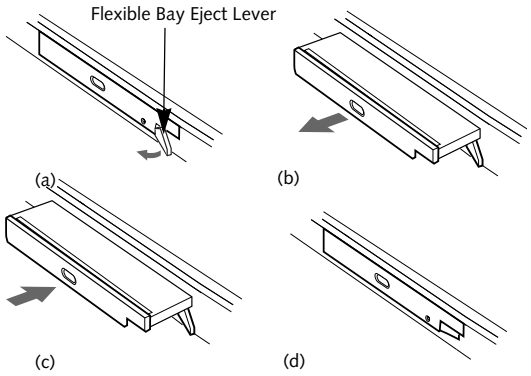

Figure 2-3 Removing/Installing a device in the Flexible Bay

Use care when aligning or seating devices in the bay. If the fit is incorrect, you may damage the bay or device. If the device does not move easily in the bay, remove it and check for dirt or foreign objects. It will require a firm push to latch it in place.

5. Slide the device you are installing into your tablet until it clicks into place.
6. It is now safe to turn your tablet back on.
7. You can now access and use the device.

Your Tablet PC will automatically detect the new device and activate it within your system. The drive letters associated with the device will be created and listed under My Computer and Windows Explorer.

Hot-swapping

Hot-swapping is provided through the Unplug or Eject Hardware utility. The icon for the utility appears on the taskbar. Click on the icon and follow the on-screen instructions.

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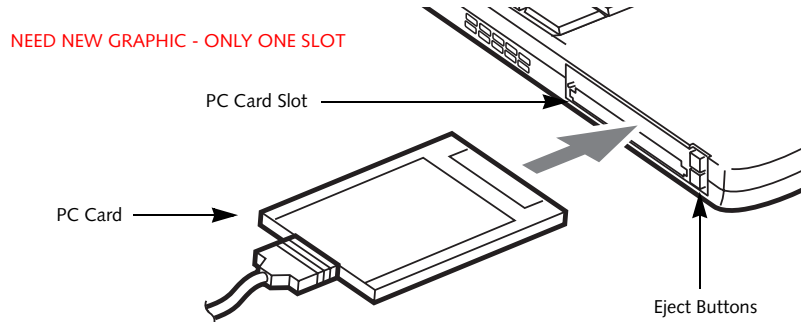


Figure 4-6. Installing/Removing PC Cards

PC Cards

Your LifeBook T Series Tablet PC supports Type I and II PC Cards, which can perform a variety of functions.

Some available PC Cards include:

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

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, follow these easy steps: *(Figure 4-6)*

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

1. See your PC Card manual for specific instructions on the installation of your card. Some PC Cards may require your Tablet PC 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. Insert your PC Card into the slot, with the product label facing up.
4. Push the card into the slot firmly until it is seated in the opening.

REMOVING PC CARDS

To remove a PC Card, follow these easy steps:

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

If the dialog box states that the device can't be removed, you must save all open files, close any open applications and shut down your Tablet PC.

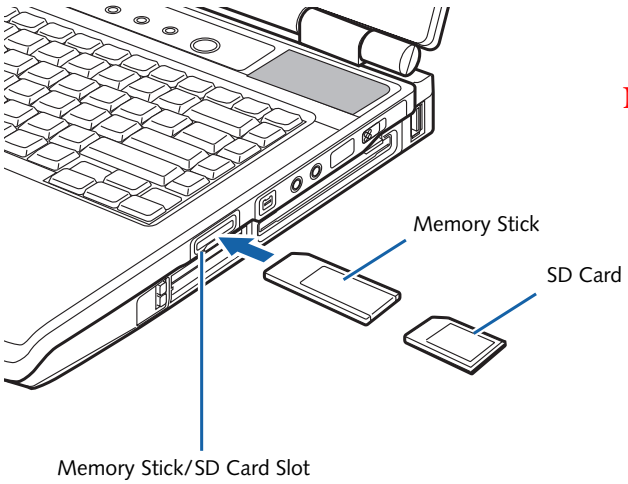
2. Push the Eject button until it pops out, and then push it in to eject the card. This will allow you to remove the card.

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

SMART CARD READER

An embedded Smart Card Reader and a dedicated Smart Card slot are provided on your Tablet PC. Smart Cards are the same size and shape as credit cards, but they contain an integrated microprocessor chip. The chip can hold a variety of information, and provides the user with many possible options, such as allowing them to make secure purchases, pay for phone calls, store security information, and provide identification and information.

Using the Smart Card functionality of your system requires third-party software. For instructions on using the Smart Card slot, see the instructions that come with the third-party software.



NEW GRAPHIC

Figure 4-2. Installing a Memory Stick/SD Card

Memory Stick/ Secure Digital Media

Your LifeBook Tablet PC supports Memory Stick/ Memory Stick Pro and Secure Digital (SD) cards, on which you can store and transfer data to and from a variety of digital devices. These cards use flash memory architecture, which means they don't need a power source to retain data.

Memory Stick is a flash memory technology developed by Sony Electronics. Memory Stick allows you to record, transfer and share digital content, such as digital pictures, movies, music, voice, and computer data and applications.

Secure Digital (SD) Cards are very similar to Memory Sticks, but they are shorter. Like the Memory Stick, SD Cards allow portable storage among a variety of devices, such as cell phones, GPS systems, digital cameras, and PDAs. SD Cards transfer data quickly, with low battery consumption. Like the memory stick, it uses flash memory architecture.

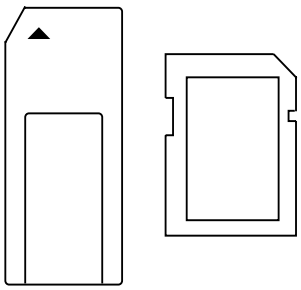


Figure 4-3. Memory Stick (left) and Secure Digital Card (right)

INSTALLING MEMORY STICK/SD CARDS

Memory Sticks and SD Cards are installed in the Memory Stick/SD Card slot *(Figure 4-2)*. To install a Memory Stick or SD Card, follow these steps:

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

1. See your Memory Stick or SD Card manual for instructions on the installation of your card. Some cards may require that your Tablet PC is off while installing them.
2. Make sure there is no card currently in the slot. If there is, see Removing a Memory Stick/SD Card.
3. Insert your PC Card into the slot with the product label facing up.
4. Push the card firmly into the slot until it is seated in the connector.

REMOVING A MEMORY STICK/SD CARD

To remove a Memory Stick or SD Card, see your Memory Stick or SD Card manual for instructions. Some cards may require your LifeBook Tablet PC to be in Suspend Mode or Off while removing them.

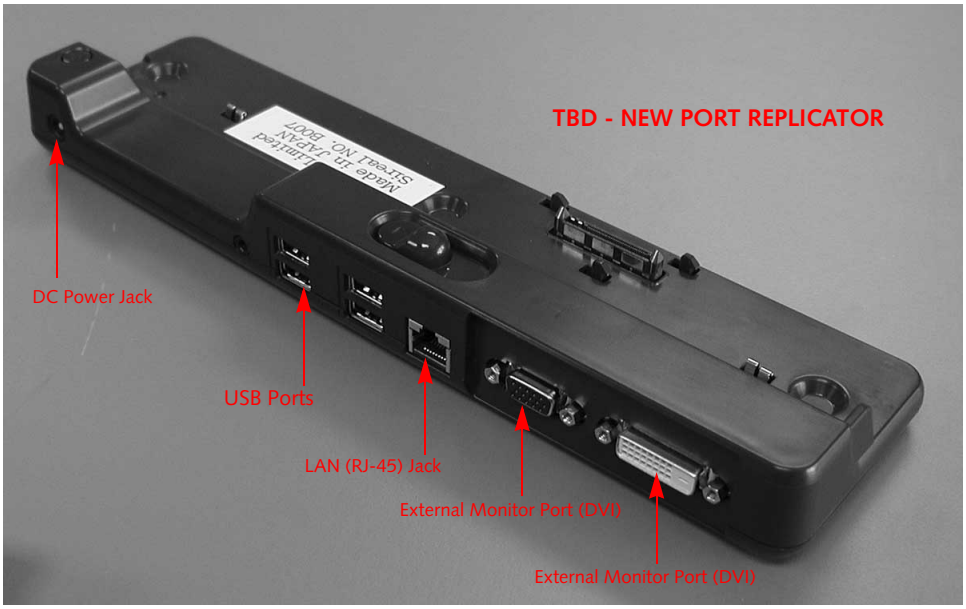


Figure 4-7. Port Replicator rear panel

Port Replicator

An optional Port Replicator is available from Fujitsu to support your LifeBook T Series Tablet PC. The Port Replicator extends the functionality of your Tablet PC by providing ports to connect USB devices, an external monitor, or a LAN device. The Port Replicator connects to the bottom of your Tablet PC. *See "Device Ports" on page 52.*

REAR PANEL COMPONENTS

Following is a brief description of the optional Port Replicator's rear panel components.

External VGA Monitor Port

The external VGA monitor port allows you to connect an external VGA or SVGA monitor. Note that if a Port Replicator is attached, you must use the external monitor port on the Port Replicator. *(Figure 4-7)*

External DVI Monitor Port

The external Digital Video Interface (DVI) port allows you to connect an external digital flat-panel monitor or projector. This provides a pure digital video signal for digital monitors.

LAN (RJ-45) Jack

The LAN jack allows you to connect a LAN to the Port Replicator. Note that when the system is attached to the Port Replicator, the LAN Jack on the Port Replicator should be used, not the one on the system.

DC Power Jack

The DC power jack allows you to plug in the AC adapter to power your Tablet PC and charge the internal Lithium ion battery.

USB 2.0 Ports

The two USB 2.0 ports allow you to connect USB devices such as game pads, pointing devices, and keyboards. USB 2.0 is downward-compatible with USB 1.1 devices, so older USB devices will work with these ports. USB 2.0 is a much faster design, running 40 times faster than USB 1.1.

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NEW GRAPHIC

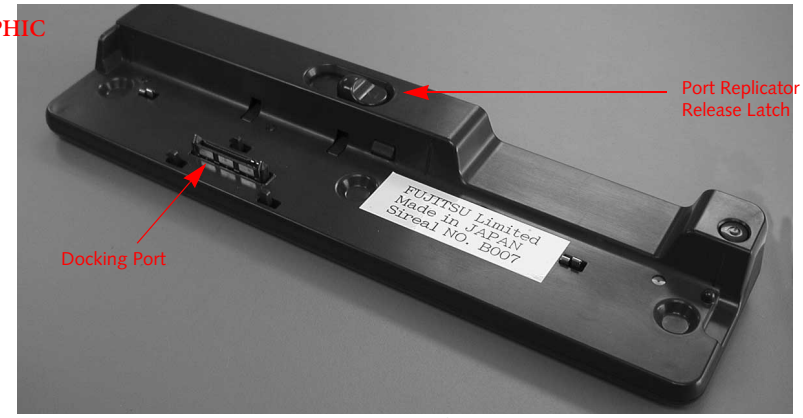

Figure 4-8. Port Replicator front panel

FRONT PANEL COMPONENTS

Following is a brief description of the optional Port Replicator's front panel components

Docking Port

The docking port connects the Port Replicator to your Tablet PC. *(Figure 4-8)*

Port Replicator Release Latch

Slide the Port Replicator Release Latch sideways to remove the Port Replicator from your Tablet PC. *(Figure 4-8)*

ATTACHING THE PORT REPLICATOR

To attach the Port Replicator, align the Port Replicator connector on the bottom of your Tablet PC with the connector on the Port Replicator and push together at the two corners. *(Figure 4-9)*

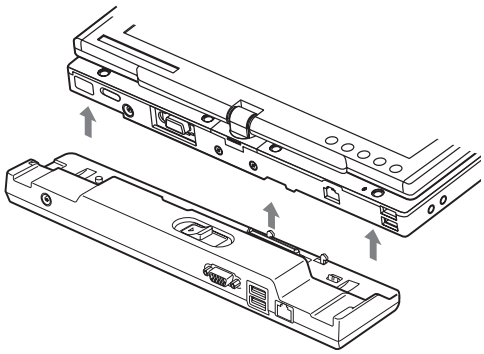

Figure 4-9. Attaching the Port Replicator

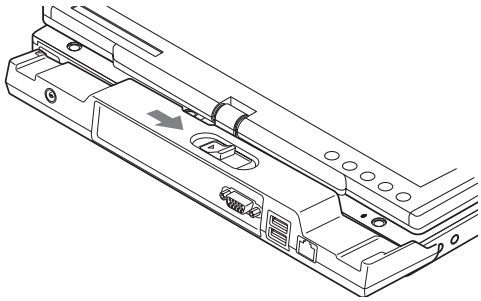

Figure 4-10. Unlatching the Port Replicator

DETACHING THE PORT REPLICATOR

To detach the Port Replicator:

1. Slide the Port Replicator release latch to release the Port Replicator from your Tablet PC. *(Figure 4-10)*
2. Pull away the Port Replicator to detach it from your Tablet PC. *(Figure 4-11)*

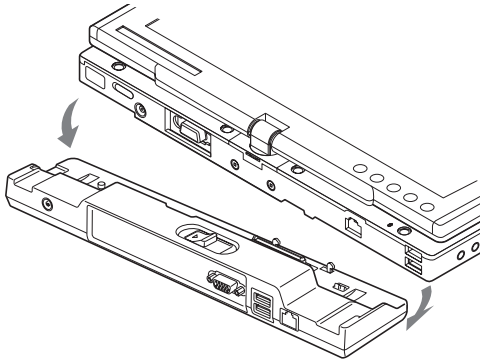

Figure 4-11. Removing the Port Replicator

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Device Ports

Your LifeBook T Series Tablet PC and the optional Port Replicator come equipped with multiple Device Ports to which you can connect an external device including: disk drives, keyboards, modems, printers, etc.

MODEM (RJ-11) JACK

The modem (RJ-11) jack is used for an internal modem. To connect the telephone cable follow these easy steps: *(See Figure 2-6 on page 14 for location)*

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

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 T Series Tablet PC. Consult your PBX manufacturer's documentation for details. Some hotels have Digital PBX systems. Be sure to find out BEFORE you connect your modem.

- The internal modem is designed to the ITU V.90 standard. Its maximum speed of 53000 bps is the highest allowed by FCC, and its actual connection rate depends on the line conditions. The maximum speed is 33600 bps at upload.
- The internal modem on all LifeBook T Series Tablet PC's from Fujitsu Computer Systems Corporation are certified for use in the United States and Canada.
- Depending upon the configuration of your system, your LifeBook Tablet PC may have either a LAN jack or an IEEE 1394 jack.

INTERNAL LAN (RJ-45) JACK

The internal LAN (RJ-45) jack is used for an internal Fast Ethernet (10/100 Base-T/Tx) connection. You will need to configure your Tablet PC to work with your particular network. (Please refer to your network administrator for information on your network configuration.) To connect the LAN cable follow these easy steps: *(See Figure 2-7 on page 15 for location)*

Note that the optional Port Replicator is designed to cover the LAN jack located on the system. This design ensures that the LAN jack on the Port Replicator is the only one used when the Port Replicator is installed.

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

DOCKING PORT

The docking port is used for the connection of your Tablet PC to an optional port replicator. In order to connect your Tablet PC to one of these devices follow the instructions that came with your docking port. *(See Figure 2-8 on page 16 for location)*

UNIVERSAL SERIAL BUS PORTS

The two Universal Serial Bus 2.0 ports (USB) allow you to connect USB devices such as external floppy disk drives, external DVD drives, game pads, pointing devices, keyboards and/or speakers. USB 2.0 is downward-compatible with USB 1.1 devices, so older USB devices will work with these ports. USB 2.0 is a much faster design, running forty times faster than USB 1.1.

In order to connect a USB device, follow these easy steps: *(See Figure 2-7 on page 15 for location)*

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

IEEE 1394 PORT

The 4-pin 1394 port allows you to connect digital devices that are compliant with IEEE 1394 standard (also known as "FireWire"). The IEEE 1394 standard is easy to use, connect, and disconnect. This port allows up to 400 Mbps transfer rate. A third-party application may be required to operate your device with the 1394 port.

The 1394 port used in this system uses a four-pin configuration. If you intend to interface with devices which use a six-pin configuration, you will need to purchase an adapter.

INFRARED PORT

The Infrared IrDA 1.1 (4 Mbps) port allows for wireless data transfer between your Tablet PC and other IrDA-compatible devices, such as another computer or a printer, without the use of a cable. *(See Figure 2-7 on page 15 for location)*

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It is important to keep in mind that while carrying out this form of communication, both devices must be placed so their infrared ports are directly facing each other without obstruction. The devices must also be separated by at least 6" but no more than 36" for maximum performance.

The following conditions may interfere with infrared communications:

- A television, radio remote control unit, or a wireless headphone is being used nearby.
- Direct sunlight, fluorescent light, or incandescent light shines directly on the port.

- Do not move either device while communication is active as it may interrupt data transmission.
- Be careful not to scratch the infrared port lens. Scratches, dirt, or other surface marks can degrade operation.

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 Tablet PC. In order to connect a microphone follow these easy steps: *(See Figure 2-5 on page 13 for location)*

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 Tablet PC. 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: *(See Figure 2-5 on page 13 for location)*

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

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

EXTERNAL VGA MONITOR PORT

The external VGA monitor port allows you to connect an external VGA or SVGA monitor. In order to connect an external monitor follow these easy steps: *(See Figure 2-7 on page 15 for location)*. There is also an external VGA monitor on the port replicator *(See Figure 4-7 on page 50 for location)*.

1. Remove the cover from the port opening, if present.
2. Align the connector with the port opening.
3. Push the connector into the port until it is seated.
4. Tighten the two hold-down screws, located on each side of the connector.

When an external monitor is plugged in, 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.

EXTERNAL DVI PORT

The external Digital Video Interface (DVI) port on the optional port replicator allows you to connect an external digital monitor or projector. In order to connect a DVI monitor follow these easy steps: *(See Figure 4-7 on page 50 for location)*.

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 side of the connector.

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5 Troubleshooting

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Troubleshooting

Your LifeBook T Series Tablet PC 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 that you are having difficulty in solving, go through the following procedure before pursuing further troubleshooting:

1. Turn off your Tablet PC.
2. Make sure the AC adapter is plugged into your Tablet PC 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 Tablet PC. 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.
8. If you still have the problem after taking all of the above approaches, please check our Web site at us.fujitsu.com/computers for possible known support issues.

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

8. If you have tried the solutions suggested in the Troubleshooting Table and checked our Web site for possible solutions without success, contact your support representative:

   Toll free: 1-800-8Fujitsu
   E-mail: 8fujitsu@us.fujitsu.com
   Web site: http://us.fujitsu.com/computers

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
- Type of device connected, if any

See the Configuration Label on the bottom of your Tablet PC for configuration and serial numbers. *(See figure 2-8 on page 16 for location)*

SPECIFIC PROBLEMS

Using the Troubleshooting Table

When you have problems with your Tablet PC, 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 Tablet PC.

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TROUBLESHOOTING TABLE

Problem	Page	Problem	Page
Audio Problems	page 58	Modem Problems	page 59
Docking Problems	page 58	USB Device Problems	page 60
Hard Drive Problems	page 58	PC Card Problems	page 60
Keyboard or Mouse Problems	page 58	Power Failures	page 60
Pen Input Problems	page 59	Shutdown and Startup Problems	page 62
Infrared Problems	page 59	Video Problems	page 63
Memory Problems	page 59	Miscellaneous Problems	page 64

Problem	Possible Cause	Possible Solutions
Audio Problems		
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 Tablet PC.	Plugging in headphones disables the built-in speakers, remove the headphones.
	Software driver is not configured correctly.	Refer to your application and operating system documentation for help.
	Sound could have been muted with function keys.	Press [F3] while holding the [Fn] key to toggle the sound on and off.
Port Replicator Problems		
Tablet PC does not turn on when installed in optional Port Replicator	Port Replicator AC adapter is not plugged in.	Provide power to the Port Replicator.
	Tablet PC is not properly seated in the Port Replicator.	Remove and re-dock your Tablet PC.
Hard Drive Problems		
You cannot access your hard drive.	The setup utility is incorrectly set for your internal (Primary Master) hard drive.	Revise BIOS settings to set the Primary Master correctly. *See "BIOS Setup Utility" on page 34.*
	The wrong drive designator was used by an application when a bootable CD-ROM was used to start the Tablet PC.	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 Tablet PC has gone into Standby mode.	Push the **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 Tablet PC off by pressing the suspend/resume button for 10 seconds or more, and then turn it back on.

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Problem	Possible Cause	Possible Solutions
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. *See "Device Ports" on page 52.*
	Your operating system software is not set up with the correct driver for that device.	Check your device and operating system documentation and activate the proper driver.
You have connected an external keyboard or a mouse and it seems to be locking up the system.	Your operating system software is not set up with the correct driver for that device.	Check your device and operating system documentation and activate the proper driver.
	Your system has crashed.	Try to restart your Tablet PC. If that fails, turn off the power by pressing the suspend/resume button for at least 10 seconds, and then power back on.
Pen Input Problems		
Cursor is not tracking the pen	The system may be uncalibrated	If the cursor on the screen appears to be misaligned with the pen or is not accurately tracking the pen, calibrate the pen. See "Calibrating the Pen" on page 27.
Infrared Problems		
Infrared data transfer is not working	The IrDA port on the system can't "see" the IrDA port on the other device.	Move the system so that there is a direct line-of-sight path between the two ports.
	The system and the other device are too far from each other.	Move the system and the device so that they are three feet or less from each other.
	The viewing angle between the devices is too great.	The viewing angle between the system port and the device port cannot be more than 15 degrees from a center line between the IrDA port on the Tablet PC and the IrDA port on the other device.
	You are using an old version of IrDA.	The device with which you are trying to communicate must be compliant with IrDA standard 1.1.
	There are possibly problems in one or both devices.	Go to Start -> (All) Programs -> Accessories -> Communications -> New Connection Wizard. Verify that "Set up an advanced connection" is checked and follow the on-screen instructions.
Memory Problems		
Your Power On screen, or Info menu of the BIOS setup utility information, does not show the correct amount of installed memory.	Your memory upgrade module is not properly installed.	Turn off your Tablet PC. Remove and re-install your memory upgrade module. *See "Memory Upgrade Module" on page 43.*
	You have a memory failure.	Check for Power On Self Test (POST) messages. *See "Power On Self Test Messages" on page 65.*
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 Solutions
Modem does not appear to work.	Modem may not have been intialized.	Verify that the modem has been initialized by the operating system. TO do so, right-click on My Computer and select the Hardware tab. Click [Device Manager] and click on the "+" symbol that appears next to Modems. Verify that your device is listed as installed.
USB Device Problems		
You have installed a USB device, but your Tablet PC does not recognize the device, or the device does not seem to work properly.	The device is not properly installed.	Remove and re-install the device. *See "Device Ports" on page 52.*
	The device may have been installed while an application was running, so your Tablet PC is not aware of its installation.	Close the application and restart your Tablet PC.
	Your software may not have the correct software driver active.	See your software documentation and activate the correct driver.
	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.
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. *See "PC Cards" on page 47.*
	The card may have been installed while an application was running, so your Tablet PC is not aware of its installation.	Close the application and restart your Tablet PC.
	Your software may not have the correct software driver active.	See your software documentation and activate the correct driver.
	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 Tablet PC and nothing seems to happen.	The installed battery is completely discharged or there is no power adapter (AC or Auto/Airline) installed.	Check the Status Indicator Panel to determine the presence and condition of the battery. See "Status Indicator Panel" on page 15. 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 battery. See "Status Indicator Panel" on page 15. If a battery is indicating a short, remove that battery and operate from another power source or replace that battery.

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Problem	Possible Cause	Possible Solutions
You turn on your Tablet PC and nothing seems to happen. (continued)	The battery is low.	Check the Status Indicator Panel to determine the presence and condition of the battery. See "Status Indicator Panel" on page 15. Use a Power adapter until the battery is charged.
	The AC or auto/airline adapter is not plugged in properly.	Verify that your adapter is connected correctly. *See "Power Sources" on page 33.*
	The Power adapter (AC or auto/airline) is faulty.	Try a different Power adapter or install a charged optional second battery.
	The Power adapter (AC or auto/airline) has no power from the AC outlet, airplane seat jack, or the car's cigarette lighter.	Move the AC cord to a different outlet, check for a line switch or tripped circuit breaker for the AC outlet. If you are using an auto/airline adapter in a car make sure the ignition switch is in the On or Accessories position.
Your Tablet PC 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 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 battery is at the dead battery state and your machine has gone into Dead Battery Suspend mode.	Install a power adapter and then push the Suspend/Resume button. *See "Power Sources" on page 33.*
	You have a battery failure.	Verify the condition of the battery using the Status Indicator panel, and replace or remove any battery that is shorted. *See "Status Indicator Panel" on page 15.*
	Your power adapter has failed or lost its power source.	Make sure the adapter is plugged in and the outlet has power.
Your Tablet PC will not work on battery alone.	The battery is dead.	Replace the battery with a charged one or install a Power adapter.
	No battery is installed.	Install a charged battery.
	The battery is improperly installed.	Verify that the battery is properly connected by re-installing them.
	Your battery is faulty.	Verify the battery condition using the Status Indicator panel and replace or remove any battery that is shorted. *See "Status Indicator Panel" on page 15.*
The battery seems to discharge too quickly.	You are running an application that uses a great deal of power due to frequent hard drive or CD-ROM access, or use of a modem or LAN PC card.	Use a power adapter for this application when at all possible.

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Problem	Possible Cause	Possible Solutions
The battery seems to discharge too quickly. (continued)	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 battery is very old.	Replace the battery.
	The battery has been exposed to high temperatures.	Replace the battery.
	The battery is too hot or too cold.	Restore the Tablet PC to normal operating temperature. The Charging icon on the Status Indicator panel will flash when the battery is outside its operating range.
	The AC Adapter is defective.	Replace with another AC Adapter to see if the problem persists. Replace any defective AC Adapters.
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 [F2] key while the Fujitsu logo is on screen, entering the setup utility and adjusting the source settings from the Boot menu. *See "BIOS Setup Utility" on page 34.*
	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. *See "BIOS Setup Utility" on page 34.*
An error message is displayed on the screen during the Tablet PC 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. *See "Power On Self Test Messages" on page 65.*
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.

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Problem	Possible Cause	Possible Solutions
Your Tablet PC 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 back-up battery has failed.	Contact your support representative for repairs. This is not a user-serviceable part.
Video Problems		
The built-in display is blank when you turn on your Tablet PC.	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 optional Port Replicator is attached, an external monitor is plugged in, and the Tablet PC 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 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 the keyboard, or move the mouse to restore operation. If that fails, push the Suspend/ Resume button. (The display may be shut off by Standy mode, Auto Suspend or Video Timeout)
The Tablet PC 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.
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.
The display goes blank by itself after you have been using it.	The Tablet PC has gone into Video Timeout, Standby Mode, or Hibernate Mode because you have not used it for a period of time.	Press a button on the keyboard, or move the mouse to restore operation. If that fails, push the 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. *See "BIOS Setup Utility" on page 34.*
	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 Suspend/ Resume button. (The display may be shut off by Standby Mode, Auto Suspend or Video Timeout)
The 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.

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Problem	Possible Cause	Possible Solutions
The 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.	The display needs technical diagnosis; 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 600/1024 x 768 pixel resolution display and display compression is enabled.	When compensation is disabled, a clearer but smaller display for applications that do not support 800 x 600/1024 x 768 pixel resolution will result. You can fill the screen but have less resolution by changing your compensation setting. (See the Video Features submenu, located within the Advanced menu of the BIOS. *See "BIOS Setup Utility" on page 34.*
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. *See "BIOS Setup Utility" on page 34.*
	Your external monitor is not properly installed.	Reinstall your device. *See "External VGA Monitor Port" on page 53.*
	Your operating system software is not set up 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 may not be compatible with your Tablet PC.	See your monitor documentation and the External Monitor Support portions of the Specifications section. See "Specifications" on page 77.
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 displays screens for more information. Not all messages are errors some may simply be status.

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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 *. 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.)

***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.

***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.

***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 hard drive may be corrupted and your system may have to be re-installed 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 and contact your support representative.

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***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 Tablet PC.

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.

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.

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Restoring Your Pre-installed Software

The Drivers and Applications Restore (DAR) DVD contains:

- Sets of device drivers and Fujitsu utilities (in specific directories) that are unique to your Tablet PC configuration for use as documented below.
- Read-me files that provide additional use information for items on this DVD-ROM.

In order to install applications and/or drivers from the DAR DVD, you will need to connect an external DVD drive to your system.

If you have access to the internet, visit the Fujitsu Support web site at http://us.fujitsu.com/computers to check for the most current information, drivers and hints on how to perform recovery and system updates.

RE-INSTALLING INDIVIDUAL DRIVERS AND APPLICATIONS

The Drivers and Application DVD can be used to selectively re-install drivers and/or applications that may have been un-installed or corrupted.

To re-install drivers and/or applications:

1. Boot up the system and insert the DAR DVD after Windows has started. A Fujitsu Welcome screen is displayed after the DVD is inserted.
2. From the left frame of the Welcome screen, "System Components" and "3rd Party Applications" can be selected. System Components are those drivers and utilities that have been developed by Fujitsu; 3rd Party Applications are applications developed by other vendors.

Installing System Components

1. To install system components, click on "System Components" in the left frame of the Welcome screen. A list of utilities and drivers will be displayed. Select one or more items from the list, or click [Select All] to select all items in the list. (To de-select your choices, click the [Clear All] button.
2. Click [Install Selected Subsystems] to install the selected items.

Installing 3rd Party Applications

1. To install 3rd party applications, click on "3rd Party Applications" in the left frame of the Welcome screen. A list of applications will be displayed.
2. Select one of the items from the list, and follow the instructions that appear on the screen. Note that only one application may be installed at a time.
3. Repeat step 2 to install additional applications.

RESTORING THE FACTORY IMAGE

The Restore Disc that came with your system contains two utilities:

- The **Recovery** utility allows you to restore the original contents of the C: drive.
- The **Hard Disk Data Delete** utility on this disc is used to delete all data on your hard disk and prevent it from being reused. Do not use the Hard Disk Data Delete utility unless you are absolutely certain that you want to erase your entire hard disk, including all partitions.

- The use of this disc requires that you have a device capable of reading DVDs attached to your system. If you do not have a built-in DVD player, you will need to attach an external player. For more information on available external devices, visit our Web site at: **us.fujitsu.com/computers**.
- This disc can only be used with the system with which it was purchased.

BOOT Priority Change

Before restoring an image, you must first verify that your system is set up to boot from the DVD drive. To verify/change the boot-up priority (rather than booting-up from the hard drive or an external floppy disk drive), perform the following steps:

1. Start your system and press the [F2] key when the Fujitsu logo appears. You will enter the BIOS Setup Utility.
2. Using the arrow keys, go to the Boot menu.
3. Arrow down to the Boot Device Priority submenu. Press [Enter].
4. If "Optical Media Drive" or "CD-ROM Drive" is not at the top of the list, arrow down to the drive in the list, and press the space bar (or the + key) to move it to the top of the list. (The system attempts to boot from the devices in the order in which they are listed.). Note that the BIOS for some systems will indicate "CD-ROM Drive", even when a DVD drive is connected.
5. If you have an *external* DVD drive connected, proceed to the next step; otherwise, proceed to step 7.
6. If you have an external DVD drive connected:
   - Select the Advanced menu in the BIOS window.

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- Scroll down to the USB Features submenu and press the Enter key to open it.
- If Legacy USB Support is disabled, press the space bar to enable it.
- Scroll down to SCSI SubClass Support and press the space bar to enable it.

7. Press [F10], then click on [Yes] to exit the BIOS Setup Utility and return to the boot process.

After you have changed the boot priority, you can restore a backup image when you are booting up.

Procedure

1. Turn on the power to your system.
2. Ensure that you have a device that can read DVDs either installed in your system or attached externally to it.
3. Insert the Restore Disc into the drive tray.
4. Reboot your system.
5. After the system reboots, follow the instructions that appear to either restore your system image or erase all data from your hard disk.

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6
Care and Maintenance

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Care and Maintenance

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

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 T SERIES TABLET PC

Caring for your Tablet PC

- Your Tablet PC is a durable but sensitive electronic device. Treat it with care.
- Make a habit of transporting it in a suitable carrying case.
- Do not attempt to service the computer yourself. Any unauthorized service performed on the computer will void the warranty.
- Always follow installation instructions closely.
- Keep it away from food and beverages.
- If you accidentally spill liquid on your Tablet PC:
  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 Tablet PC will not boot after it has dried out, call your support representative.
- Do not use your Tablet PC in a wet environment (near a bathtub, swimming pool).
- Always use the AC adapter and batteries that are approved for your Tablet PC.
- Avoid exposure to sand, dust and other environmental hazards.
- Do not expose your Tablet PC to direct sunlight for long periods of time as temperatures above 140° F (60° C) may damage your Tablet PC.
- 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 Tablet PC 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 Tablet PC.
- Do not touch the screen with any sharp objects.

Cleaning your Tablet PC

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

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

Traveling with your Tablet PC

- Do not transport your Tablet PC while it is turned on.
- Do not check your Tablet PC as baggage. Carry it with you.
- When traveling 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 traveling overseas. Check the following diagram to determine which adapter you'll need or ask your travel agent.

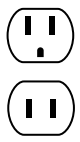
Outlet Type	Location
	United States, Canada, Mexico, parts of Latin America, Japan, Korea, the Philippines, Taiwan
	Russia and the Commonwealth of Independent States (CIS), most of Europe, parts of Latin America, the Middle East, parts of Africa, Hong Kong, India, most of South Asia
	United Kingdom,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

Figure 6-1. Outlet types

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KEYBOARD

Caring for your Keyboard

The keyboard of your computer is a very sensitive instrument. It is made up of many switches that are activated when you press on the keys. The keyboard is a major component of the heat dissipation system in a Tablet PC. Due to heat and size considerations the keyboard is not sealed. Because the keys are so close together, it is not easy for the user to see when liquids have fallen onto the circuitry below the keys.

Attempting to clean the keyboard with a spray on cleaner or rag soaked with cleaner the liquid can drip onto the circuitry sight unseen. Once the liquid seeps between the layers of circuitry, it can cause corrosion or other damage to the circuits. This can result in keys which no longer operate, or which, when pressed, record the wrong characters and other similar failures.

There is no repair for this problem other than replacement. The solution is to become aware of the issue and take appropriate steps to protect your keyboard.

To clean the keyboard, use a rag dampened slightly with cleaning solution. Use extreme care to prevent liquid from dripping between the keys. Spraying directly on the keys should be avoided. The spray should be applied first to the cloth, and then the cloth wiped over the keys.

BATTERIES

Caring for your Batteries

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

Increasing Battery Life

- Keep brightness to the lowest comfortable level.
- Set the power management for maximum battery life.
- Put your Tablet PC in Standby 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.

OPTIONAL FLOPPY DISK DRIVE AND FLOPPY DISKS

Caring for your Floppy Disks

- Avoid using 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 optional Optional 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.

OPTIONAL CD DRIVE AND 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.

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- 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 Optional 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.
- Use of a commercially-available lens cleaner kit is recommended to maintain the drive lens.
- 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 Card Slots

PC Cards are durable, but you must treat them with care. The documentation supplied with your PC Cards provides specific information for caring for the cards.

When you don't have a PC Card installed in your system, you should be sure to install the PC Card slot inserts that came with your system. These will help to keep dust and dirt out of your system.

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