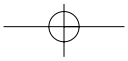

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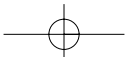
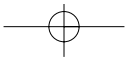
DECLARATION OF CONFORMITY
according to FCC Part 15

Responsible Party Name:	Fujitsu PC Corporation
Address:	598 Gibraltar Drive Milpitas, CA 95035
Telephone:	(408) 935-8800
Declares that product:	Model: LifeBook C340. LifeBook C350.
	Complies with Part 15 of the FCC Rules.

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

David Woo	Fujitsu	8/28/98
FULL NAME	COMPANY	DATE





CAUTION

Changes or modifications not expressly approved by Fujitsu PC Corporation could void this user's authority to operate the equipment.

FCC NOTICES

Notice to Users of Radios and Television

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet that is on a different circuit than the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

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

Notice to Users of the US Telephone Network

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

1. The telephone number to which the notebook is connected.
2. The Ringer Equivalence Number (REN) for this equipment.
3. That the equipment requires a standard modular jack type USOC RJ-11C which is FCC Part 68 compliant.
4. The FCC Registration Number.

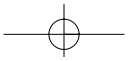
This equipment is designed to be connected to the telephone network or premises wiring using a standard modular jack type USOC RJ-11C which is FCC Part 68 compliant and a line cord between the modem and the telephone network with a minimum of 26AWG.

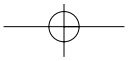
The REN is used to determine the number of devices that you may connect to your telephone line and still have all of those devices ring when your number is called. Too many devices on one line may result in failure to ring in response to an incoming call. In most, but not all, areas the sum of the RENs of all of the devices should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the RENs, contact your local telephone company.

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

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

Your telephone company will probably ask you to disconnect this equipment from the telephone network until the problem is corrected and you are sure that the equipment is not malfunctioning. This equipment may not be used on coin service telephones provided by your telephone company. Connection to party lines is subject to state tariffs. Contact your state's public utility commission, public service commission or corporation commission for more information.





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

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

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

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

DOC (INDUSTRY CANADA) NOTICES

Notice to Users of Radios and Television

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

CET appareil numérique de la class B respecte toutes les exigence du Réglement sur le matérial brouilleur du Canada.

Notice to Users of the Canadian Telephone Network

The Canadian Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

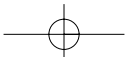
The LifeBook C Series notebook computers are supplied with an internal modem which complies with the Industry Canada certification standards for telecommunication network protection and safety requirements. Before connecting this equipment to a telephone line the user should ensure that it is permissible to connect this equipment to the local telecommunication facilities. The user should be aware that compliance with the certification standards does not prevent service degradation in some situations.

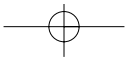
Repairs to telecommunication equipment should be made by a Canadian authorized maintenance facility. Any repairs or alterations not expressly approved by Fujitsu™ PC Corporation or any equipment failures may give the telecommunication company cause to request the user to disconnect the equipment from the telephone line.

The connecting arrangement code for this equipment is CA11A.

The Load Number is 0.8.

The Load Number assigned to each telephone terminal device denotes the percentage of the total load to be connected to a telephone loop or circuit which is used by the device to prevent overloading. The termination on a loop may consist of any combination of devices such that the total of the load numbers of all devices does not exceed 100.





CAUTION

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

Avis Aux Utilisateurs Du Réseau Téléphonique Canadien

L'étiquette canadienne Industrie Canada identifie l'équipement certifié. Cette certification signifie que l'équipement satisfait certaines normes de protection, d'exploitation et de sécurité des réseaux de télécommunications. Le département ne garantit pas le fonctionnement de l'équipement à la satisfaction de l'utilisateur.

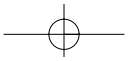
La série LifeBook C possède un modem interne conforme aux normes de certification d'Industrie Canada pour protéger les réseaux de télécommunications et satisfaire aux normes de sécurité. Avant de connecter cet équipement à une ligne téléphonique, l'utilisateur doit vérifier s'il est permis de connecter cet équipement aux installations de télécommunications locales. L'utilisateur est averti que même la conformité aux normes de certification ne peut dans certains cas empêcher la dégradation du service.

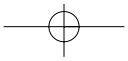
Les réparations de l'équipement de télécommunications doivent être effectuées par un service de maintenance agréé au Canada. Toute réparation ou modification, qui n'est pas expressément approuvée par Fujitsu PC Corp., ou toute défaillance de l'équipement peut entraîner la compagnie de télécommunications à exiger que l'utilisateur déconnecte l'équipement de la ligne téléphonique.

Le code d'arrangement de connexion de cet équipement est CA11A.

Le numéro de charge est 0.8.

Le numéro de charge assigné à chaque terminal téléphonique indique le pourcentage de la charge totale pouvant être connecté à une boucle ou à un circuit téléphonique, utilisé par ce périphérique afin de prévenir toute surcharge. La terminaison d'une boucle peut être constituée de n'importe quelle combinaison de périphériques de sorte que le total de numéros de charge de tous les périphériques n'excède pas 100.





AVERTISSEMENT

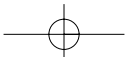
Pour assurer la sécurité, les utilisateurs doivent vérifier que la prise de terre du service d'électricité, les lignes télphoniques et les conduites d'eau métalliques sont connectées ensemble. Les utilisateurs NE doivent PAS tenter d'établir ces connexions eux-mêmes, mais doivent contacter les services d'inspection d'installations électriques appropriés ou un électricien. Ceci peut être particulièrement important en régions rurales.

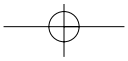
UL NOTICE (FOR AUTHORIZED REPAIR TECHNICIANS ONLY)

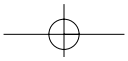
CAUTION: For continued protection against risk of fire, replace only with the same type and rating fuse.

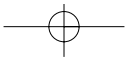
CAUTION: Danger of explosion if CMOS battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instruction.

WARNING: CMOS and NiCAD batteries may explode if mistreated. Do not recharge, disassemble or dispose of in fire.









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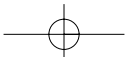
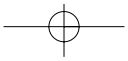
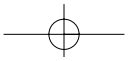






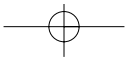
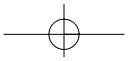
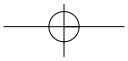
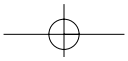
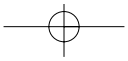


Table of Contents

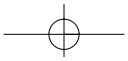








LifeBook C Series from Fujitsu



PREFACE

The LifeBook C Series from Fujitsu PC Corporation is a powerful notebook computer. It is powered by an Intel Pentium® II microprocessor, has a built-in HPA DSTN color display, a CD-ROM drive, an internal 56K modem with v.90 support, and brings the computing power of desktop personal computers (PCs) to a portable environment.

This manual explains how to operate your LifeBook C Series' hardware and built-in system software. The LifeBook C Series is compatible with the IBM® PC AT. It comes with Windows 98 pre-installed.

A LifeBook C Series notebook is a completely self-contained unit with a dual-scan (DSTN) color LCD display. It has a powerful interface that enables it to support a variety of optional features and software. (*Figure P-1.*)

CONVENTIONS USED IN THE GUIDE

Screen examples in this manual are intended as examples only, and screen and file names may differ in actual use.

Messages displayed by the LifeBook C Series appear in `Courier` type.
Example: `Shutdown the computer?`

Keyboard keys are shown in boldface **Helvetica** type.
Example: **Fn**, **F1**, **Esc**, and **Ctrl**.

Pages with additional information about a specific topic are cross-referenced within the text.
Example: (*See page xx.*)

POINT

The point icon highlights information that will enhance your understanding of the subject material.

CAUTION

The caution icon highlights information that is important to your safety, to the safe operation of your computer, or to the integrity of your files. Please read all caution information carefully.

LifeBook C Series from Fujitsu

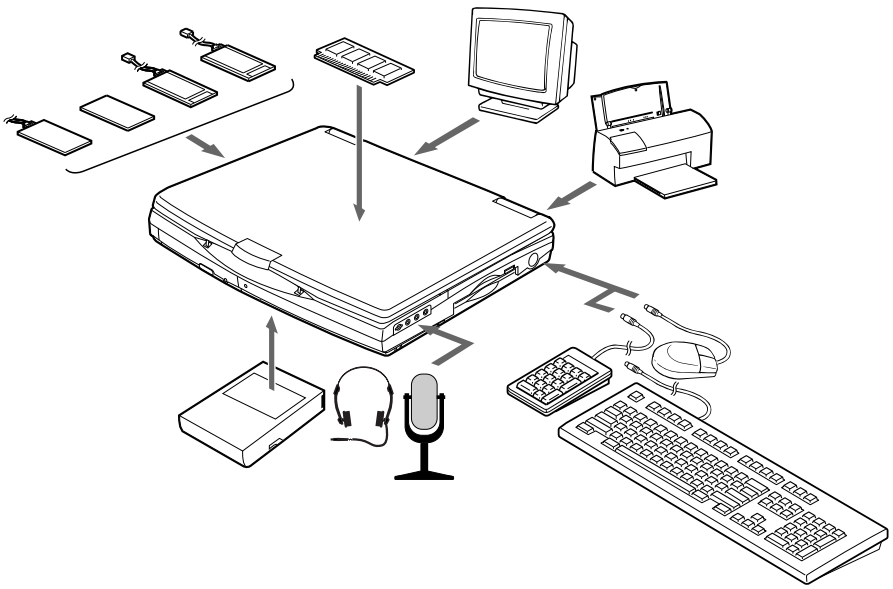
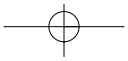
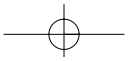
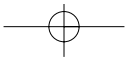


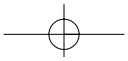
Figure P-1 LifeBook C Series with Both Fujitsu and Third Party Options







Setting Up Your LifeBook C Series



Section One

SETTING UP YOUR LIFEBOOK C SERIES FROM FUJITSU

This section describes how to set up your LifeBook C Series from Fujitsu. We strongly recommend that you read it before using your notebook – even if you are already familiar with notebook computers.

UNPACKING

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

For a standard configuration you should have:

- LifeBook C Series notebook from Fujitsu. *(Figure 1-1.)*
- AC adapter with AC power cord (located in the Accessories box). *(Figure 1-2.)*
- Lithium ion battery. (Already installed in the battery bay of your notebook.)
- RJ-11 telephone cable (located in the Accessories box).
- Getting Started Guide.
- User's Guide.
- Microsoft Windows 98 Manual.
- Registration card and customer information pack.
- Recovery CD-ROM (located in the Accessories box).
- Additional equipment and/ or documentation.

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

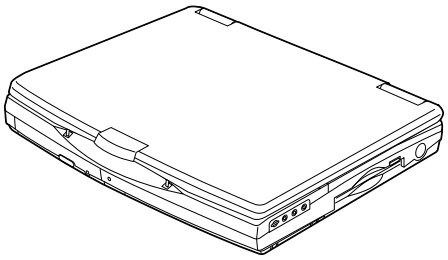


Figure 1-1 LifeBook C Series Notebook

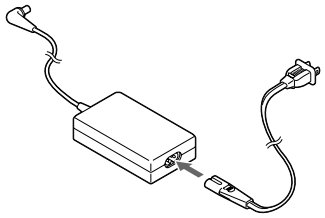


Figure 1-2 AC Adapter Unit

OVERVIEW OF LIFEBOOK C SERIES FEATURES

The LifeBook C Series is a compact, yet powerful notebook computer available with standard features including: *(See Appendix A, pages 140–143, for detailed information on individual models.)*

- 233MHz or 266MHz Intel Pentium II processor.
- 32MB SDRAM standard, expandable to 96MB.
- 12.1" HPA dual-scan (DSTN) color display with 800 x 600 resolution (C340) or 13" HPA DSTN color display with 1024 x 768 resolution (C350)
- 2MB video RAM.
- Built-in 3.2GB (C340) or 4.0GB (C350) hard drive.
- Lithium ion battery.
- Internal 56K fax/data/voice modem with v.90 support.

CAUTION

Your internal modem is designed to allow faster downloads from v.90 compliant digital sources. Maximum achievable download transmission rates may not reach 56kbps and will vary with line conditions.

CAUTION

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 notebook. Consult your PBX manufacturer's documentation for details. Some hotels have Digital PBX systems. Be sure to find out BEFORE you connect your modem.

- Full audio and video features:
  - 16-bit SoundBlaster Pro-compatible sound chip.
  - Zoomed Video support for full motion video acceleration.
  - Built-in stereo speakers.
  - Built-in mono microphone.
  - Stereo line in jack.
  - Stereo headphone jack.
  - Microphone jack.
- Two Type II/one Type III PC Card slots.
- Integrated ErgoTrac™ pointing device for superb cursor control and comfort.
- External monitor support with simultaneous display capabilities.
- Full-size keyboard with three dedicated Windows keys.
- Hot swappable PS/2 port for external components.
- USB device support.

- Standard pre-installed software:
  - Microsoft Windows 98 operating system.
  - LapLink for file transfers via modem or LapLink cable. (Not provided.)
  - Microsoft Works for business applications including word processing, spreadsheets and databases.
  - Quicken Basic 98 for money management.
  - PC-Doctor for system diagnostics.
  - PMSet 98 for system power management.
  - McAfee VirusScan for virus protection.
  - SoftPEG for MPEG video.
- Standard user install software:
  - AOL Free Trial.
  - AT&T WorldNet™.
  - Netscape® Communicator.

POINT

Windows 98 comes pre-installed with Internet Explorer 4.01.

POINT

This unit does not come pre-installed with the Windows 95 or Windows NT operating systems. Windows 98 is the only operating system supported on your notebook.

COMPONENT IDENTIFICATION

For detailed specifications on each model refer to Appendix A on pages 140–143.

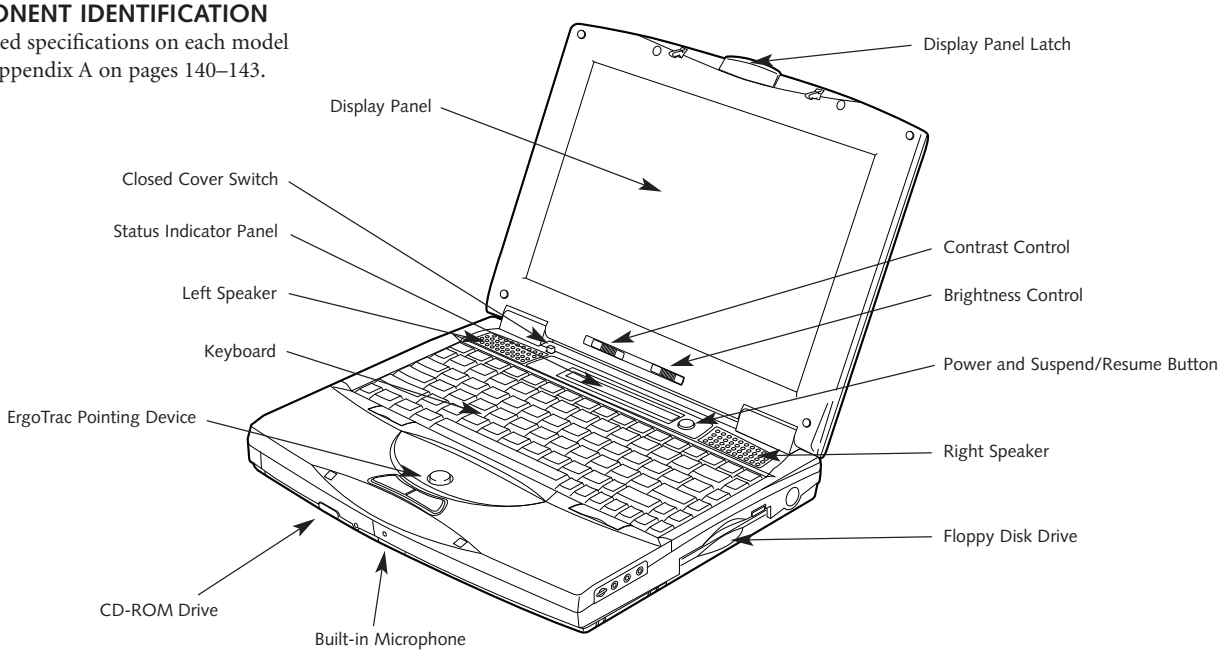


Figure 1-3 LifeBook C Series with Display Open

TOP AND FRONT COMPONENTS

Display Panel Latch
This latch locks and releases the display panel. When the display panel is released it pops up slightly to make it easier to open. *(Figure 1-3.)*

Display Panel
This is a color LCD panel with back lighting for the display of text and graphics. *(Figure 1-3.)*

Brightness Control
The brightness control adjusts the overall intensity of the display panel back lighting. *(Figure 1-3.)*

Contrast Control
The contrast control (located to the left of the brightness control) sets the ratio of the intensity of the light to dark areas of the display. *(Figure 1-3.)*

Built-in Microphone
The built-in microphone allows mono audio input to your notebook. *(Figure 1-3.)*

Status Indicator Panel
An LCD display of the status of the power state and source, Suspend mode, battery charge (battery in either Multi-function Bay), floppy disk drive activity, hard drive or Zip drive activity, CD-ROM drive activity, PC Card activity, CapsLock, NumLk and Scr Lk. *(Figure 1-3.)*

Power and Suspend/Resume Button
The Power button allows you to power on your notebook, suspend notebook activity without powering off, resume your notebook from suspend mode, and power off your notebook. This multi-function button acts as both the suspend/resume control and the power switch. *(See page 20 for more information on the power button.) (Figure 1-3.)*

Left and Right Speakers
The built-in dual speakers output stereo sound from the notebook. *(Figure 1-3.)*

CAUTION

Holding down the Power Button for more than four seconds will power off your notebook without first shutting down Windows 98. *(See Power Off, page 20, for more information.)*

Closed Cover Switch
The closed cover switch turns off the LCD back lighting when the display panel is closed, thus saving power. This switch also behaves as a Suspend/Resume button. To change the functionality of this switch, adjust the settings in the Advanced Features submenu of the Power menu in the BIOS Setup Utility. *(See pages 93-100.) (Figure 1-3.)*

Keyboard
A full-size keyboard with dedicated Windows keys for input into the notebook. *(Figure 1-3.)*

ErgoTrac Pointing Device

The integrated ErgoTrac pointing device is composed of a short, comfortable, dish-shaped finger mouse and two buttons. Its button-like shape is both responsive and comfortable for your finger when rocked gently. *(Figure 1-3.)*

CD-ROM drive

A 20x speed maximum CD-ROM drive. *(Figure 1-3.)*

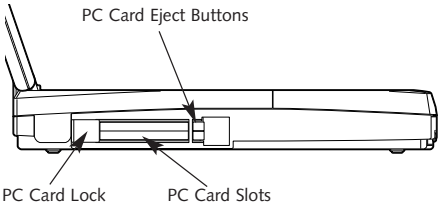


Figure 1-4 LifeBook C Series Left-side Panel

LEFT-SIDE PANEL COMPONENTS

PC Card Slots

The PC Card Slots allow you to install two Type I or Type II PC Cards or one Type III PC Card. *(See pages 98-100 for more information on PC Cards.)* The button to the left of the card slots locks the card(s) in place, and the buttons to the right of the slots eject the card(s) from the slots. *(Figure 1-4.)*

RIGHT-SIDE PANEL COMPONENTS

PS/2 Port

The port allows you to connect an external PS/2 keyboard, mouse, or numeric keypad. *(Figure 1-5.)*

Microphone Jack

The microphone jack allows you to connect an external mono microphone. *(Figure 1-5.)*

Stereo Line In Jack

The stereo line in jack allows you to connect an external audio source to your notebook, like an audio cassette player. This jack will not support an external microphone. *(Figure 1-5.)*

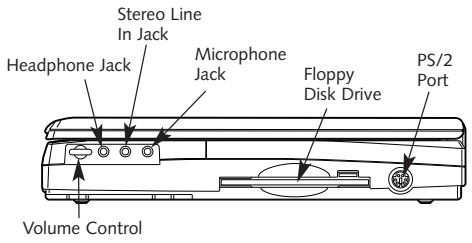


Figure 1-5 LifeBook C Series Right-side Panel

Headphone Jack
You can connect headphones or powered external speakers to the headphone jack. *(Figure 1-5.)*

Volume Control
The volume control is a knob which provides manual control of the sound level of all audio output from your notebook. *(Figure 1-5.)*

CAUTION

There are also software volume controls. The knob setting and the software settings will interact. Be sure to check both the software volume control and the knob on your notebook if you are experiencing problems. *(See Volume Control on page 33 for more information.)*

REAR PANEL COMPONENTS

RJ-11 Telephone Jack
This is the jack for attaching a telephone line to the internal modem. *(Figure 1-6.)*

Reset Button
The Reset button is for restarting your notebook in the event that your operating system has halted and cannot be restarted by the **CTRL+ALT+DEL** keys. *(Figure 1-6.)*

CAUTION

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 notebook. Consult your PBX manufacturer's documentation for details. Some hotels have Digital PBX systems. Be sure to find out BEFORE you connect your modem.

DC Power Jack
The DC power jack allows you to plug in the AC adapter or the optional auto/airline adapter to power the notebook and charge the internal Lithium ion Battery. *(Figure 1-6.)*

Parallel Port
The parallel port allows you to connect parallel devices, such as a parallel printer to your notebook. (This is also sometimes referred to as an LPT port.) *(Figure 1-6.)*

Serial Port
The serial port allows you to connect serial RS-232C devices, such as serial printers or serial scanners. (This is also sometimes referred to as a COM port.) *(Figure 1-6.)*

External Monitor Port
This port allows you to connect an external VGA or SVGA CRT monitor. *(Figure 1-6.)*

USB Port

The USB port allows you to connect Universal Serial Bus devices, such as external game pads, pointing devices, keyboards and speakers. *(Figure 1-6.)*

Anti-theft Lock Slot

This is a slot that allows you to attach a physical lock down device. *(Figure 1-6.)*

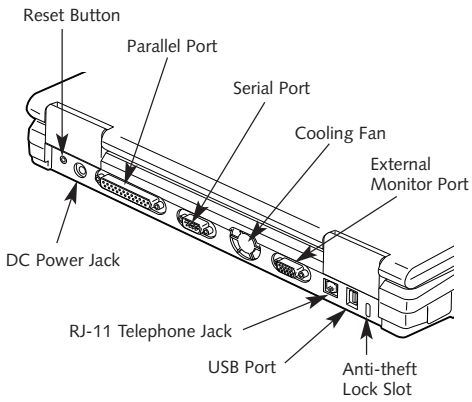


Figure 1-6 LifeBook C Series Rear Panel

BOTTOM COMPONENTS

Main Unit and Configuration Label

This label shows the model number and other information about your notebook. In addition the configuration portion of the label has the serial number and manufacturer information that you will need to give your support representative so that he or she can help you. It identifies the exact version of various components of your notebook. *(Figure 1-7.)*

Lithium ion Battery Bay

The Battery Bay contains the internal Lituium ion Battery. It can be opened for the removal of the Battery when stored over a long period of time or for swapping a discharged battery with a charged Lithium ion Battery. (*Figure 1-7.)*

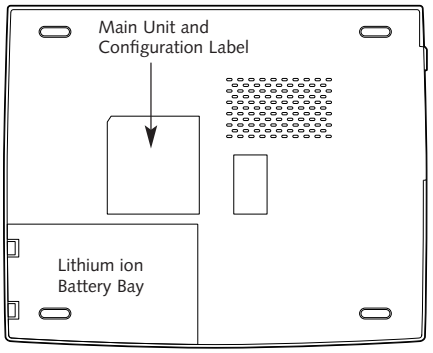
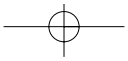
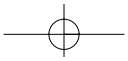
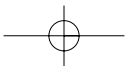


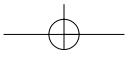
Figure 1-7 LifeBook C Series Bottom View







Starting Your LifeBook C Series from Fujitsu



SECTION TWO

STARTING YOUR LIFEBOOK C SERIES FROM FUJITSU

This section describes the initial power on and setup of your notebook. It provides information on power sources, powering on, shutting down, initial software setup and the registration of your LifeBook C Series.

POWER SOURCES

Your notebook has three possible power sources: the internal Lithium ion battery; the AC adapter; or an optional auto/airline adapter.

Connecting the Power Adapters

The AC adapter or an optional auto/airline adapter provides power for operating your notebook and charging the battery. *(Figure 1-2.)*

To Connect the AC Adapter

1. Plug the DC Output cable of the AC adapter into the DC Power jack on the rear panel of your notebook. *(Figure 2-1.)*

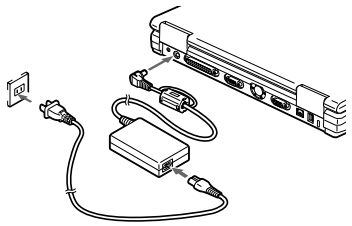


Figure 2-1 Connecting the AC Adapter

2. Plug the AC adapter into an AC electrical outlet.

To Connect the Optional Auto/airline Adapter

1. Plug the DC Output cable into the DC Power jack on the rear panel of your notebook.
2. Plug the auto/airline adapter plug into the cigarette lighter or accessory plug of a car or other vehicle with the ignition key in the On or the Accessories position or into the DC Power jack on an airplane seat.

To Switch From AC Adapter Power To Battery Power

1. Be sure that you have a charged or partially charged battery installed.
2. Remove the AC or auto/airline adapter from the DC Power jack.

CAUTION

The internal Lithium ion battery is not charged when you purchase your notebook. Initially you will need to connect the AC adapter or the auto/airline adapter to use it. If you purchase a second Lithium ion battery it will not be charged when you get it. You will need to charge it prior to use. It can take up to three (3) hours to charge the battery if your notebook is turned off or is in Suspend mode. If your notebook is in use it can take up to nine (9) hours or more to charge a battery.

DISPLAY PANEL

Opening the Display Panel

Lifting the latch releases the top of the display panel from the front of the notebook body. When the display panel is released it pops up slightly to make it easier to open. Lift the display panel backward until the screen is at a comfortable viewing angle. *(Figure 2-2.)*

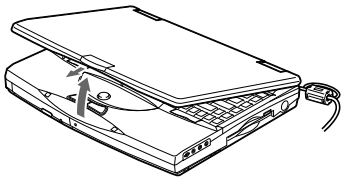


Figure 2-2 Opening the Display Panel

Adjusting the Display Panel

Before you turn on your notebook, you may want to check the brightness and contrast level of the screen. Start with both the brightness and contrast sliders in the middle position. *(Figure 2-3.)*

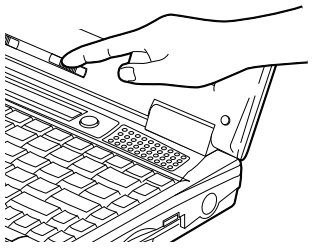


Figure 2-3 Adjusting the Display

You may need to adjust the brightness and contrast levels after you start your notebook and periodically for different operating environments.

POINT

The higher the brightness level, the more power the notebook will consume and the faster your batteries will discharge. For maximum battery life, make sure that the brightness is set as low as possible.

STARTING YOUR LIFEBOOK FOR THE FIRST TIME

Power On

The Power Button is located above your keyboard to the right of the Status Indicator Panel. This button is always used to Power On your notebook from its Off state. Once you have connected your AC adapter or have charged your internal Lithium ion Battery, you can press this button to Power On your notebook.

CAUTION

When you turn on your notebook be sure you have a power source. This means that the internal Lithium ion Battery is installed and charged, or that the AC adapter or the auto/airline adapter is connected and has power.

CAUTION

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

When powered On, your notebook carries out a Power On Self Test (POST) to check the internal parts and configuration. If a fault is found a short series of beeps will sound and/or an error message will be displayed. *(See Troubleshooting on pages 128-130)* Depending on the nature of the problem you may be able to continue by starting the operating system or by entering the setup utility and revising the settings.

After satisfactory completion of the Power On Self Test (POST) your notebook will load your operating system. *(See Boot Menu on pages 83-84 to see which kind of disk will be the source.)*

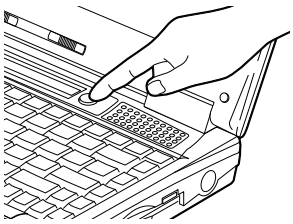


Figure 2-4 Power On

Booting the System

We strongly recommend that you not attach any other external devices and do not put any CD or floppy disk in your drives until you have gone through the initial power on sequence.

When you turn on your notebook for the first time it will display a Fujitsu logo on the screen. If you do nothing the system will read the hard drive for the operating system software, flash the notebook configuration information on the screen, and then the Windows 98 Setup Wizard Screen will appear. You will then be stepped through the condition of use process. You must complete this initial process before you will be able to use your notebook. (If you wish to access the BIOS setup utility before you go through the condition of use process you must press the **F2** key while the Fujitsu logo is still visible. If you press the **Esc** key while the Fujitsu logo is still present you will get a dialog box which will allow you to select which drive is to be used for finding the operating system.) If you turn off the power without using the on screen `Cancel` button you will get an error message when you start your notebook again.

Condition of Use Process

The first time you start your notebook you must confirm your acceptance of the copyright limitations for your pre-installed software. After you complete the Condition of Use process these screens will not appear again. There are 6 screens to read carefully and respond to.

You **cannot** use your notebook until this Condition of Use process is completed. The bottom of each screen has a `<Back` button, a `Next>` Button and a `Cancel` button which are activated by the integrated ErgoTrac cursor control and button click. The `<Back` button will return you to the previous screen. The `Next>` button activates any choices or information you have entered and takes you on to the next screen. The `Cancel` button allows you to stop the setup process.

If you stop the process your notebook will start up at the beginning of the Windows 98 Setup Wizard.

The screens you will be required to respond to are described with the required action.

User Information

Fill in your name and your company name as you want the software licensed. To step from the name blank to the company blank press the **Tab** key. When the information has been entered click on the `Next>` button. You will not be allowed to continue until you make an entry.

License Agreement

Read the agreement carefully. You can scroll through the text using the integrated ErgoTrac or TouchPad pointing device to activate the scroll bar or use the up arrow ↑ and down arrow ↓ keys to move up and down the text one line at a time, or use the **Page Up** and **Page Down** keys to move the text one screen at a time. When you finish reading you must point and click to accept or reject the terms of the agreement and then click on the `Next>` button.

POINT

If you reject the terms of the license agreement you will be asked to review the license agreement for information on returning Windows 98 or to shut down your notebook.

Product Key

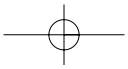
Look in the box that your notebook came in and you will find a Windows 98 Certificate of Authenticity shrink wrapped with the Windows 98 Users manual. On the certificate you will find a bar-code with a number above it. This is your product key and the number you should enter on the Product Key screen. When you have entered the number exactly as shown then click on the `Next>` button.

Start Wizard

The Start Wizard screen will appear if you have entered a valid product key. When you click on the Finish button the display will flash various screens as the system identifies what hardware is installed.

Time Zone

When your notebook has completely identified all of the installed hardware it will display a dialog box for entering which time zone you wish to set the clock to.



Printer Setup

When the time zone setup is complete a dialog box will appear for selecting which printer is to be attached to your notebook. You do not have to select a printer at this time. If you do not wish to select a printer, click on the Cancel button. If you do wish to select a printer click on the Next button and answer the questions.

Welcome to Windows 98

When you boot into Windows 98 for the first time you will see a Welcome to Windows 98 dialog box with several options. Select the first option, Register Now, to register your LifeBook C Series notebook.

POINT

You will find a Recovery CD-ROM packet in your accessories box. Please store the packet in a safe place in case there is a loss of data and it becomes necessary to re-install your operating system and/or application programs. *(See Restoring Your Pre-installed Software from the Recovery CD-ROM on page 132.)*

REGISTERING YOUR LIFEBOOK

What are the benefits of registering?

You will receive an identification label for your LifeBook, which, if your LifeBook is ever lost, may help in getting it returned to you. You also receive priority Personal Identification Number (PIN) technical support access and useful product mailings. Proof of purchase is not required if you register within 30 days of your purchase.

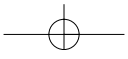
How do I register?

By modem, fax, mail or telephone. With Windows 98, you can access the Softbank E-Registration program by selecting the Register Now option in the Welcome to Windows 98 wizard menu. This menu appears the first time you start Windows 98 after completing the Condition of Use process. To access the Welcome to Windows 98 wizard anytime, double-click on the Welcome to Windows 98 icon on your desktop.

You may also print your completed registration form and fax it to 1-949-450-9140 or mail it to:
Fujitsu PC Corporation
15355 Barranca Pkwy
Irvine, CA 92618-9520

Alternately you may call:
1-800-8fujitsu (1-800-838-5487)

E-mail address:
8fujitsu@fpc.fujitsu.com



LEARNING ABOUT YOUR OPERATING SYSTEM AND APPLICATION SOFTWARE

Tutorials

All operating systems and most application software have tutorials built-in. We highly recommend that you step through your tutorial before you use an application even if you are familiar with the same application on a different machine, an earlier version of the application, or a similar product.

Manuals

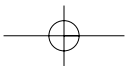
In the accessories box you will find manuals for Windows 98 and other pre-installed software.

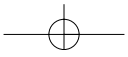
Software manuals of pre-installed software that are not in the accessories box are available online. See the help screens of your pre-installed software. We recommend that you review these manuals for general information on the use of these applications and to get a basic understanding of what is covered in the manual, and how it is organized, should questions arise as you use the applications.

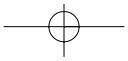
Links to Fujitsu On-line

You can go directly to the Fujitsu Accessories catalog for your notebook by clicking on the LifeBook Accessories Website option from the Windows Start menu. This will take you to the Web site for Fujitsu Lifebook accessories.

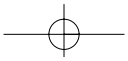
You can also reach the Fujitsu Service and Support Web site on-line for your LifeBook by choosing the Service & Support option from the Windows Start menu. Alternately, you may call: 1-800-8fujitsu (1-800-838-5487)







Using Your LifeBook C Series from Fujitsu



SECTION THREE

USING YOUR LIFEBOOK C SERIES FROM FUJITSU

This section describes the indicators, buttons, connections, operating modes, and software of your LifeBook C Series and their uses.

POWER BUTTON

The power button is located above the keyboard to the right of the Status Indicator Panel. It is used like a switch to turn your notebook on and off. It also can suspend and resume your notebook. *(For more information on suspend and resume features see Power Management pages 38-42.)*

You can use the power button to turn on your notebook, to resume from Standby or Save-to-Disk mode, to place you notebook in Standby or Save-to-Disk mode or to shut down and power off. You can also turn off your notebook by choosing Shut Down from the Windows 98 Start menu. *(For the Power On procedure see Section Two, page 13.)*

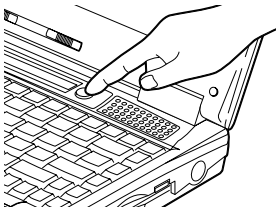


Figure 3-1 The Power Button

Power Off

Before turning off the power by choosing Shut Down from the Windows 98 Start menu or pressing the power button, check that the Hard Drive, CD-ROM, PC Card and the Floppy Disk Drive Access indicators are all Off. *(See Figure 3-3, page 22.)* If you turn off the power while accessing a disk or PC Card there is a risk of loss of data. To assure that your notebook shuts down without error, use the Windows 98 shut down procedure. You can also power Off your notebook by holding the Power Button down for four seconds. This is similar to turning a power switch to Off. This method is only recommended if you cannot restart your computer with the **CTRL + ALT + DEL** keys.

CAUTION

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

Shutting down your notebook from Windows 98 lets your notebook shut down operations, and turn off the power in the proper sequence to prevent errors. The sequence is:

1. Go to the Start button menu.
2. Click on `Shut down.`
3. Verify that `Shut down` is selected and click on `Yes`.

If you are going to store your notebook for a month or more, take the following precautions:

1. Remove any CD and/or floppy disk.
2. Shut down with Windows 98 to power Off your notebook.
3. Close your notebook display panel.
4. Disconnect the AC adapter.
5. Remove the battery and store it separately in a cool dry place.

RESTARTING THE SYSTEM

When you wish to restart your system be sure that you follow the proper procedure. The procedure is as follows:

1. Go to the Start button menu.
2. Click on `Shut Down.`
3. Click on `Restart.`
4. Verify that `Restart` is selected and click on `Yes.`

Windows 98 will shutdown and restart your notebook.

NOTE: You may also select Shut Down from the Start menu and once the power is off for 10 seconds or more you can restart your notebook with the Power Button. This alternative method is not recommended, however.

POINT

In Windows 98 pressing the Ctrl+Alt+Del keys simultaneously triggers the Shut Down submenu of the Start menu.

CAUTION

Turning off the power without exiting Windows 98 may cause an error when you start the next time. Turning the power to On when it has been Off for less than 10 seconds may also cause an error when you start the next time.

Reset Button

The Reset button is located on the rear panel to the left of the DC Power jack. This hardware reset button should only be used when your notebook has locked up and you are unable to restart the system using the standard procedure. To use this reset button, take the tip of a pen or a straightened paper clip, depress the button and release it immediately. This will perform a hard reset which is similar to powering off your notebook and then powering it back on.

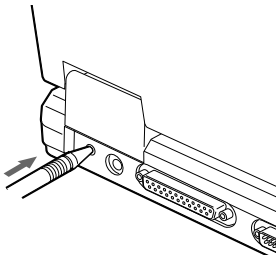


Figure 3-2 using the reset button

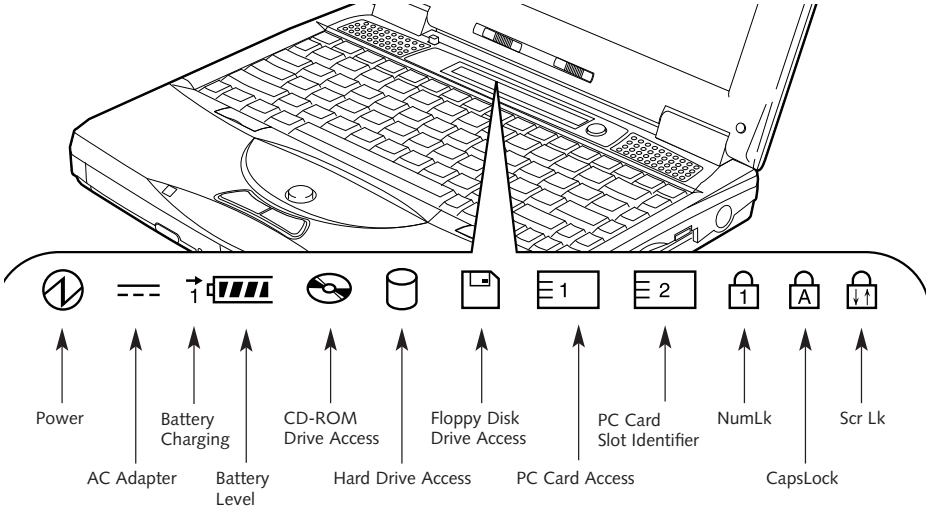


Figure 3-3 Status Indicator Panel

STATUS INDICATOR PANEL

The Status Indicator panel is located in the recess just above the keyboard. *(Figure 3-3.)* The appropriate indicators become visible as you use your notebook.

Power Indicator

The Power indicator tells you when the system is operational. It is on steady when there is power to your notebook, and blinks when the system is in Suspend mode. It goes off when the system has entered Save-to-Disk mode or has been powered down by the Windows 98 or the Power Button.

AC Adapter Indicator

The AC Adapter indicator tells you whether the system is operating on an AC or auto/airline adapter, or the battery alone. The indicator is On when either of the adapters is active and Off when power comes from the battery alone.

If a battery is charging, the Power Adapter indicator is active regardless of whether your notebook is On or Off. If there is no battery charging, and the your notebook is powered Off, then the AC Adapter indicator and the Battery indicators will all be Off.

Battery Indicator

The battery indicator shows whether or not the Lithium ion battery is installed, and indicates the condition. *(Figure 3-3.)*

A small arrow icon (Battery Charging indicator) appears to the left of the Battery Level indicator and above the number (Battery identifier) if the battery is charging. The Battery Charging indicator flashes if the battery is too hot or too cold to charge. *(Figure 3-3.)* The Battery Charging indicators operate whether the notebook is Off or On.

The symbols inside the battery outline of the Battery Level indicator show the operating level available in that battery. *(Figure 3-4.)*

CAUTION

A shorted battery is damaged and must be replaced. *(See Figure 3-4.)*

CAUTION

Turning off the power or using the Suspend/Resume button when any of the Access indicators are On may cause loss of data and/or system errors.

CAUTION

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

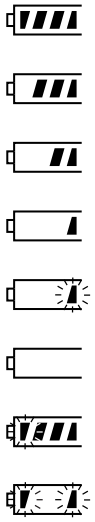


Figure 3-4 Battery Level Indicator

CD-ROM Drive Access Indicator
The CD-ROM Access indicator tells you the CD-ROM drive is being accessed. The CD-ROM Access indicator will flash when the software tries to access a CD or CD-ROM even if no CD or CD-ROM is inserted.

POINT

The Windows 98 CD automatic insertion function will periodically check for a CD inserted in the drive, causing the CD-ROM Access indicator to flash. The CD automatic insertion function allows your system to automatically start a CD as soon as it is inserted in the drive and the tray is closed. It will begin playing an audio CD or will start an application if the CD has an auto run file on it.

POINT

If you do not wish to have the CD automatic insertion function on you can disable it.

To disable the CD automatic insertion function do as follows:

1. Save all data and close all applications.
2. Click on the Start button.
3. Point to `Settings.`
4. Click on the Control Panel. The control panel window will be displayed.
5. Double click on the System icon. The system properties dialogue box will be displayed.
6. Click on the Device Manager tab. The device list will be displayed.
7. Click on the + to the left of the CD-ROM icon. The CD-ROM drive manufacturer's name and model will be displayed.
8. Click on the CD-ROM drive manufacturer's name and model.
9. Click on Properties. The CD-ROM drive manufacturer's name and model properties dialogue box will be displayed.
10. Click on the Settings tab.
11. Click on the automatic insertion notification box to toggle it off.
12. Click on `OK.`
13. Click on `OK` in the system properties dialogue box.
14. Restart your notebook according to the message displayed.

You can re-enable the function by repeating the process except in step 11 change the setting to on.

Hard Drive Access Indicator

The Hard Drive Access indicator tells you when the internal hard drive is being accessed.

Floppy Disk Drive Access Indicator

The Floppy Disk Drive Access indicator tells you a floppy disk drive is being accessed. The Floppy Disk Drive Access indicator will flash when your software tries to access a floppy disk even if no floppy disk drive is installed.

PC Card Access Indicators

The PC Card Access indicators tell you when an installed PC Card is being accessed. Card 1 is the bottom connector inside the slot and Card 2 is the upper connector inside the card slot. Type III cards are always Card 1 only. The PC Card Access indicator will flash if your software tries to access a PC Card even if none are installed.

NumLk Indicator

The NumLk indicator tells you the internal keyboard is set in ten-key numeric keypad mode. *(See page 31 for more information on the numeric keypad.)* You can activate the NumLk mode by pressing the **NumLk/Scr Lk** key while holding down the **Shift** key. Deactivate the mode the same way that you activated it.

CapsLock Indicator

The CapsLock indicator tells you when the keyboard is set for all capital letters. Activate the all capital letters setting by pressing the **CapsLock** key on the keyboard. Deactivate the mode the same way that you activated it.

Scr Lk Indicator

The Scr Lk indicator tells you when scroll lock is active. You can activate or deactivate the scroll lock by pressing the **NumLk/Scr Lk** key. Deactivate the mode the same way that you activated it.

BATTERIES

The Lithium ion battery is rechargeable with an operating time of up to three (3) hours depending on active power management features and user activity levels. Your notebook can be operated on one internal Lithium ion battery at a time. If the internal Lithium ion Battery goes dead, you must install the AC adapter or shut down and install a charged battery. *(See page 97 for replacing the battery.)*

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

- When used at temperatures that exceed a low of 5°C or a high of 35°C. High 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.)
- 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.
- When using a high current device such as a modem, a LAN card, the CD-ROM drive, or the hard drive frequently.

Using the AC adapter will conserve your battery when using a high current device such as a modem, a LAN card, the CD-ROM drive, or the hard drive frequently.

CAUTION

Actual battery life will vary based on screen brightness, applications, features, power management settings, battery condition, and other customer preferences. CD-ROM drive, hard drive, and modem usage may also have a significant impact on battery life.

CAUTION

Do not leave a faulty battery in your notebook. It might damage your AC adapter, optional auto/airline adapter, another battery, or your notebook itself. It may also prevent operation of your notebook by draining all available current into the bad battery.

CAUTION

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 (1-800-838-5487).

Shorted Batteries

If your Status Indicator panel shows a shorted battery, check the installation for that battery by removing and re-installing it. If it still shows that it is shorted, replace it with a new battery.

CAUTION

A shorted battery is damaged and must be replaced so that it does not damage anything else.

Recharging the Batteries

If you want to check the condition of the Lithium ion battery check the Battery Level indicator located on the Status Indicator panel. This indicator changes as the battery level changes. Battery 1 is the Lithium ion battery which is installed in battery bay. (*Figure 3-3 on page 20.)* You can also check the PMSet 98 toolbar to see battery condition.

The Lithium ion battery is recharged internally using the AC adapter or auto/airline adapter. To recharge a battery:

- Make sure the battery to be charged is installed in the battery bay of your notebook and connect the AC or auto/airline adapter.
- Make sure that the Battery Charging indicator to the left of the Battery Level indicator of the battery to be charged is visible on the Status Indicator panel.
- Make sure the percentage charge is shown inside the Battery Level icon. *(Figure 3-4 on page 23.)*

There is no memory effect on the Lithium ion batteries, which means that you do not need to discharge them completely before recharging. A single fully discharged Lithium ion battery will charge in approximately three (3) hours when your notebook is Off or in Suspend mode. The charging time will be significantly longer if your notebook is in use when the battery is charging, (approximately nine (9) hours.)

CAUTION

Using heavy current devices such as LAN cards or frequent CD-ROM accesses may prevent charging completely.

Low Battery State

When the battery is running low, your notebook beeps about every 15 seconds and the Battery Level indicator flashes. If you do not respond to the low battery alarm, the battery will continue to discharge until it is too low to operate. When this happens there will be a multiple beep alarm, the Battery Level indicator will show dead battery, and your notebook will go into Suspend mode to try and protect your data as long as possible. Your power management settings do not affect what happens at the dead battery alarm level. Your notebook will go to Suspend mode. *(Figure 3-4 on page 23.)*

CAUTION

You may not be able to hear the audio alarms if the volume control is set too low or is turned off by either hardware or software but you will still be able to see the Battery Level indicator flash.

When the low battery alarm occurs you need to save all your active data and put your notebook into Suspend mode until you can provide a new power source. You should provide this power as soon as possible. The new power source can be a charged battery or a power adapter, either AC or auto/airline.

CAUTION

When you are in Suspend mode there must always be at least one power source active. If you turn off the power with the power switch, or remove all power sources, battery, AC adapter or auto/airline adapter, while your notebook is in Suspend mode any data which has not been saved to the hard drive will be lost.

Once your notebook goes into Dead Battery Suspend mode you will be unable to resume operation until you provide a source of power either from an AC adapter, an optional auto/airline adapter, or a charged battery. Dead Battery Suspend mode shows on the Status indicator just like the normal Suspend mode. Once you have provided power, you will need to press the Suspend/Resume button to resume operation. In the Suspend mode, your data can be maintained for sometime. If a power source is not provided promptly, the Power indicator will stop flashing and go out, and you will have lost the data that was not stored.

Once you provide power you can continue to use your notebook while an adapter is charging the battery, but the battery trickle charges under these conditions. If you want to charge the battery more quickly, put your notebook into Suspend mode, or turn off your notebook while the adapter is charging the battery. *(See Power Off on pages 20-21 for shutdown procedures.)*

CAUTION

There is no guarantee that data will not be lost once your notebook enters the Dead Battery Suspend mode.

INTEGRATED ERGOTRAC POINTING DEVICE

The ErgoTrac pointing device is composed of a short, comfortable, dish-shaped pointing device and two buttons located in front of the keyboard. The ErgoTrac pointing device has the function of a mouse, and moves the cursor around on the screen – up, down, left and right. A light pressure with the tip of your finger is all that is required to operate the ErgoTrac. The more pressure you use the faster the cursor will move. The second part of the ErgoTrac pointing device – the buttons – function as mouse buttons, and the functions they perform depend on the application you are running. Figure 3-5 shows the position of the ErgoTrac pointing device and buttons.

POINT

An external mouse can be connected to the PS/2 port on the right side of the notebook, and used simultaneously with the ErgoTrac pointing device.

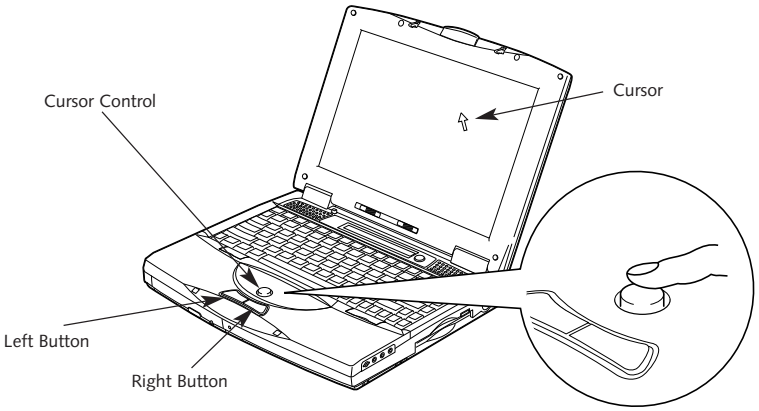


Figure 3-5 ErgoTrac pointing device

Clicking

Clicking means pushing and releasing a button. To left-click move the screen cursor to the item you wish to select, press the left pointing device button once, and then immediately release it. To right-click, move the mouse cursor to the item you wish to select, press the right pointing device button once, and then immediately release it. *(Figure 3-6.)*

Double-Clicking

Double-clicking means following the preceding Clicking procedure, but pressing the pointing device button twice in rapid succession. Double-clicking works with both the left and right buttons.

CAUTION

If the interval between clicks is too long, double-clicking will not be executed.

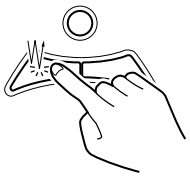


Figure 3-6 Clicking

POINT

The interval between presses for double clicking, and other parameters of pointing and selecting, can be adjusted with the selections in the dialog box of the mouse icon in your Windows Control panel.

Dragging

Dragging means selecting an item with the pointing cursor, and while keeping the left pointing device button depressed, moving the cursor to the desired new location, then releasing the button. *(Figure 3-7.)*

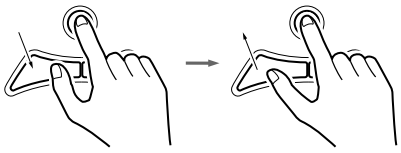


Figure 3-7 Dragging

ErgoTrac Pointing Device Control Adjustment

The Windows Control Panel provides customization of your ErgoTrac pointing device from the mouse icon. There are four (4) aspects of the ErgoTrac pointing device operation which you can adjust.

- Buttons – This lets you set up the buttons for right or left handed operation and set the time interval for double clicking.
- Pointers – This lets you set up the size and shape of the cursor for different functions.
- Motion – This lets you set up the relation of the speed of motion of your finger to the motion of the cursor and to enable a trailing tail for the cursor arrow.
- General – This allows you to choose the type of mouse being used. It is already set for your integrated ErgoTrac. You may need to change it for an external mouse.

You may want to try practicing with different adjustments until you find a combination that is comfortable for you.

USING THE KEYBOARD

Your notebook has an integral 86-key keyboard. *(Figure 3-8.)* The keys perform all the standard functions of a 101-key keyboard and also include Windows keys and other special function keys. This section describes only those items specific to your notebook. They are the numeric keypad, the cursor keys, the function keys, the function extension key (**Fn**) and the Windows keys.

Numeric Keypad

Certain keys on the keyboard perform dual functions as both standard character keys and numeric keypad keys. Figure 3-8 highlights these keys. To switch into numeric keypad mode, press the **NumLk/Scr Lk** while holding down the Shift key. You can now enter numerals 0 through 9, perform addition (**+**), subtraction (**–**), multiplication (*****), or division (**/**), and enter decimal points (**.**) using the keys designated as ten-key function keys. The keys in the numeric keypad are marked on the front edge of the key to indicate their secondary functions.

To return these keys to their normal character function, press the **NumLk/Scr Lk** while holding down the **Shift** key again.

POINT

When an external numeric keypad is connected to the notebook the NumLk mode enables the external keypad and disables the built-in keyboard numeric keypad.

Cursor Keys

The cursor keys are the four arrow keys on the keyboard which allow you to move the cursor up ↑, down ↓, left ← and right → as your application allows.

POINT

The integrated ErgoTrac pointing device and/or external mouse are also used for moving the cursor around the screen.

Function Keys

Your notebook has 12 function keys, **F1** through **F12**. The functions assigned to these keys differ for each application. You should refer to your software documentation to find out how these keys are used. *(Figure 3-8.)*

Fn Key

The **Fn** key provides extended functions for the notebook and is always used in conjunction with another key. *(Figure 3-8.)*

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

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 panel only, external monitor only, or both built-in display panel and external monitor.

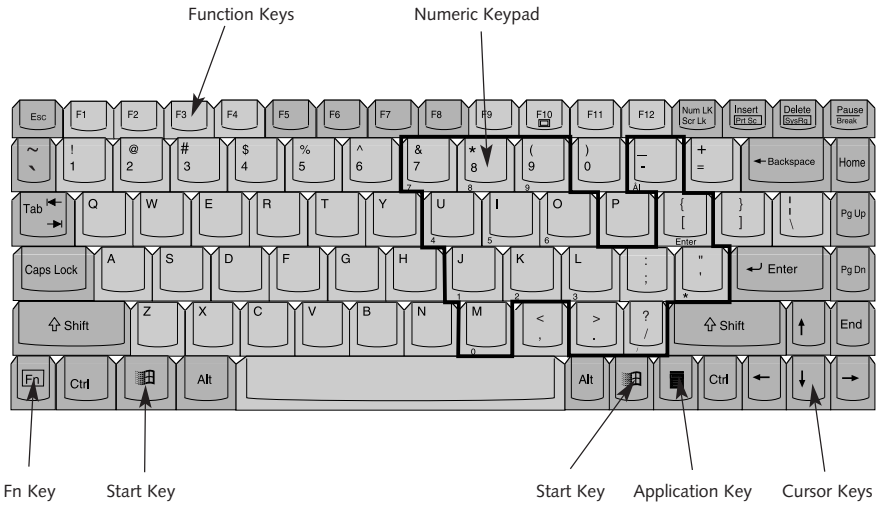


Figure 3-8 Keyboard

Windows Keys

Your notebook has three Windows keys, two Start keys and an Application key. The Start key displays the Start menu. This is the same as the button on the toolbar which is typically at the bottom of your Windows 98 desktop. The Application key has the same function in Windows 98 as the right mouse button, it displays the Shortcut menu for whatever item is selected. See your Windows 98 documentation for additional information. *(Figure 3-8.)*

VOLUME CONTROL

All system and application functions have multiple volume controls which interact with each other. There is the hardware volume control on the right side panel of your notebook. There is also a volume control in the your operating system Sound Control panel and any other application with sound.

Each setting source puts an upper limit on the volume which can be set by the other sources. For example if the hardware volume control is turned all the way down, your software volume control settings have no effect. By the same token, if the operating system has the sound turned off, adjusting the hardware or other application software volume settings will not produce sound. One easy operating method is to use the hardware and operating system volume controls to set an upper limit on sound level and then make fine adjustments with other application software.

CAUTION

The operating system volume setting sets the maximum volume level of the hardware volume control knob.

FLOPPY DISK DRIVE

The floppy disk drive is a 3.5" drive which can read and write on 1.44MB and 720KB floppy disks. Floppy disk format is controlled from your operating system. (See your software documentation for more information.)

Loading a Floppy Disk

To load, insert a floppy disk into the floppy disk drive, shutter side first and label up, until the Eject button, above the floppy disk drive opening, pops out. *(Figure 3-9)*

POINT

When there is no floppy disk in the drive, the Eject button is flush with the front of your notebook.

Ejecting a Floppy Disk

To eject a disk, check that the Floppy Disk Drive Access indicator is Off, *(see pages 22 and 25)* and press the Eject button. *(Figure 3-9.)*

CAUTION

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

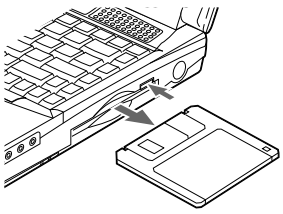


Figure 3-9 Ejecting a Floppy Disk

Preparing a Floppy Disk for Use

Before you can use a new floppy disk, you need to prepare it so your notebook knows where to store information. This preparation is called formatting or initializing a disk. You need to format new 3.5" floppy disks, unless you purchase preformatted disks. You will use your notebook's operating system software to format a floppy disk. Please refer to the operating system manual for step-by-step instructions.

To prevent data stored on a floppy disk from being erased, slide the write protect tab on the floppy disk to open up the small hole. This makes the disk write protected. When you want to write data to that disk, slide the write protect tab the other way to close the small hole.

CAUTION

Formatting a previously used floppy disk is an effective method of clearing a disk as long as you realize that ALL the information on the disk will be erased.

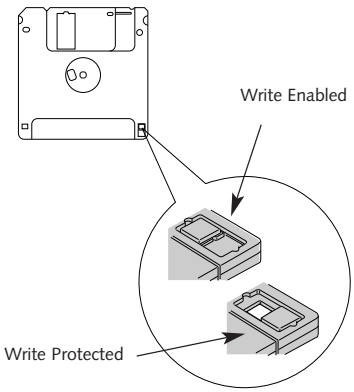


Figure 3-10 Floppy Disk Write Protect

Care of Floppy Disk Drives and Disks

- Avoid storing the floppy disk drive and disks in extremely hot and cold locations, or in locations subject to severe temperature changes.
- Keep the floppy disk drive and disks out of direct sunlight and away from heating equipment.

- Avoid storing the floppy disk drive in locations subject to shock and vibration.
- Avoid using the floppy disk drive and disks in damp and dusty locations.
- Never use the floppy disk drive with any liquid, metal, or other foreign matter inside the floppy disk drive or disk.
- Never store a floppy disk near a magnet or magnetic field.
- 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.
- Never disassemble or dismantle your floppy disk drive.

CD-ROM DRIVE

The CD-ROM drive is a 20-speed maximum CD-ROM reader.

CAUTION

Do not operate your CD-ROM drive unless your notebook is sitting on a flat surface and the adjustment feet are folded against the bottom of the notebook. Using a CD when the drive is not level may damage the drive or prevent proper operation.

Loading a CD

- Make sure there is power to your notebook.
- Push, gently but firmly, and release the eject button on the front of the CD-ROM drive to open the CD-ROM holder tray, the tray will come out a short distance.
- Gently pull the tray out until a CD-ROM can be easily placed in the tray.

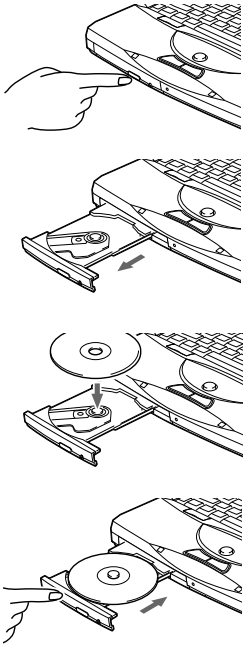


Figure 3-11 Loading the CD-ROM Tray

- If there was a protective sheet in the tray when it was shipped, make sure it has been removed.
- Place the CD into the tray, label side up, with the hole in the center of the CD snapped onto the raised circle in the center of the tray.
- Close the tray.
- After the CD is loaded, it will take a short time for your notebook to recognize it.

POINT

If you have disabled your CD automatic insertion function you will have to start the CD from your desktop, as your notebook will not automatically recognize that the CD has been loaded.

Care of CD-ROMs

CD-ROMs are precision devices and will function reliably if given reasonable care.

- Always store your CD-ROM in its case when it is not in use.
- When removing the CD-ROM from its case, press down on the holder's center while lifting out the CD-ROM by its edges.
- Always handle a CD-ROM by the edges and avoid touching the surface.

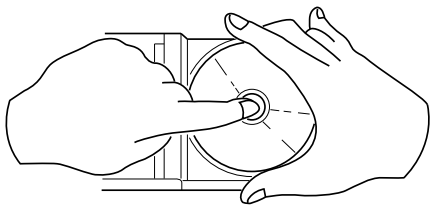


Figure 3-12 CD-ROM Handling

- Avoid storing any CD-ROM in extreme temperatures.
- Do not bend CD-ROMs or set heavy objects on them.
- Never write on the label surface with a ball point pen, pencil or similar device.
- If a CD-ROM 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 a CD-ROM.
- If a CD-ROM is dirty, use only a CD-ROM cleaner or wipe it with a clean, soft, lint free cloth starting from the inner edge and wiping to the outer edge.

HARD DRIVE

The internal hard drive capacity is dependent on which model you are using. See Appendix A *(pages 140–143)* for model information.

Formatting the Hard Drive

The hard drive inside your notebook is formatted (initialized) at the factory. You do not need to format it under normal circumstances. Check your operating system documentation for information on initializing a hard drive. If you need to reformat your internal hard drive.

CAUTION

If you reformat the internal hard drive ALL data including the operating system, applications software and data will be erased. Unless data is copied to floppy disks or other data storage media it will be permanently lost. All software will be need to be re-installed and data files restored from your back-up disks. See the operating system manual for more information on backing-up your data files. The factory installed software, including the operating system, can be restored from the Recovery CD-ROM which came in the accessories box when you purchased your notebook. *(See Recovery CD-ROM on page 132 for more information.)* Any application software which you have purchased and installed will have to be re-installed from the original source. When doing a recovery remember that you must allocate space for the Save-to-Disk function if you have it enabled. *(See Setting Up Your Save-to-Disk File Allocation on pages 92-93 for more information.)*

INTERNAL MODEM

Your internal modem is a 56K fax/data/voice modem with v.90 support that is controlled by Windows 98, LapLink, or other software. The voice functions of the modem include speakerphone and answering machine capabilities. The answering machine capabilities require the use of third party software not included with your notebook. The other features are accessible via Windows 98, LapLink or other software.

CAUTION

Your internal modem is designed to the V.90 ITU-T standard. Its maximum speed is 56,000bps at download theoretically and its actual connection rate depends on the line conditions. The maximum speed is 33,600bps at upload.

POWER MANAGEMENT

Your LifeBook C Series has many features for conserving power. Some power savings features are automatic and have no user control, such as those for the internal modem, while others depend on the parameters you set to best suit your operating conditions. Other power saving features turn the display brightness down, limit the use of high power devices, activate an appropriate power savings profile, and put your notebook in Suspend mode when not actually performing an operation. As with all mobile, battery-powered computers, there is a trade-off between performance and power savings.

Internal power management for your notebook may be controlled from settings made in the BIOS setup utility, or from settings made in your operating system.

Using the Suspend/Resume Features

When your notebook is active, the Power button, *(Figure 1-3 on page 5)*, can be used to manually put your notebook into Suspend mode. The Power button is located next to the Status Indicator panel above the keyboard of your notebook. *(Figure 3-13.)* Push the Power button, when your notebook is active but no Access indicators are on and release the button (immediately). You will hear two short beeps and then your system will enter Suspend mode.

If your notebook is suspended, pushing the Power button will return your notebook to active operation at the point where it went into suspension. You can tell whether or not your system is in Suspend mode by looking at the Power indicator. *(See pages 22-25.)* If it is visible and not flashing, your notebook is fully operational. If it is visible and flashing, your notebook is in Suspend mode. If it is not visible, the power is Off or your notebook is in Save-to-Disk mode. *(See page 40.)* When you receive your LifeBook C Series it will be set to the default, which is Suspend mode.

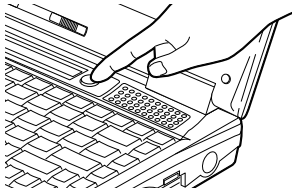


Figure 3-13 The Power Button

CAUTION

If you hold the Power button down for four (4) seconds or more it will power Off your notebook without putting it into Standby mode or Save-to-Disk mode.

POINT

Disabling the Suspend/Resume function prevents it from being used to put your notebook in Standby or Save-to-Disk mode. The resume function of the button cannot be disabled. *(See the Power Menu of the BIOS setup utility, pages 75-80, for more information.)*

CAUTION

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

POINT

If your notebook is active when you enter the Standby or Save-to-Disk 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 internal hard drive during Save-to-Disk mode.

CAUTION

If you are running your notebook on battery power, be aware that the battery continues to discharge while your notebook is in Suspend mode, though not as fast as when fully operational. With a fully charged internal Lithium ion battery the suspend mode will maintain your status for 24 hours or more.

Standby Mode

Standby mode, in Windows 98, saves the contents of your notebook's system memory during periods of inactivity by maintaining power to critical parts while turning off the CPU, the display, the hard drive and all of the other internal components except those necessary to maintain system memory, recognize the Power button and restart. Your notebook can be put in Suspend mode by:

- Pressing the Power button when your system is in the On state.
- Selecting Standby from the Windows Shut Down menu.
- Timing out from lack of activity.
- Battery level reaching the Dead Battery Warning condition.

Your notebook's system memory typically stores the file(s) on which you are working, the open application(s) and any other data required to support the operation(s) in progress. When you resume operation from Standby mode, it returns to the point in the operation where it left off. You must use the Power button to resume operation, and there must be an adequate power source available, or your notebook will not resume.

CAUTION

Loss of all power sources, including batteries, while in the Standby mode will cause lost data and inability to return to operation with the Power button.

Using the Power Button to Perform Save-to-Disk

When your notebook is active, the Power button, *(Figure 3-13)*, can be used to manually put your notebook into Save-To-Disk mode. However, you must first enable Save-to-Disk mode by enabling Save-to-Disk mode in the BIOS Setup utility Power menu. *(See pages 75-80 for more information on the Power menu of the BIOS Setup utility.)*

Push the Power button, when your notebook is active but no Access indicators are on and release the button (immediately). You will hear two short beeps and then your system will flash the Save-to-Disk screen, and enter Save-to-Disk mode.

If CMOS setting is suspended you can get into Save-to-Disk mode by pressing the **Fn** key and Power Button together.

If your notebook is in Save-to-Disk mode, pushing the Power button will return your notebook to active operation at the point where it went into Save-to-Disk mode. You can tell whether or not your system is in Save-to-Disk mode by looking at the Power indicator. *(See pages 22-25.)* If it is visible and not flashing, your notebook is fully operational. If it is visible and flashing, your notebook is in Suspend mode. If it is not visible, the power is Off or your notebook is in Save-to-Disk mode.

POINT

If power is lost during Save-to-Disk mode the data will be retrieved automatically as soon as power is returned.

POINT

When PC Cards or external devices are in use, Save-to-Disk mode cannot return to the exact state prior to suspension, because all of the peripheral devices will be re-initialized when the system restarts.

POINT

The main advantage of using the Save-to-Disk function is that power is not required to maintain your data. This is particularly important if you will be leaving your notebook in a suspended state for a prolonged period of time. The drawback of using Save-to-disk mode is that it lengthens the power down and power up sequences and resets peripheral devices.

CAUTION

Be sure you know which settings are active for the Power Button before you use it; misuse can result in data loss. *(See the Power Menu of the BIOS setup utility, pages 75-80, for more information.)*

POINT

Save-to-disk mode requires allocating a significant amount of hard drive capacity for saving all system memory, which reduces your usable disk space. When you purchase your notebook it will have space allocated for the memory installed. If you upgrade the original system by adding a memory upgrade module without changing the size of your Save-to-Disk allocation you will get an error message when you try to activate Save-to-Disk mode and it will not work. Use the PHDISK Utility to increase the size of the Save-to-Disk file, SAVE2DSK.BIN. *(Refer to Setting Up Your Save-to-Disk File Allocation on pages 92-93 for more information.)* If you need help contact your support representative for recommendations.

Save-to-Disk Mode

The Save-to-Disk function, saves the contents of your notebook's system memory to the hard drive and shuts down whenever you:

- Press the Power Button until acknowledged with Save-to-Disk mode enabled from the Power menu of the BIOS setup utility.
- Select Standby from the Windows Shut Down menu with Save-to-Disk enabled by the BIOS Setup Utility.
- Time out from lack of activity with Save-To-Disk mode enabled from the Power Savings menu of the BIOS setup utility.

Your notebook's system memory typically stores the file(s) on which you are working, the open application(s) and any other data required to support the operation(s) in progress. When the Save-to-Disk function is activated your notebook saves the contents of the system memory to a file on the internal hard drive, and then automatically shuts off power to your notebook. When you resume operation by pressing the Power button, you return to the point in the operation where you left off, before going into Save-to-Disk mode.

POINT

It is possible to enter Save-to-Disk mode without having enabled it in the BIOS Setup utility. To do this, hold down the **Fn** key while pressing the Power Button.

Idle Mode

Idle mode is one of the power management parameters. When Idle mode is enabled the CPU is put into low-speed operation when there is no activity (keystroke, pointer action, sound generation, video display change, modem transmission or reception, etc.) on your notebook for 16 seconds. Any activity will cause the normal operation to restart automatically. This feature is independent of the Suspend/Resume modes. This parameter is enabled and disabled in the BIOS setup utility. *(See page 76.)*

Standby Timeout

Standby mode is one of the power management parameters. When Standby mode is activated, your notebook puts the CPU in low-speed operation, shuts off the display and turns off the hard drive when there is no activity (keystroke, pointer action, sound generation, video display change, modem transmission or reception, etc.) on your notebook for the user selected time-out period. *(See page 76.)* Any activity will cause your notebook to return to normal operation automatically. This feature is independent of the Power button. This parameter is enabled and disabled in the BIOS setup utility.

Video Timeout

The Video Timeout is one of the power management parameters which 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 Power button. This parameter is enabled and disabled in the BIOS setup utility. *(See page 76.)*

Hard Disk Timeout

The Hard Disk Timeout is one of the power management parameters which saves power by turning off the hard drive if there is no hard drive access for the timeout period which has been set in the BIOS setup utility. *(See page 76.)* Any attempt to access the hard drive will cause the hard drive to restart automatically. This feature is independent of the Suspend/Resume button. This parameter is enabled and disabled in the BIOS setup utility.

Windows Power Management Control Panels

The Power Management icon in the Windows 98 Control Panel allows you to configure some of the power management settings that are normally controlled by the BIOS. For instance, you can set timeout values in the Power Management Control Panel for turning off the display and for turning off hard disks. You can specify these timeout values based on whether you are running on batteries or AC.

ACPI and Windows 98

Short for Advanced Configuration & Power Interface, a power management specification developed by Intel, Microsoft, and Toshiba. ACPI, which is part of the Windows 98 operating system, enables the operating system to control the amount of power given to each device attached to the computer. With ACPI, the operating system can turn off peripheral devices, such as CD-ROM players, when they are not in use.

Your LifeBook C Series notebook is configured to APM (Advanced Power Management) mode. Due to ongoing industry development of ACPI technology, it is not recommended that you re-configure your notebook for ACPI mode.

DATA SECURITY

Your LifeBook C Series has a built-in hardware control password security feature that allows you to protect the data stored in the notebook from unauthorized access. Your operating system and some applications have software control password security features that allow you to protect all or portions of the data stored in the notebook from unauthorized access.

Hardware Data Security Features

When you are using your notebook built-in hardware control password to gain access to the notebook the actual password will not appear on the screen. This is a safety precaution. The hardware control security parameters are set from the BIOS setup utility. *(See Security Menu on pages 71-74 for more information on setting and clearing passwords and enabling and disabling built-in security features.)*

Software Data Security Features

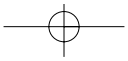
The operating system and some applications have security features that are independent of the built-in hardware protection features that are controlled from the BIOS. See your software documentation for more information about these features.

CAUTION

Make sure you memorize your passwords, both hardware and software. If you forget, you may not be able to use the notebook, and you will have to contact your service provider and arrange to have them reset the hardware system password. See your software documentation for what to do if you forget your software security password(s).

CAUTION

Software security feature passwords may not be the same as the hardware security passwords. Be sure you know which features are controlled from software and which from hardware or you may lock yourself out of your own data or lock up your hardware and not be able to operate your notebook.



PRE-INSTALLED SOFTWARE

Your LifeBook C Series comes with pre-installed software for playing audio and video files of various formats. In addition there is file transfer software, telephony software and virus protection software. Some models come with additional application software.

All of the pre-installed software can be accessed from the Program folder of the Windows 98 Start menu or the following folders above the Program folder in the Start menu: Business Software, Communications Software, Multimedia Software, Service and Support Software, and System Management Software.

SoftPEG MPEG File Player

The MPEG file player displays a screen to find the file which you wish to play. You can setup the list to select from limited to particular types of files or display all files. Opening the desired file will play it. Online help screens are available for more information. (Located in the Multimedia Software folder.)

SoftPEG Video CD Player

This control resembles a VCR player front panel and is operated in the same way. When you point to a button, a small explanation of the use of the button will appear. When you left-click on the button it will activate. Online help screens are available for more information. (Located in the Multimedia Software folder.)

LapLink

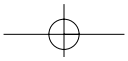
LapLink by Traveling Software provides direct file transfers to other computers; data transfers via internal modem, a PC Card modem, the infrared port, a serial cable, or a parallel cable (cables are not included). See the LapLink online help screens for operating instructions. (Located in the Communications Software folder.)

McAfee VirusScan

Running your McAfee VirusScan program after loading data or programs from a floppy disk, CD-ROM, modem data transfer, or infrared data transfer is a precaution that will protect the data on your hard drive from contamination or destruction. See your VirusScan online help screens for information on how and when to run this program. (Located in the Service and Support Software folder.)

PC Doctor

PC Doctor by Watergate Software is primarily for use by your support representative when helping you with trouble shooting. (*See pages 108–109 for more information.)* (Located in the Service and Support Software folder.)



Quicken 98 Basic

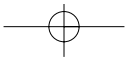
Quicken 98 Basic by Intuit is a personal money management program. It has features such as portfolio management, account registries, online banking, and bill paying features. (Located in the Business Software folder.)

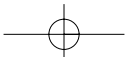
Microsoft Works

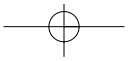
Microsoft Works is a suite of software containing the basic tools to write letters and reports, track family and friends with the address book, manage home finances, and create a home inventory. (Located in the Business Software folder.)

PMSet 98

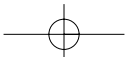
PMSet 98 is a power management application which allows you to monitor battery status and configure your display panel to conserve battery life. See your online help screens for information on how to use the program.







Configuring Your LifeBook C Series



SECTION FOUR

CONFIGURING YOUR LIFEBOOK C SERIES FROM FUJITSU

This section explains the BIOS setup utility. The BIOS setup utility is used to set the date, time, power management modes, data security passwords and other operating parameters of your notebook.

BOOT SEQUENCE

Each time you power up or restart your LifeBook C Series, it goes through a quiet boot sequence that displays a Fujitsu logo until your operating system is loaded. During quiet boot, your notebook is performing a standard boot sequence including a Power On Self Test (POST). To view this diagnostic screen press the **Esc** key anytime while the Fujitsu logo is displayed. To enter the BIOS setup utility press the **F2** key anytime while the Fujitsu logo is displayed. When the boot sequence is completed without a failure and without a request for the setup utility, the system displays the Windows 98 opening screen. The boot sequence is executed when:

- You turn on power to the system using the power button on your notebook. *(Figure 3-1 on page 20.)*
- You restart your computer from the Windows 98 Shut down dialog box of the Start Menu.
- The software initiates a system restart. Example: When you install a new application.
- You reset the system by pressing the three keys **Ctrl+Alt+Del** at the same time and then restart your computer from the Windows 98 Shut down dialog box.
- You depress the reset button on the rear panel of your notebook.

POINT

The BIOS setup utility is entered by pressing the **F2** key during the boot process while the Fujitsu logo is on the screen.

POINT

When error messages occur see Section Six, pages 128-130, for help in understanding the meaning and required actions to be taken.

IDENTIFYING THE DRIVES

Your notebook uses drive letters (Example A:, B:, C:, D:, E:) to identify internal and external devices such as hard drives, floppy disk drives, CD-ROM drives and PC Cards. The most commonly assigned drive designators are listed below. If you add other devices, the drive designators may be different. See your operating system manual for setting drive designations.

Drive Designators

A: Floppy disk drive.
Installed inside your notebook.

B: Not used with your notebook.

C: Hard drive.
Installed inside your notebook.

D: CD-ROM drive.
Installed inside your notebook.

BIOS SETUP UTILITY

The BIOS setup utility is a program that sets the operating environment for your notebook. It is referred to in this publication as the setup utility. There is no need to set or change the environment to operate as it is set at the factory for normal operating conditions.

The setup utility configures:

- Standard system parameters, such as date and time.
- Device control feature parameters, such as I/O addresses and boot devices.
- Power Management parameters that help to conserve your notebook's batteries.
- System Data Security feature parameters, such as passwords.

You will only have to change the utility settings if you want to:

- Change the date or time. (You can also do this without entering the setup utility, through your operating system. See your operating system manual.)
- Change the primary boot device.
- Change the power management parameter settings.
- Change a port address or other parameter.
- Change an audio parameter setting.
- Change the selection of whether to use the built-in display, an external monitor or both.
- Change the system data security settings.

Routinely Entering the Setup Utility

You can enter the setup utility whenever you turn on or reset the system. To do this:

1. Allow the system to start booting.
2. As soon as the Fujitsu logo appears on the screen, press the **F2** key.
3. The Main menu of the setup utility then appears with the current settings of the parameters displayed.
4. If you wish to go to one of the other setup menus, press the ← or the → key to find the menu you require.

POINT

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

Entering the Setup Utility After a Configuration Change or System Failure

If there has been a change in the system configuration that does not agree with the parameter settings stored in your BIOS memory, or there is a failure in the system, the system beeps and/or displays an error message after the Power On Self Test (POST). If the failure is not too severe, it will give you the opportunity to modify the settings of the setup utility, as described in the following steps:

1. When you turn on or restart the computer there is a beep and/or the following message appears on the screen:

```
Error message - please run
SETUP program
Press <F1> key to continue,
<F2> to run SETUP
```

2. If an error message is displayed on the screen, and you want to continue with the boot process and start the operating system anyway, press the **F1** key.

CAUTION

If your notebook beeps a series of beeps that sounds like a code and the display is blank, please refer to the Troubleshooting Section. *(See page 128.)* The Troubleshooting Section includes a list of error messages and their meanings. *(See pages 128-130.)*

POINT

If your data security settings require it, you may be asked for a password before the operating system will be opened.

3. If an error message is displayed on the screen, and you want to enter the setup utility, press the **F2** key.
4. When the setup utility starts with a fault present, the system displays the following message:

```
Warning!
Error message
[Continue]
```

5. Press any key to enter the setup utility. The system will then display the Main Menu with current parameters values.

NAVIGATING THROUGH THE SETUP UTILITY

The BIOS setup utility consists of seven menus; MAIN, ADVANCED, SECURITY, POWER, BOOT, INFO and EXIT. The remainder of Section Three explains each menu in turn including all submenus and setup items.

The following procedures allow you to navigate the setup utility menus:

1. To select a menu, use the cursor keys: ←, →.
2. To select a field within a menu or a sub-menu, use the cursor keys: ↑, ↓.
3. To select the different values for each field, press the **Spacebar** or **+** to change to the next higher selection and **F5** or **-** to go to the next lower selection.
4. To activate a submenu press the **Enter** key.
5. To return to a menu from a submenu, press the **Esc** key.
6. To go to the Exit menu from any other menu, press the **Esc** key.

POINT

Selecting a field causes a help message about that field to be displayed on the right-hand side of the screen.

POINT

Pressing the **Enter** key with the highlight on a selection that is not a submenu or auto selection will cause a list of all options for that item to be displayed. Pressing the **Enter** key or **Esc** key will select the highlighted choice and remove the list.

7. Pressing the **F9** key resets all items in the current menu to the default values.
8. Pressing the **F10** key saves the current configuration and exits the BIOS Setup Utility. You will be asked to verify this selection before it is executed.
9. Pressing the **F1** key gives you a general help screen.

POINT

The BIOS Setup screens depicted in this manual are only representations of the actual setup screens. The BIOS Setup screens on your notebook may vary.

MAIN MENU – SETTING STANDARD SYSTEM PARAMETERS

The Main Menu allows you to set or view the current system parameters. Follow the instructions for Navigating Through The Setup Utility to make any changes. *(See page 51.)*

Table 4-1 shows the names of the menu fields for the Main menu, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

POINT

System Time and System Date can also be set from your operating system without using the setup utility. Use the calendar and time icon on your Control panel for Windows 98 or type time or date from the MS-DOS prompt.

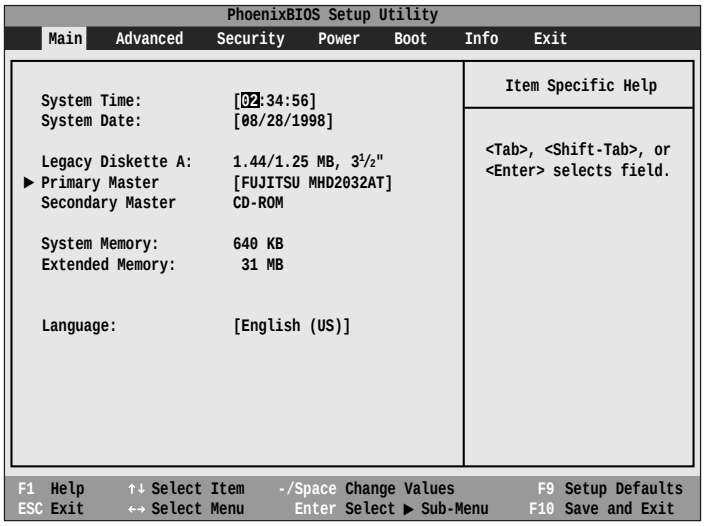


Figure 4-1 Main Menu

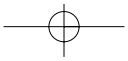
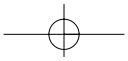


Table 4-1 Fields, Options and Defaults for the Main Menu

Menu Field	Options	Default	Description
System Time:	—	—	Sets and displays the current time. Time is in a 24 hour format of hours:minutes:seconds with 2 digits for each. (HH:MM:SS). Example: 16:45:57. You may change each segment of the time separately. Move between the segments with the **Tab** key and/or **Shift** + **Tab** keys.
System Date:	—	—	Sets and displays the current date. Date is in a month/day/year numeric format with 2 digits each for month and day and 4 digits for year. (MM/DD/YYYY) for example: 03/20/1998. You may change each segment of the date separately. Move between the segments with the **Tab** key and/or **Shift** + **Tab** keys.
Legacy Diskette A:		1.44/1.25MB, 3.5"	
Primary Master:	Selects Primary Master submenu.		Display the type of device on this ATA/ATAPI interface, if there is one. Pressing the **Enter** key selects the Primary Master submenu allowing additional device configuration options for this interface.
Secondary Master:		CD-ROM	



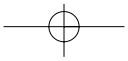
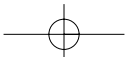


Table 4-1 Fields, Options and Defaults for the Main Menu

Menu Field	Options	Default	Description
System Memory:		640 KB	Displays the size of system memory, which is detected automatically and cannot be changed by the setup utility.
Extended Memory:		31 MB	Displays the size of extended memory which is detected automatically and cannot be changed by the setup utility.
Language:	English (US); Japanese (JP).	[English (US)]	The default setting differs between the US/European and the Japanese model. Selects the display language for the BIOS.



Primary Master – Submenu

The Primary Master submenu is for the internal hard drive. Is has the capacity displayed at the top of the screen as well as on Main menu. Follow the instructions for Navigating Through the Setup Utility to make any changes.
(See page 51.)

Table 4-2 shows the names of the menu fields for the Primary Master submenu, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

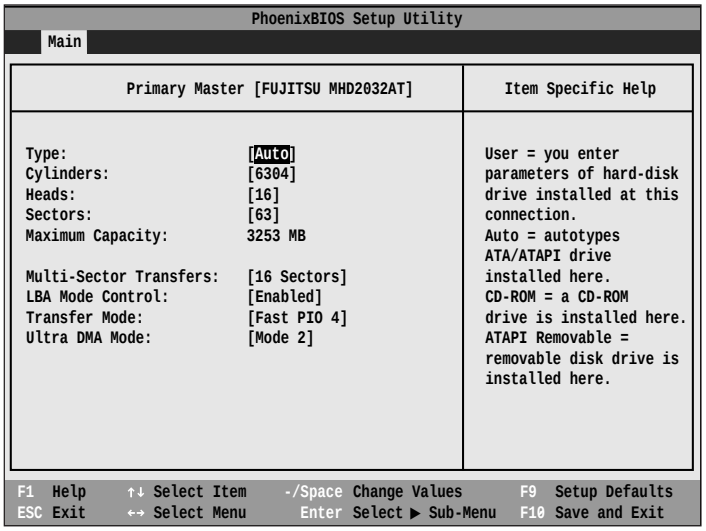


Figure 4-2 Primary Master Submenu

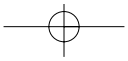
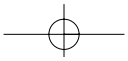


Table 4-2 Fields, Options and Defaults for the Primary Master Submenu

Menu Field	Options	Default	Description
Type:	Auto; None; CD-ROM; User.	[Auto]	Selects the ATA/ATAPI device type. Select Auto to have the type automatically identified by the BIOS at POST. If None is selected, all of the following Set-up items do not appear. Select CD-ROM if a CD-ROM drive is installed at this connection. If User is selected, you must specify the number of Cylinders, Heads, and Sectors for the drive.
Cylinders:	A number between 0 and 65,535.		This item appears only when Auto is selected and the type is identified as hard disk, or User is selected. When User is selected, you can change the value. This field is changed by incrementing (pressing the **Spacebar**) or by typing in the number.
Heads:	A number between 1 and 16.		This item appears only when Auto is selected and the type is identified as hard disk, or User is selected. When User is selected, you can change the value. This field is changed by incrementing (pressing the **Spacebar**) or by typing in the number.



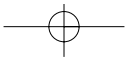
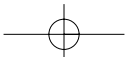


Table 4-2 Fields, Options and Defaults for the Primary Master Submenu

Menu Field	Options	Default	Description
Sectors:	A number between 0 and 63.		This item appears only when Auto is selected and the type is identified as hard disk, or User is selected. When User is selected, you can change the value. This field is changed by incrementing (pressing the **Spacebar**) or by typing in the number.
Maximum Capacity:	Display only.	—	Displays the maximum capacity of the drive calculated from the parameters of the hard disk when Auto is selected and the type is identified as hard disk, or User is selected.
Multi-Sector Transfers:	Disabled; 2; 4; 8; 16. MAX 32; MAX 64; MAX 128.	—	This option cannot be changed when Auto is selected. Specify the number of sectors per block for multiple sector transfer. MAX refers to the size the disk returns when required.
LBA Mode Control:	Enabled; Disabled.	—	Enables or disables logical Block Addressing in place of Cylinder, Head, Sector addressing. This option cannot be changed when Auto is selected.



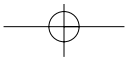
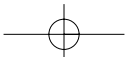


Table 4-2 Fields, Options and Defaults for the Primary Master Submenu

Menu Field	Options	Default	Description
Transfer Mode:	Standard, Fast PIO 1; Fast PIO 2; Fast PIO 3; Fast PIO 4; Fast PIO 3 / DMA; Fast PIO 4 / DMA.	—	Selects the method for moving data to/from the drive. Autotype the drive to select the optimum transfer mode. This option cannot be changed when Auto is selected. Multi-word DMA is automatically set to mode 1 for Fast PIO 1, Fast PIO 2, Fast PIO 3, and set to mode 2 for Fast PIO 4 / DMA.
Ultra DMA Mode:	Disabled; Mode 0; Mode 1; Mode 2.	—	Selects the method for moving data to/from the drive. Autotype the drive to select the optimum transfer mode. This option cannot be changed when Auto is selected.



ADVANCED MENU – SETTING DEVICE FEATURE CONTROLS

The Advanced Menu allows you to:

- Set the I/O addresses for the serial and parallel ports.
- Set the communication mode for the parallel port.
- Set the features of the keyboard.
- Set an audio function I/O address, interrupt level and DMA channel.
- Select between the display panel and an external CRT display.
- Enable or disable compensation for your display.

Follow the instructions for Navigating Through the Setup Utility to make any changes. *(See page 51.)*

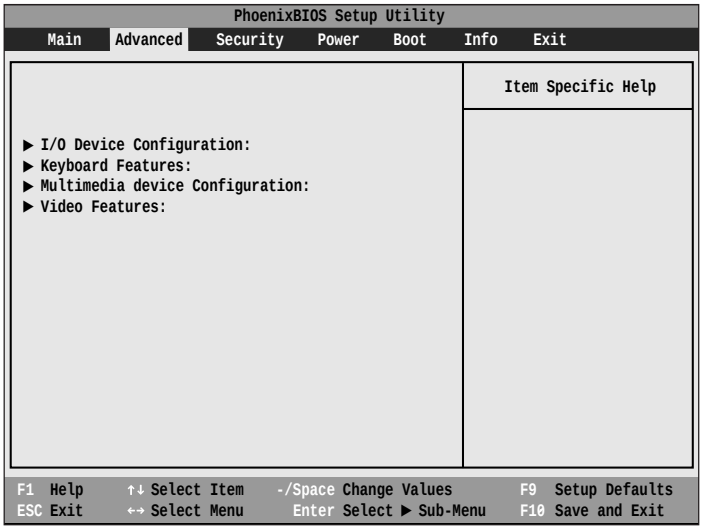


Figure 4-3 Advanced Menu

Table 4-3 shows the names of the menu fields for the Advanced Menu, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

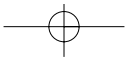
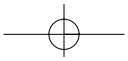


Table 4-3 Field Names, Options and Defaults for the Advanced Menu

Menu Field	Description
I/O Device Configuration:	When selected, opens the I/O Device Configuration submenu which allows the user to modify settings for parallel and serial ports, the floppy disk controller, and the local bus IDE adapter.
Keyboard Features:	When selected, opens the Keyboard Features submenu, with Numlock parameters.
Multimedia Device Configuration:	When selected, opens the Multimedia Device Configuration submenu, which allows setting the hardware address and interrupt levels of audio functions.
Video Features:	When selected, opens the Video Features submenu, which allows setting of the display parameters, including routing of video signals to different displays.



CAUTION

I/O addresses, DMA channels and Interrupt levels can be entered in various ways, including via the BIOS setup utility, the control software for the I/O device, or the hardware. If any two ports or devices, serial or parallel, have the same I/O address assigned your notebook will not function normally. Please keep a record of original settings before making any changes in the event that a restoration is required. See your hardware and software documentation as well as the setup utility to determine settings, limitations, etc.

I/O Device Configuration Submenu of the Advanced Menu

The I/O Device Configuration submenu provides the ability to set the I/O addresses and interrupt levels for the parallel and serial ports, and disk drive controllers of your notebook.

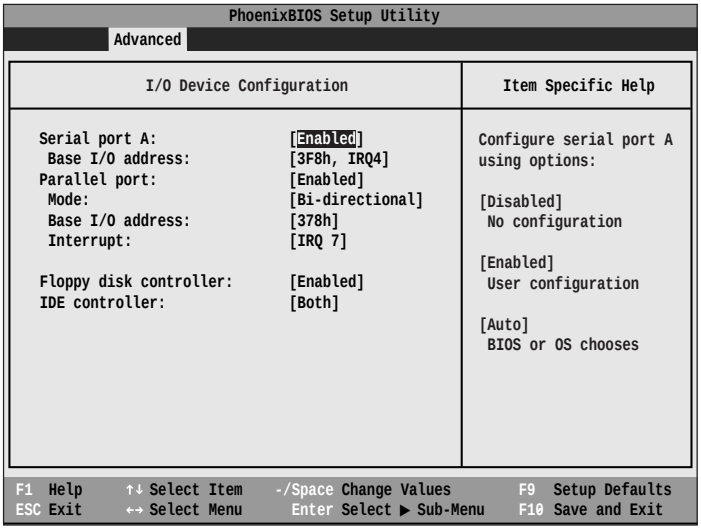
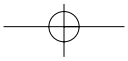


Figure 4-4 I/O Device Configuration Submenu

Follow the instructions for Navigating Through the Setup Utility to make any changes. *(See page 51.)*



CAUTION

The BIOS will warn you if there is a resource conflict by placing a yellow asterisk next to the device(s) reporting (a) conflict.

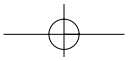
Table 4-4 shows the names of the menu fields for the I/O Device Configuration submenu, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

POINT

To prevent IRQ and address conflicts, avoid changing the default settings. If you must change the settings, you can call 1-800-8FUJITSU for technical assistance.

POINT

All I/O addresses in Table 4-4 are in hexadecimal.



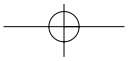
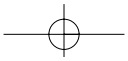


Table 4-4 Fields, Options and Defaults for the I/O Device Configuration Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Serial Port A:	Disabled; Enabled; Auto.	[Enabled]	Configures the serial port A using either no configuration (Disabled), a user defined configuration (Enabled), or by allowing the BIOS or OS to choose the configuration (Auto).
Base I/O address:	3F8h, IRQ4; 2F8h, IRQ3; 3E8h, IRQ4; 2E8h, IRQ3.	[3F8h, IRQ4]	Allows user to set the serial port base I/O address when port A is Enabled.
Parallel port:	Disabled; Enabled; Auto.	[Enabled]	Configures the parallel port using either no configuration (Disabled), a user defined configuration (Enabled), or by allowing the BIOS or OS to choose the configuration (Auto).
Mode:	Output Only; Bi-directional; ECP.	[Bi-directiona1]	When the parallel port is enabled this option is available allowing the user to set the mode for the parallel port. Bi-directional allows two-way transfer of information between your notebook and a connected parallel device. Output Only (Half Duplex) allows information to be transferred in only one direction, from your notebook to the printer or similar device. ECP Mode allows communication with the ECP class of parallel I/O devices.



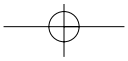
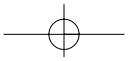


Table 4-4 Fields, Options and Defaults for the I/O Device Configuration Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Base I/O address:	378h; 278h; 3BCh.	[378h]	Allows user to set the parallel port base I/O address when the parallel port is Enabled.
Interrupt:	IRQ 5; IRQ 7.	[IRQ 7]	Allows user to set the parallel port interrupt when the parallel port is Enabled.
Floppy disk controller:	Disabled; Enabled.	[Enabled]	Enables and disables the floppy disk drive controller for fixed floppy disk drive port.
IDE controller	Both; Disabled; Primary; Secondary.	[Both]	Enables and disables the integrated IDE controller.



Keyboard Features Submenu

The Keyboard Features submenu is for setting the parameters of the integrated keyboard. Follow the instructions for Navigating Through the Setup Utility to make any changes. *(See page 51.)*

Table 4-5 shows the names of the menu fields for the Keyboard Feature submenu, the default settings and a description of the field's function and any special information needed to help understand the field's use.

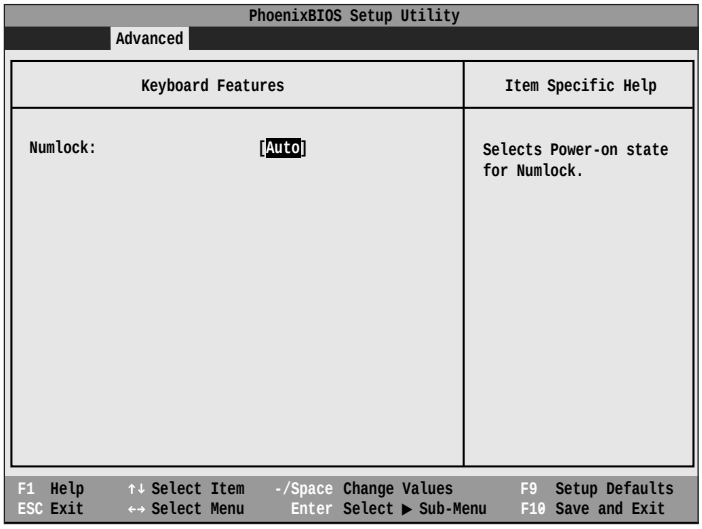


Figure 4-5 Keyboard Features Submenu

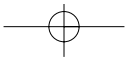
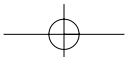


Table 4-5 Fields, Options and Defaults of the Keyboard Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Numlock:	Off; On; Auto.	[Auto]	Sets the NumLock function state when the computer completes booting.



Multimedia Device Configuration Submenu

The Multimedia Device Configuration submenu is for setting the features of the built-in audio functions. Follow the instructions for Navigating Through the Setup Utility to make any changes. *(See page 51.)*

Table 4-6 shows the names of the menu fields for the Multimedia Device Configuration submenu, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

POINT

All I/O addresses in Table 4-6 are in hexadecimal.

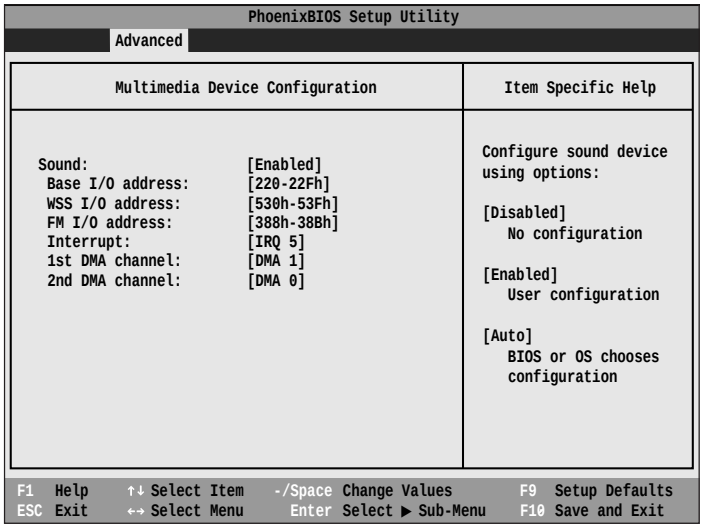


Figure 4-6 Multimedia Device Configuration Submenu

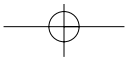
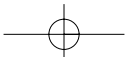


Table 4-6 Fields, Options and Defaults of the Multimedia Device Configuration Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Sound:	Disabled; Enabled; Auto.	[Enabled]	Allows BIOS support for sound to be enabled or disabled. When set to Auto, the BIOS or OS will choose the proper sound configuration settings and some of the following items will not appear.
Base I/O address:	220-22Fh; 240-24Fh; 260-26Fh; 280-28Fh.	[220-22Fh]	When Sound is Enabled, this option is available allowing the user to set the base I/O address for the sound device.
WSS-I/O address:	530h-53Fh; 540h-54Fh; 550h-55Fh; 560h-56Fh.	[530h-53Fh]	When Sound is Enabled, this option is available allowing the user to set the I/O address for the WSS.
FM I/O address:	388h-38Bh; 390h-393h; 398h-39Bh; 3A0h-3A3h.	[388h-38Bh]	When Sound is Enabled, this option is available allowing the user to set the base I/O address for the FM device.
Interrupt:	IRQ 5; IRQ 7; IRQ 9; IRQ 11.	[IRQ 5]	When Sound is Enabled, this option is available allowing the user to set the interrupt for the sound device.
1st DMA channel:	DMA 0; DMA 1; DMA 3.	[DMA 1]	When Sound is Enabled, this option is available allowing the user to set the DMA channel for the sound device.
2nd DMA channel:	DMA 0; DMA 1; DMA 3.	[DMA 0]	When Sound is Enabled, this option is available allowing the user to set the DMA channel for the sound device.



Video Features Submenu

The Video Features Submenu is for setting the display parameters. Follow the instructions for Navigating Through the Setup Utility to make any changes. *(See page 51.)*

Table 4-7 shows the names of the menu fields for the Video Features submenu, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

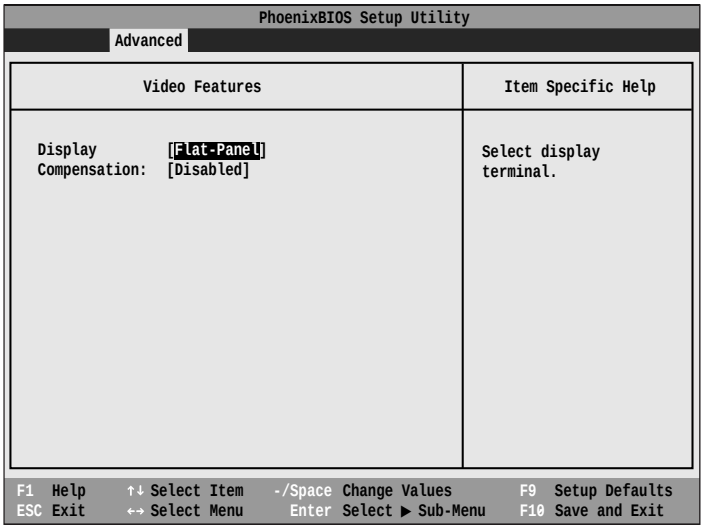


Figure 4-7 Video Features Submenu

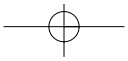
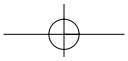


Table 4-7 Fields, Options and Defaults for the Video Features Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Display:	Flat-Panel; CRT; Simultaneous.	[Flat-Panel]	Selects where the video signal will be routed.
Compensation:	Enabled; Disabled.	[Disabled]	Enables or disables compensation which controls spacing on the display. For C340 model when enabled displays with less then 800 x 600 pixel resolution will still cover the entire screen. For C350 model when enabled displays with less then 1024 x 768 pixel resolution will still cover the entire screen.

Exiting from the Advanced Menu

When you have finished setting the parameters on the Advanced Menu, you can either exit from setup utility or move to another menu. If you wish to exit from setup utility, press the **Esc** key to go to the Exit menu. If you wish to move to another menu, use the cursor keys.



SECURITY MENU – SETTING THE SECURITY FEATURES

The Security menu allows you to set up the data security features of your notebook to fit your operating needs and to view the current data security configuration. Follow the instructions for Navigating Through the Setup Utility to make any changes. *(See page 51.)*

Table 4-8 shows the names of the menu fields for the Security menu, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use. The default condition is no passwords required and no write protection.

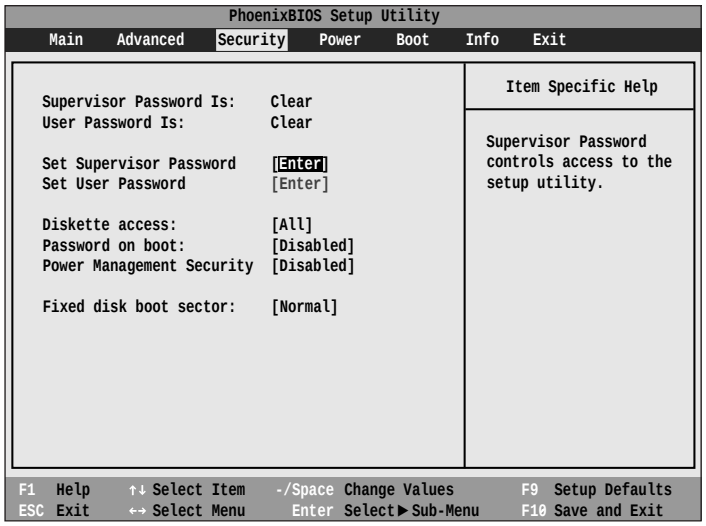
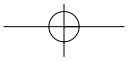


Figure 4-8 Security Menu



POINT

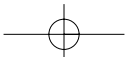
If you set a password, write it down and keep it in a safe place. If you forget the password you will have to contact your support representative to regain access to your secured functions and data.

CAUTION

Entering a password incorrectly 3 times in a row will cause the keyboard and mouse to be locked out and the warning `[System Disabled]` to be displayed. If this happens restart the computer by turning off and on the power with the power switch and use the correct password on reboot.

POINT

If you make an error when re-entering the password a `[Warning]` will be displayed on the screen. To try again press the **Enter** key and then retype the password. Press the **Esc** key to abort the password setting process.



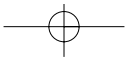
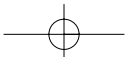


Table 4-8 Fields, Options and Defaults for the Security Menu

Menu Field	Options	Default	Description
Supervisor Password is:	—	Clear.	A display-only field. Set is displayed when the system supervisor password is set and Clear when it is not.
User Password is:	—	Clear.	A display-only field. Set is displayed when the general user password is set, and Clear when it is not.
Set Supervisor Password:	[Enter]	—	Sets, changes or cancels the Supervisor Password. The Supervisor Password may be up to eight characters long and must include only lower-case letters or numbers. To cancel a password press the **Enter** key instead of entering characters in the Enter New Password field and in the Re-enter New Password field. When a Supervisor Password is set it must be used to access the BIOS setup utility.
Set User Password:	[Enter]	—	(This field can only be accessed if the Supervisor Password is set.) Sets, changes or cancels the User Password. The User Password may be up to eight characters long and must include only lower case letters or numbers. To cancel a password press the **Enter** key instead of entering characters in the Enter New Password field and in the Re-enter New Password field. When a User Password is set it must be used to access the BIOS setup utility.



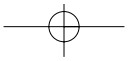


Table 4-8 Fields, Options and Defaults for the Security Menu

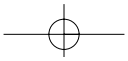
Menu Field	Options	Default	Description
Diskette access:	All; Supervisor Only.	All.	Sets the floppy disk access to be secured for access only with Supervisor's password or by all users with a password. The default is all users with a password.
Password on boot:	Enabled; Disabled.	Disabled.	When set to Enabled, a password (User or Supervisor) is required after the Power On Self Test (POST) before the operating system will be read from a disk. When set to Disabled no password is required. If no Supervisor Password is set this feature is not available and no password is required.
Power Management Security:	Enabled; Disabled.	Disabled.	When set to Enabled, a password, is required upon Resume from Suspend or Save-to-Disk Mode. This password is identical to power of password.
Fixed disk boot sector:	Normal; Write Protect.	[Normal]	Sets write protection for the sector of the boot disk which contains the operating system. When set to Write Protect, the BIOS will prevent any application from writing into the sector of the internal hard drive containing the operating system. When set to Normal there is no BIOS protection of the operating system.

Exiting from the Security Menu

When you have finished setting the parameters on the Security Menu, you can either exit from setup utility or move to another menu. If you wish to exit from setup utility, press the **Esc** key to go to the Exit Menu. If you wish to move to another menu, use the cursor keys.

POINT

Boot sector protection must be set to `[Normal]` to install or upgrade an operating system.



POWER MENU – SETTING POWER MANAGEMENT FEATURE CONTROLS

The Power menu allows you to set and change the power management parameters. Follow the instructions for Navigating Through the Setup Utility to make any changes. *(See page 51.)*

Table 4-9 shows the names of the menu fields for the Power menu, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

POINT

Most power management parameters which are BIOS related can be set from PMSet 98 and the Power Management control panel. Changing PMSet's own options and settings does not change what is stored in the CMOS memory.

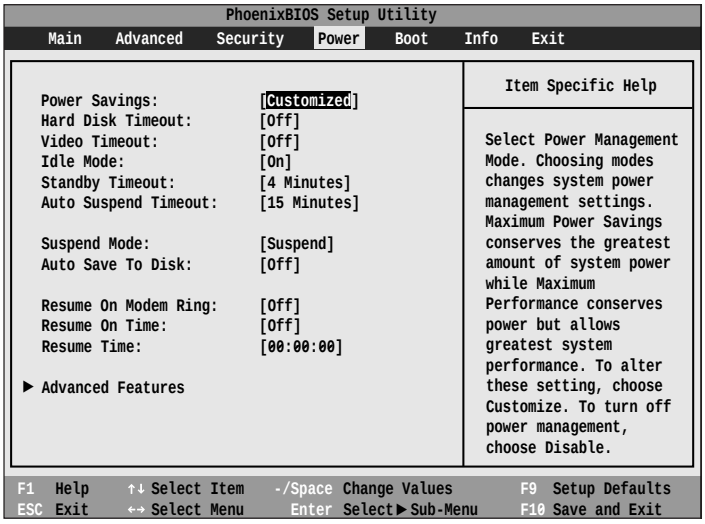


Figure 4-9 Power Menu

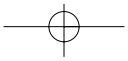
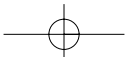


Table 4-9 Fields, Options and Defaults for the Power Menu.

Menu Field	Options	Default	Description
Power Savings:	Customized; Maximum Power Savings; Maximum Performance, Disabled.	[Customized]	Sets the power savings parameters to a factory installed combination of parameters, a custom set of parameters set by you or no power saving features.
Hard Disk Timeout:	30 seconds to 20 minutes; Off.	[Off]	Sets the length of time that the hard drive can be inactive before your notebook automatically turns off the power to the hard drive controller and drive motor. If you choose a factory installed combination of parameters this field will display the setting. If you choose to customize the parameters you will be able to set this yourself. The options available vary from Off, which has no inactivity shutoff, to 20 minutes.
Video Timeout:	2 minutes to 20 minutes; Off.	[Off]	Sets the length of time without any user input device activity before the display is turned off. If you choose a factory combination of parameters, this field will display the setting. If you choose to customize the parameters, you will be able to set this yourself. Off has no inactivity shutoff.
Idle Mode:	On; Off.	[On]	Turns on and off the slow down of the CPU during periods of inactivity. When this is turned on the CPU clock slows by the amount set in the Advanced submenu when there is no activity for 16 seconds or more. Normal speed resumes automatically as soon as there is any activity.



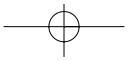
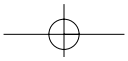
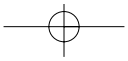


Table 4-9 Fields, Options and Defaults for the Power Menu.

Menu Field	Options	Default	Description
Standby Timeout:	1 minute to 16 minutes; Off.	[4 Minutes]	Sets the length of time without any user input device activity before the CPU is set to half speed and the display and the hard drive are turned off. If you choose a factory combination of parameters this field will display the setting. If you choose to customize the parameters you will be able to set this yourself.
Auto Suspend Timeout:	5 to 60 minutes; Off.	[15 Minutes]	Sets the length of time without any I/O activity before your not book goes into Suspend mode. If you choose a factory combination of parameters this field will display that setting. If you choose to customize the parameters you will be able to set this yourself. Off has no inactivity suspension.
Suspend Mode:	Suspend; Save-to-Disk.	[Suspend]	Sets the form of suspension state. If you choose Suspend, you will suspend operation with power to system memory, and everything else powered down or in a very low power state. If you choose Save-to-Disk your notebook will save all of system memory and the operating parameters to the hard drive before turning your notebook to the pseudo-off condition.



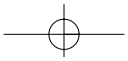


POINT

When resuming from a Save-to-Disk suspension there will be a delay while the contents of system memory and operating parameters are loaded from the hard drive.

CAUTION

In Save-to-Disk mode there is no indication on the Status Indicator to let you know you are suspended rather than shut off from the power switch.



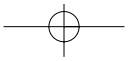
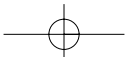


Table 4-9 Fields, Options and Defaults for the Power Menu.

Menu Field	Options	Default	Description
Auto Save to Disk:	Off; After 1 Hour.	[Off]	When set to `After 1 Hour` your notebook will automatically save all of system memory and the operating parameters to the hard drive and go to the pseudo-off if you leave your notebook in Suspend mode for a peroid of time.
Resume On Modem Ring:	On; Off.	[Off]	Sets whether or not to Resume from a suspension state when a message is received by telephone line. This feature is not available if the Save-to-Disk mode is enabled. This feature applies to internal, external.
Resume On Time:	On; Off.	[Off]	Sets whether or not to resume from a suspension state at a designated time. This feature is available from either the Suspend mode or the Save-to-Disk mode.
Resume Time:	–	–	Sets the designated time, on a 24-hour clock, when the notebook is to automatically resume operation from the Suspend state. The format of the clock setting is hours:minutes:seconds. Each segment of the time is set separately, either by incrementing or by typing in the numbers. You move between the segments with the **Tab** key or the **Shift+Tab** keys. This only applies when Resume on Time is set to On.
Advanced Features:	–	–	When selected, opens the Advanced Features submenu which allows setting additional power saving parameters.



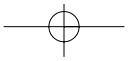
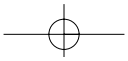


Table 4-9 Fields, Options and Defaults for the Power Menu.
Factory Installed Values for Power Saving Profiles

	Hard Disk Timeout	Video Timeout	Idle Mode	Standby Timeout	Auto Suspend Timeout
Customized:	Off.	Off.	On.	4 Minutes.	15 Minutes.
Maximum Power Savings:	30 Seconds.	2 Minutes.	On.	1 Minute.	5 Minutes.
Maximum Performance:	Off.	Off.	Off.	Off.	15 Minutes.
Disabled:	Off.	Off.	Off.	Off.	Off.
Sample Customized Profile: (To get even better battery life keep the display and volume settings as low as possible and use the custom setting to set the parameters as shown.)	2 Minutes.	1 Minute.	On.	1 Minute.	5 Minutes.



Advanced Features Submenu of the Power Menu

The Advanced Features submenu is for setting some non-time related power saving parameters. Follow the instructions for Navigating Through the Setup Utility to make any changes. *(See page 51.)*

Table 4-10 shows the names of the menu fields for the Video Features submenu, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

Exiting from the Power Menu

When you have finished setting the parameters on the Power menu, you can either exit from the Setup utility or move to another menu. If you wish to exit from Setup utility press the **Esc** key to go to the Exit menu. If you wish to move to another menu, use the cursor keys.

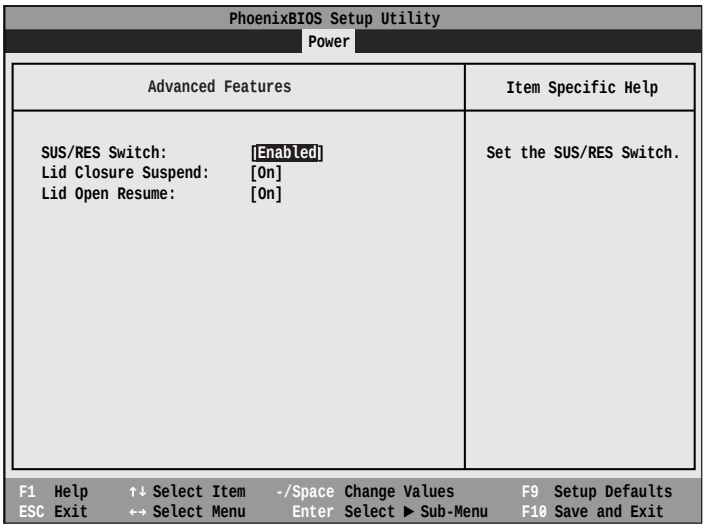


Figure 4-10 Advanced Features Submenu

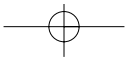
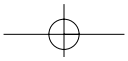


Table 4-10 Fields, Options and Defaults for the Advanced Features Submenu of the Power Menu

Menu Field	Options	Default	Description
SUS/RES Switch:	Enabled; Disabled.	[Enabled]	Sets the function of the Power button when your notebook is in an active state. The resume function can not be disabled as it works regardless of any other settings.
Lid Closure Suspend:	On; Off.	[On]	Enables and disables having closure of the Display panel put your notebook in Suspend mode.
Lid Open Resume:	On; Off.	[On]	Enables and disables having opening the Display panel acting as an automatic resume.



BOOT MENU – SELECTING THE OPERATING SYSTEM SOURCE

The Boot Menu is used to select the order in which the BIOS searches sources for the operating system.

Table 4-11 shows the names of the menu fields for the Boot menu, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

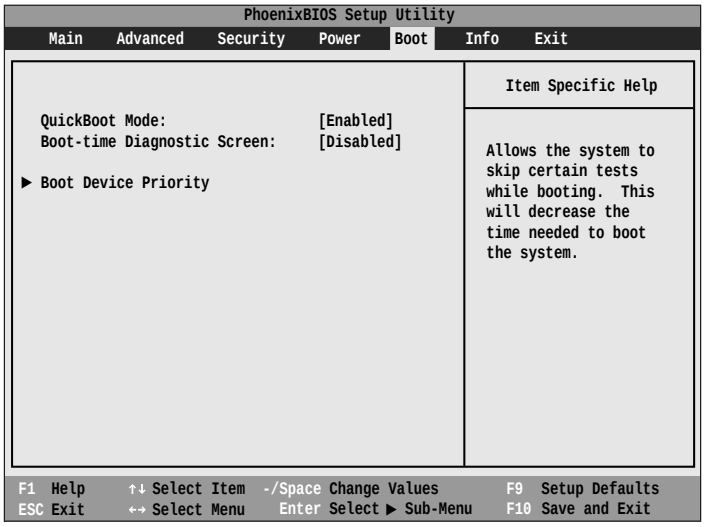


Figure 4-11 Boot Menu

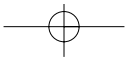
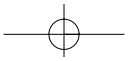


Table 4-11 Fields, Options and Defaults for the Boot Menu

Menu Field	Options	Default	Description
QuickBoot Mode:	Enabled; Disabled.	[Enabled]	Turns on and off booting with a truncated set of Power On Self Test. (Fewer tests mean faster turn on.)
Boot-time Diagnostic Screen:	Enabled; Disabled.	[Disabled]	Turns on and off display of test results instead of Fujitsu logo screen during Power On Self Test.
Boot Device Priority:	Selects the Boot Device Priority submenu.	—	This menu allows setting up the source for the operating system.



The Boot Device Priority Submenu of the Boot Menu

The Boot Device Priority Submenu is for setting the order of checking of sources for the operating system. Follow the instructions for Navigating Through the Setup Utility to make any changes. *(See page 51.)*

Table 4-12 shows the names of the menu fields for the Boot Device Priority submenu, all the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

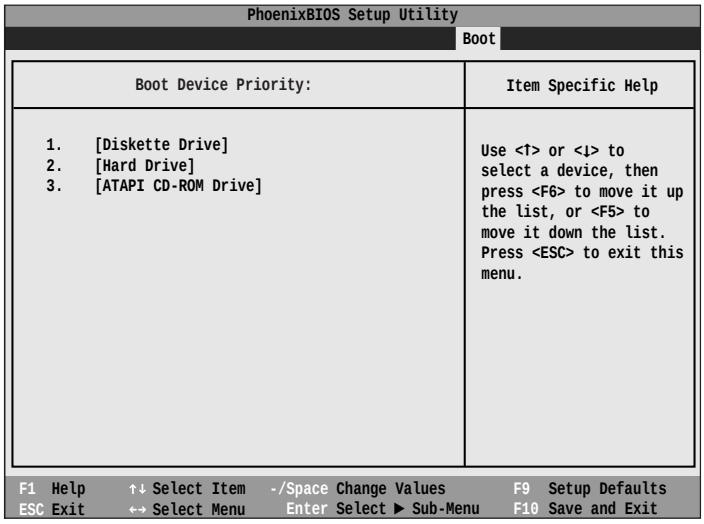


Figure 4-12 Boot Device Priority Submenu

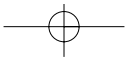
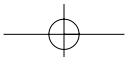


Table 4-12 Fields, Options and Defaults for the Boot Device Priority Submenu

Menu Field	Options	Default	Description
1. Diskette Drive:	—	—	The boot selections determine the order in which the BIOS searches for the operating system during a startup sequence. To change the order highlight one source by using the up ↑, down ↓ cursor keys and then press the **+** or **-** key to change the order number for that source. Be sure to save your changed order when you exit the BIOS setup utility.
2. Hard Drive:	—	—	
3. ATAPI CD-ROM Drive:	—	—	

Exiting from Boot Menu

When you have finished setting the boot parameters with the Boot menu, you can either exit from the setup utility or move to another menu. If you wish to exit from the setup utility press the **Esc** key to go to the Exit menu. If you wish to move to another menu, use the cursor keys.



INFO MENU – DISPLAYING BASIC SYSTEM INFORMATION

The Info menu is a display only menu that provides the configuration information for your notebook.

Table 4-13 shows the names of the menu fields for the Info menu, all the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

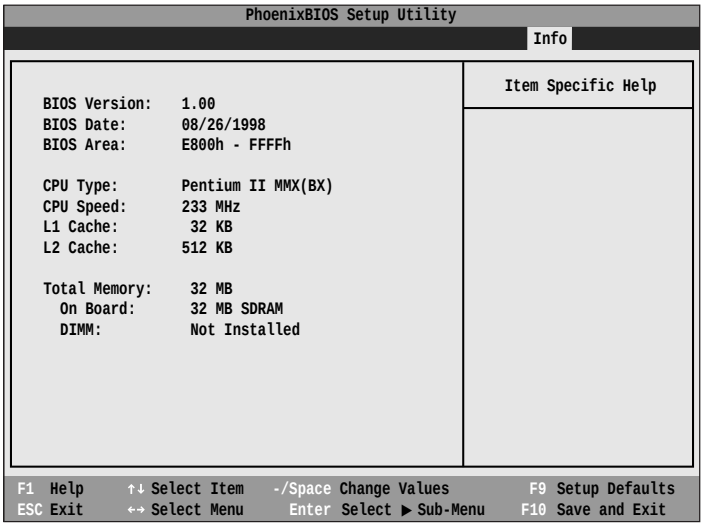


Figure 4-13 Info Menu

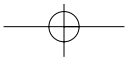
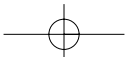


Table 4-13 Fields, Options and Defaults for the Info Menu

Menu Field		Default
BIOS Version:	—	1.00.
BIOS Date:	—	08/26/1998.
BIOS Area:	—	E800h – FFFFh.
CPU Type:	—	Pentium II MMX(BX).
CPU Speed:	—	233 MHz (C340 model) / 266 MHz (C350 model).
L1 Cache:	—	32 KB.
L2 Cache:	—	512 KB.
Total Memory:	—	32 MB.
On Board:	—	32 MB SDRAM.
DIMM:	—	Not Installed.



EXIT MENU – LEAVING THE SETUP UTILITY

The Exit Menu is used to leave the setup utility. Follow the instructions for Navigating Through the Setup Utility to make any changes. *(See page 51.)*

Table 4-14 shows the names of the menu fields for the Exit menu, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

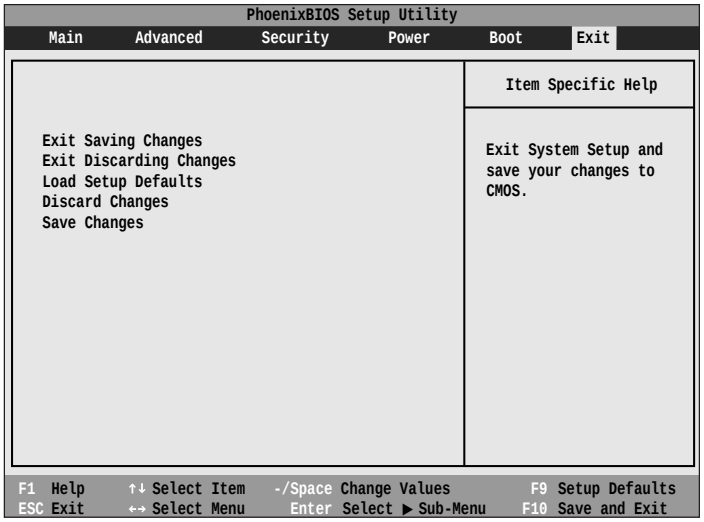


Figure 4-14 Exit Menu

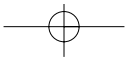
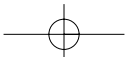


Table 4-14 Fields, Options and Defaults for the Exit Menu.

Menu Field	Options	Default	Description
Exit Saving Changes:	—	—	Selecting Exit Saving Changes will store all the entries on every menu of the setup utility to the BIOS memory and then exit the setup utility. A setup confirmation message `Save Changes and Exit Now? [Yes] [No]` will be displayed.
Exit Discarding Changes:	—	—	Selecting Exit Discarding Changes will exit the setup utility with out writing to the BIOS memory. When the BIOS recognizes this selection it will load the operating system and begin operation. A message setup/warning: `Configuration has not been saved. Save before exiting? [Yes][No]` will be displayed.
Load Setup Defaults:	—	—	Selecting Load Setup Defaults will load the factory preset default values for all setup items, then display the message setup `Confirmation: Load Default Configuration now? [Yes] [No]` When confirmed the setup utility will return to the Exit Menu. To return to another menu follow the directions in the Navigating Through the Setup Utility Section. *(See page 51.)*



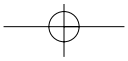
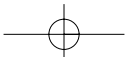
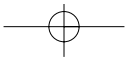


Table 4-14 Fields, Options and Defaults for the Exit Menu.

Menu Field	Options	Default	Description
Discard Charges:	—	—	Load previous values from CMOS for all setup items.
Save Changes:	—	—	Selecting Save Changes will cause the new settings in all menus to be written to the BIOS memory. `Setup Confirmation Save Configuration Changes now? [Yes] [No]` When confirmed the setup utility will return to the Exit menu. To return to another menu, follow the directions in the Navigating Through the Setup Utility section. *(See page 51.)*





SETTING UP YOUR SAVE-TO-DISK FILE ALLOCATION

Your notebook comes with an allocation of space on the internal hard drive adequate to operate the Save-to-Disk function for the amount of memory installed at the factory. If you add a memory upgrade module or do not use the Save-to-Disk function and wish to free up the disk space, you will need to change your allocation. The utility to change the allocations is PHDISK.EXE and is activated from the MS-DOS prompt.

PHDISK allows you to perform five different functions related to the Save-to-Disk space on your internal hard drive. They are:

1. Allocate a space for the Save-to-Disk function.
2. Remove all space allocation for the Save-to-Disk function.
3. Find out details about the hard drive and the current Save-to-Disk space allocation.
4. Re-allocate space and mark bad blocks in the space allocated to the Save-to-Disk function when a disk error has occurred.
5. Find out how much space is needed to perform the Save-to-Disk function with the current memory configuration and how much unused space is available on the internal hard drive.

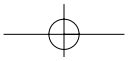
To find out how much space is needed to perform the Save-to-Disk function with the current memory configuration and how much unused space is available on the internal hard drive, do the following:

1. Restart your notebook in MS-DOS mode.
2. At the DOS prompt type
   `CD C:\Fujitsu`
3. Type `PHDISK`
4. Press the **Enter** key.

The screen will display the amount disk space needed to perform the Save-to-Disk function with the current memory configuration and how much unused space is available on the internal hard drive.

To find out details about the hard drive and the current Save-to-Disk space allocation, do the following:

1. Restart your notebook in MS-DOS mode.
2. At the DOS prompt type
   `CD C:\Fujitsu`
3. Type `PHDISK /INFO`
4. Press the **Enter** key.
5. The screen will display the size of the space currently allocated to the Save-to-Disk function and other parameters about the space and the hard drive.



To remove all space allocation for the Save-to-Disk function, do the following:

1. Go to the Start Menu and select MS-DOS Prompt.
2. Type `CD C:\Fujitsu`
3. Type `PHDISK /DELETE /FILE`
4. Press the **Enter** key.

The utility will remove the space allocation for the Save-to-Disk function and free that space for other use.

To create a space allocation for the Save-to-Disk function, do the following:

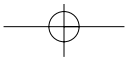
1. Restart your notebook in MS-DOS mode.
1. Type `CD C:\Fujitsu`
3. At the DOS prompt type `PHDISK /CREATE /FILE`
4. Press the **Enter** key.
5. The utility will create a Save-to-Disk file called SAVE2DSK.BIN in the root directory. It will be of the minimum size needed to support the Save-to-Disk function with the current memory configuration.

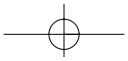
If you have had a read or write error when you tried to perform a Save-to-Disk operation you can re-allocate space to compensate for bad blocks on your drive. To do this:

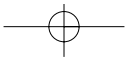
1. Go to the MS-DOS prompt.
2. Type `CD C:\Fujitsu`
3. Type `PHDISK /REFORMAT /FILE`
4. Press the **Enter** key.
5. The utility will re-create the Save-to-Disk file called SAVE2DSK.BIN with the same usable size and any bad blocks marked.

CAUTION

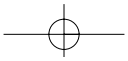
Never use PARTITION in place of FILE with the PHDISK Utility or you will reformat your internal hard drive and all data, applications and operating system will be destroyed.

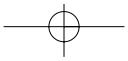






User Installable Features





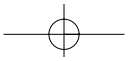
SECTION FIVE

USER INSTALLABLE FEATURES

Your LifeBook C Series has a number of user installable features:

- A Battery bay on the underside of your notebook allows you to replace the internal Lithium ion battery with a second one.
- PC Card slots in the left side panel of your notebook allow you to install PC Cards, IC memory cards (SRAM card) or Zoomed Video cards (Slot 1 only).
- A compartment under the keyboard of your notebook allows you to install a memory upgrade module.
- A microphone jack on the right side of your notebook allows you to connect a mono microphone.
- A stereo line in jack on the right side of your notebook allows you to connect a sound source such as a cassette recorder.
- A headphone jack on the right side of your notebook allows you to connect headphones or powered speakers.
- A PS/2 port on the right side of your notebook allows you to connect an external mouse, keyboard or numeric keypad.
- A USB port in the back of your notebook allows you to connect a Universal Serial Bus device.
- An RJ-11 jack in the back of your notebook allows you to connect a telephone line to the internal modem.
- A serial port in the back of your notebook allows you to connect serial devices, such as RS-232C pointing devices or modems.
- A parallel port in the back of your notebook allows you to connect a parallel printer, photo or text scanner, etc.
- An external monitor port in the back of your notebook allows you to connect an external monitor.

This section describes how to install and remove equipment for each of the expansion features.



LITHIUM ION BATTERY

Lithium ion Battery

Your Lithium ion battery is durable and long lasting but should not be exposed to extreme temperatures, high voltages, chemicals or other hazards.

CAUTION

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

Replacing the Battery

The battery is installed in the battery bay on the underside of your notebook. With the purchase of an additional battery, you can have a fully charged spare to swap with one that is not charged. To swap batteries, have a charged battery ready to install and follow the steps below:

1. Shut down your notebook and disconnect the AC adapter.
2. Close your display and turn your notebook over on a flat surface.
3. Detach the cover of the battery bay.
4. Slide the battery pack away from the connector.
5. Remove the battery from the bay by tilitng it upwards and taking it out of the bay.
6. Insert a new battery by placing it in the bay with the connector end up and then lay it flat.
7. Slide the new battery onto the connector.
8. Replace the battery bay cover making sure it locks in place.

Batteries should be removed and stored separately in a cool dry place if your notebook is not going to be used for an extended period of time.

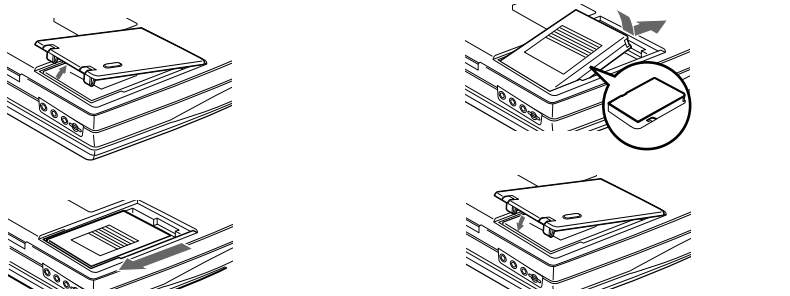
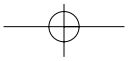


Figure 5-1 Replacing the Battery



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 your old battery, or contact your support representative at 1-800-8FUJITSU (1-800-838-5487).

PC CARDS

PC Cards perform a wide variety of functions, and are ideal for mobile computers.

Some available PC Cards:

- Fax/data modem cards (Type II).
- Local area network (LAN) cards (Type II).
- Wireless LAN cards (Type II).
- IDE solid-state disk cards (Type II).
- SCSI cards (Type II).
- Zoomed Video cards (Type II, Slot 1 only).
- ATA cards (Type III).
- Other PC Cards that conform to PCMCIA 2.1 or CardBus standards.

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

POINT

MPEG playback using zoom video in 24 bit (true color) mode is not supported with the DSTN display. For optimal MPEG playback performance using zoom video, use 256 or 16 bit (high color) modes.

Caring for PC Cards

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

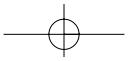
- To keep out dust and dirt, store PC Cards in their protective sleeves when they are not installed in your notebook.
- Avoid prolonged exposure to direct sunlight or excessive heat.
- Keep the cards dry.
- Do not flex or bend the cards, and do not place heavy objects on top of them.
- Do not force cards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

Installing PC Cards in Your Notebook

PC cards are installed in the PC Card slots in the left side panel of your notebook. Some PC Cards will not work when all possible devices are enabled. If a PC Card is not recognized, you will need to open the Control panel, the System folder, and then the Device Manager, and choose a device to disable so that the resources can be used by the PC Card.

CAUTION

Do not insert a PC Card into a slot if there is water or any other substance on the card; you may permanently damage the card, your notebook, or both.



To install a PC Card:

1. See your PC Card manual for instructions on installation of that specific card.
2. Make sure that there is not already a PC Card in the slot. If there is, eject it, as described in Removing PC Cards.

CAUTION

Some PC Cards can only be installed or removed with the power in Suspend mode, some only with power Off. Please check the card documentation for correct usage.

3. Insert the PC Card in the card slot, with the product name label facing up. *(Figure 5-2.)*
4. When the PC Card is fully inserted, the eject button will pop out.
5. Flip this button toward the front of your notebook to fold it out of the way.
6. When the card is installed, lock it in place by sliding the Lock button toward the front of your notebook. *(Figure 5-2.)*

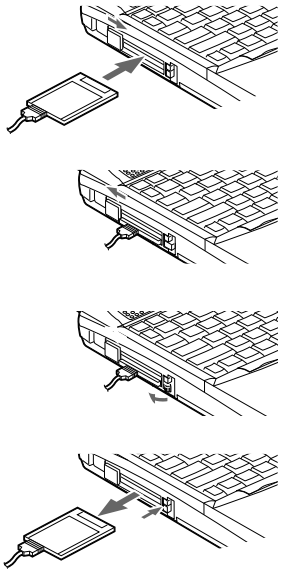


Figure 5-2 Installing and Removing a PC Card

CAUTION

Installing or removing a card while your notebook is in the process of going through the power on or power off sequence may damage the card and/or your notebook.

CAUTION

Windows 98 has a shutdown procedure for PC Cards that must be followed before beginning to remove a card.

Removing PC Cards

If you wish to remove or replace the PC Card, use the following procedure:

1. Shutdown operation of the card.
2. Click on the PC Card indicator on the Windows taskbar.

From the PC Card Properties Window:

3. Select the card to be removed and click on the `Stop` button.
4. Verify that the `You can safely remove your card` message appears.
5. If the `device cannot be removed` message appears, save all files, close all applications, and exit Windows 98 then shut-off the power with the power switch. *(See Power Off on pages 20-21.)*

CAUTION

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

PARALLEL PORT DEVICES

To connect a parallel interface device to the parallel port, be sure that the connector is the right size and aligned, then push in until it is fully seated. When it is seated tighten the hold-down screws, one on each end of the connector. *(See Figure 1-6 on page 9.)*

SERIAL PORT DEVICES

To connect an RS-232C device to the serial port, be sure that the connector is the right size and aligned, then push in until it is fully seated. When it is seated tighten the hold-down screws, one on each end of the connector. *(See Figure 1-6 on page 9.)*

USB DEVICES

When installing a device on the USB Port, be sure that the connector is the right size, aligned, and fully seated. *(See Figure 1-6 on page 9.)*

CAUTION

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

MICROPHONE

Make sure that your mono microphone is equipped with an 1/8" (3.5 mm) mono mini-plug. Make sure the plug is aligned and push it into the jack until fully seated. *(See Figure 1-5 on page 7.)*

STEREO LINE IN DEVICE

Make sure that your stereo line in audio device, a cassette recorder, for example, is equipped with an 1/8" (3.5 mm) stereo mini-plug. Make sure the plug is aligned and push it into the jack until fully seated. *(See Figure 1-5 on page 7.)*

HEADPHONES

Make sure that your stereo headphones are equipped with an 1/8" (3.5 mm) stereo mini-plug. Make sure the plug is aligned and push it into the jack until fully seated. *(See Figure 1-5 on page 7.)*

POINT

Plugging in headphones disables the built-in stereo speakers.

TELEPHONE LINES

To attach a telephone line to the internal modem open the rear panel connector cover or with the cover closed slide the panel in the connector cover slightly opened to reveal the RJ-11 jack. Plug one end of the telephone cable into the telephone line outlet. Orient the telephone cable with the release latch on the connector up. Push it into the jack until it clicks and latches. *(See Figure 1-6 on page 9.)*

CAUTION

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 notebook. Consult your PBX manufacturer's documentation for details. Some hotels have Digital PBX systems. Be sure to find out BEFORE you connect your modem.

MOUSE, KEYBOARD OR KEYPAD

Make sure the connector on your device is the correct PS/2 type. Align the arrow on the connector to point to the bottom of your notebook and push it in until the connector seats. A mouse, keyboard or keypad may be installed and automatically recognized by your notebook without restarting or changing setups. *(See Figure 1-5 on page 7.)*

EXTERNAL MONITOR

You may install an external monitor on the external monitor port on the rear panel of your notebook. Make sure that the wide side of the connector is up and attach it to the port by pushing in until it is seated, then tighten the hold-down screw on each end of the connector. *(See Figure 1-6 on page 9.)*

CAUTION

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 panel only, external monitor only, or both built-in display panel and external monitor.

THEFT PREVENTION LOCK

A physical security system lock can be installed on the right side of your notebook. *(See Figure 1-6 on page 9 for the location of the lock slot.)* Simply insert the key end of your security system in the slot, rotate 90 degrees and lock.

MEMORY UPGRADE MODULE

Your notebook has 32MB of installed SDRAM. To increase your memory capacity you may install a memory upgrade module in the memory upgrade compartment under the keyboard of your notebook. The memory upgrade module is a dual-in-line memory module (DIMM). You may add modules of different capacity. SDRAM modules are recommended but EDO modules will work. Installing an EDO module will cause your system to operate at a slower rate.

CAUTION

Never remove screws except the ones specifically shown in the directions for installing and removing the memory upgrade module.

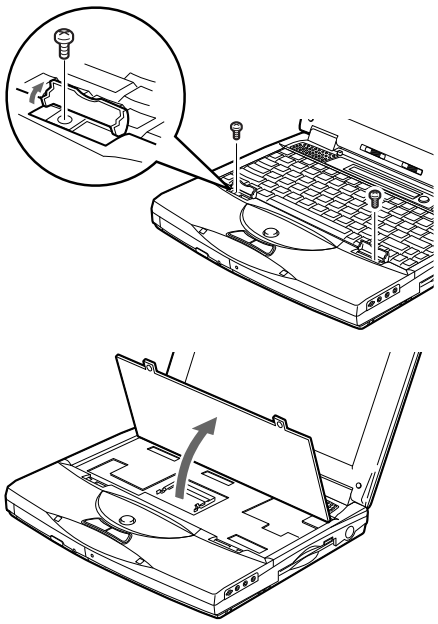


Figure 5-3 Opening the Memory Upgrade Compartment

To Install a Memory Upgrade Module:

1. Shut Down your notebook *(see Power Off on pages 20-21)* and remove any power adapter (AC or auto/airline).
2. Open the keyboard on both sides of the keyboard, lock covers, and remove the screws. *(Figure 5-3.)*
3. Holding the keyboard covers on both sides, which were opened in Step 2, open the keyboard slowly. *(Figure 5-3.)*

CAUTION

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

4. Align the memory upgrade module with the part side up. Align the connector edge of the memory upgrade module with the connector slot in the compartment. The connector will be pointing toward the front of the notebook. *(Figure 5-4.)*
5. Insert the memory upgrade module at a 45° angle. *(Figure 5-4.)* Press the connector edge of the module firmly down and into the connector.
6. Press the memory upgrade module down into the compartment until it lodges under the retaining clip. You will hear a click when it is properly in place.
7. Close the keyboard by hooking the tabs under the front edge of the keyboard opening and tilting down until flush with your notebook. *(Figure 5-5.)*
8. Replace the screws and close the keyboard lock covers.

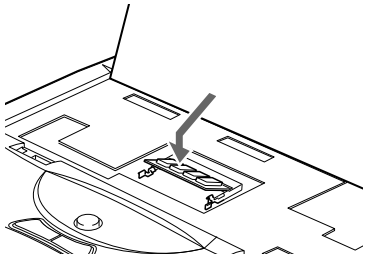


Figure 5-4 Installing a Memory Upgrade Module

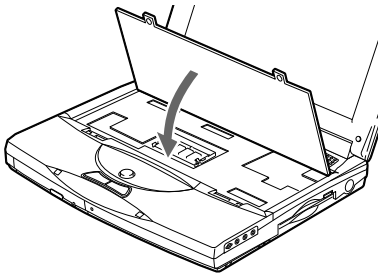
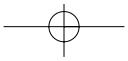


Figure 5-5 Closing the Memory Upgrade Compartment



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

CAUTION

Before you install or remove the memory upgrade module, save changes and close all files and turn power off to your notebook. (*See Power Off on pages 20-21.*)

To Remove a Memory Upgrade Module:

1. Perform steps 1 through 4 of To Install 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 front of your notebook.
4. Store the memory upgrade module in a static guarded sleeve.
5. Close the keyboard by following the instructions in steps 8 and 9 of the instructions for To Install a Memory Upgrade Module, or install a new memory upgrade module and then replace the cover by following the instructions in steps 5 through 9 of the instructions To Install a Memory Upgrade Module.

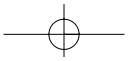
CAUTION

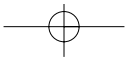
The memory upgrade module can be severely damaged by electro-static discharge (ESD). Be sure you are properly grounded when handling and removing the module.

Checking the Computer Recognition of New Memory Capacity

When you have changed system memory capacity by adding or removing a memory upgrade module, be sure to check that your notebook has recognized all of the memory. You can check memory capacity by looking at the Main menu of the setup utility:

1. Turn on power using the power switch.
2. Enter the setup utility by pressing the **F2** key as soon as the Fujitsu logo appears on the screen. *(See pages 50-51.)*





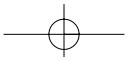
3. The System Memory and the Extended Memory capacity, as detected by your notebook during the Power On Self Test (POST), are displayed at the bottom of the Main menu screen.

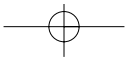
Example: A system with 32MB of memory will display 640K System Memory, 31M Extended Memory.

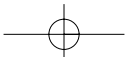
When you have installed additional memory, the display should change. For example for:

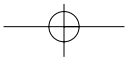
Total RAM Installed	System Memory	Extended Memory
32 MB	640 K	31M
48 MB	640 K	47M
64 MB	640 K	63M
96 MB	640 K	95M

If the total memory displayed is not what you believe it should be, check that your memory upgrade module is properly installed. If it is properly installed and the capacity is not correctly recognized, see the Troubleshooting Section starting on page 108.

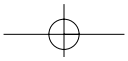


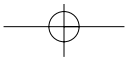






Troubleshooting





SECTION SIX

TROUBLESHOOTING

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

IDENTIFYING THE PROBLEM

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

1. Make sure the AC adapter is plugged into your notebook and to an active AC power source.
2. 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.
3. 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.
4. Go through the boot sequence. *(See Section 2, pages 13-14.)*
5. If the problem has not been resolved, refer to the problem guide table, which follows, for more detailed troubleshooting information. (*See page 109.*)

POINT

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

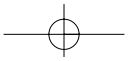
CAUTION

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

6. If you have tried the solutions suggested in Specific Problems without success, contact your support representative:
   toll free 1-800-8FUJITSU (1-800-838-5487)
   fax 1-901-259-5700
   e-mail 8fujitsu@fpc.fujitsu.com
   Web Site http://www.8fujitsu.com.

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.



- PIN (Personal Identification Number) on the card located in the service and support folder.
- Conditions under which the problem occurred.
- Any error messages that have occurred.
- Hardware configuration.
- Type of printer connected, if any.

See the Configuration Label on the bottom of your notebook for configuration and serial numbers. *(Refer to Figure 1–7 on page 9.)*

SPECIFIC PROBLEMS

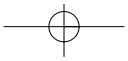
Using PC-Doctor

PC-Doctor is a diagnostic program by Watergate Software, Inc. which comes pre-installed on your notebook. If you are an experienced computer user you may find it useful, however, it is intended primarily to help your Fujitsu support representative better serve you.

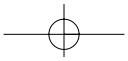
User Problem Guides

When you have problems with your notebook, try to find the symptoms under the **Problem** column of the 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 Solution**.

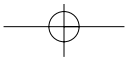
Remember that it helps to keep notes of what you have tried and the results when you are troubleshooting.



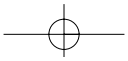
Problem	Possible Cause	Possible Solution
Audio Problems		
There is no sound coming from the built-in speakers.	1. The volume knob is turned too low.	1. Adjust the volume control knob on the right side of your notebook.
	2. The software volume control is set too low.	2. Adjust the sound volume control settings in your software, both operating system and applications.
	3. Headphones are plugged into your notebook.	3. Plugging in headphones disables the built-in speakers, remove the headphones.
	4. BIOS audio settings are incorrect.	4. Set the BIOS setup utility, Multimedia Device Configuration submenu of the Advanced menu to the default values. *(See pages 67-68.)*
	5. Software driver is not configured correctly.	5. Refer to your application and operating system documentation for help.
CD-ROM Drive Problems		
Notebook fails to recognize CD-ROM.	1. Shipping card is still in the CD-ROM drive tray.	1. Remove shipping card and replace CD in tray.
	2. CD-ROM is installed with label face down.	2. Open CD-ROM tray and re-install CD with proper orientation.
	3. CD-ROM is not pushed down onto raised center circle of drive.	3. Open CD-ROM tray and re-install CD properly.
	4. CD-ROM tray is not latched shut.	4. Push on the front of the CD-ROM tray until it latches.

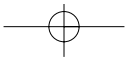


Problem	Possible Cause	Possible Solution
Notebook fails to recognize CD-ROM (continued).	5. Setup utility is set to something other than CD-ROM or Auto for the Secondary Master Controller.	5. Revise BIOS settings to set the Secondary Master correctly. *(See Main menu and Primary Master submenu pages 55-58 for more information.)*
	6. Wrong drive designator was used for CD-ROM in the application.	6. Verify the drive designator used by the application is the same as the one used by the operating system. When the operating system is booted from a CD-ROM drive designations are automatically adjusted. *(See Boot Options submenu on pages 85-86.)*
	7. Windows CD auto insertion function is disabled.	7. Start the CD from the desktop or application software or re-enable the Windows CD auto insertion function. *(See CD-ROM Access Indicator on pages 22-24 for more information.)*
The CD-ROM Access indicator on the Status Indicator panel blinks at regular intervals when no CD is in the tray or the CD-ROM drive is not installed.	1. The Windows CD auto insertion function is active and is checking to see if a CD is ready to run.	1. This is normal. You can disable this function if you wish. *(See CD-ROM Access Indicator on pages 22-24 for more information.)*

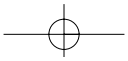


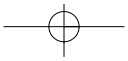
Problem	Possible Cause	Possible Solution
Floppy Disk Drive Problems		
You cannot access your floppy disk.	1. Security is set to protect access to floppy disk data. 2. Floppy disk is not loaded correctly. 3. BIOS setup utility has `Diskette Controller: Disabled.` 4. You tried to write to a write protected floppy disk.	1. Verify your password and security settings. Security should have Diskette Access: All. 2. Eject floppy disk, check orientation and re-insert. *(See Floppy Disk Drive on pages 34-35.)* 3. Revise the setup utility Main menu settings. *(See Main Menu on pages 52-54.)* 4. Eject the floppy disk and set it to write enabled. *(See pages 34-35.)*



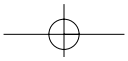


Problem	Possible Cause	Possible Solution
Hard Drive Problems		
You can not access your hard drive.	1. The setup utility is set to something other than the characteristics of your internal or optional second hard drive.	1. Revise BIOS settings to set both Primary Master and Primary Slave correctly. *(See Main Menu and Primary Master Submenu on pages 52-56 for more information.)*
	2. The wrong drive designator was used by an application when a bootable CD-ROM was used to start the notebook.	2. Verify drive designator used by application is in use by the operating system. When the operating system is booted from a CD-ROM, drive designations are automatically adjusted. *(See Primary Master Submenu on pages 55-56.)*
	3. Security is set so operating system can not be started without a password.	3. Verify your password and security settings. (*See Security menu on pages 71-74.*)
Keyboard or Mouse Problems		
The built-in keyboard does not seem to work.	1. The notebook has gone into Suspend mode. 2. Your application has locked out your keyboard.	1. Push the Suspend/Resume button. 2. Try to use the ErgoTrac pointing device to access the Start menu and then the ShutDown menu and restart the System. If this fails then turn reset your notebook using the reset button located on the rear panel. *(See Reset button on page 32.)*

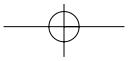




Problem	Possible Cause	Possible Solution
You have installed an external keyboard. External keyboard is not functioning.	1. Your external device is not properly installed. 2. Your operating system software is not setup with the correct software driver for that device.	1. Re-install your device. 2. Check 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.	1. Your operating system software is not setup with the correct software driver for that device. 2. Your system has crashed.	1. Check your device and operating system documentation and activate the proper driver. 2. Restart your system using the reset button on the rear panel. *(See Reset button on page 32.)*
Memory Problems		
Your power on screen or Main menu of the BIOS setup utility information does not show the correct amount of installed memory.	1. Your memory upgrade module is not properly installed. 2. You have a memory failure.	1. Remove and re-install your memory upgrade module. *(See Memory Upgrade Module on pages 102-105.)* 2. Make sure display of error messages is enabled (*see Boot Options Submenu on pages 85-86*), and check for Power On Self Test (POST) messages. *(See pages 128-130 for possible messages and their meanings.)*



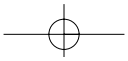
Problem	Possible Cause	Possible Solution
Modem Problems		
Messages about modem operation.	1. Messages about modem operation are generated by whichever modem application is in use.	1. See your application software documentation for additional information.
Parallel, Serial, and USB Device Problems		
You have installed a parallel-port device, a serial-port device or a USB device. Your notebook does not recognize the device, or the device does not seem to work properly.	1. The device is not properly installed. 2. The device may have been installed with an application running and your notebook doesn't know it's there. 3. Your software may not have the correct software driver active. 4. You may have the wrong I/O address selected for your device. 5. Your device and another device are assigned the same I/O address.	1. Remove and re-install the device. *(See Parallel Port Devices, Serial Port Devices or USB Devices on page 100.)* 2. Close your application and restart your notebook. 3. See your software documentation and activate the correct driver. 4. See your device documentation and software documentation to determine the required I/O address. 5. Check all I/O addresses in the BIOS Setup Utility and your other installed hardware and software and make sure there are no duplications.

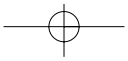


Problem	Possible Cause	Possible Solution
PC Card Problems		
A card inserted in the PC Card slot does not work or is locking up the system.	1. The card is not properly installed 2. The card may have been installed with an application running and your notebook doesn't know it's there. 3. Your software may not have the correct software driver active. 4. You may have the wrong I/O address selected for your PC Card device. 5. Your PC Card device and another device are assigned the same I/O address.	1. Remove and re-install the card. *(See PC Cards on pages 98-99.)* 2. Close your application and restart your notebook. 3. See your software documentation and activate the correct driver. 4. See your PC Card documentation to determine the required I/O address. 5. Check all I/O addresses in the BIOS setup utility and your other installed hardware and make sure there are no duplications.

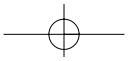
CAUTION

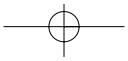
Due to ongoing changes in USB technology and standards, not all USB devices and/or drivers are guaranteed to work.



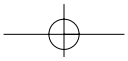


Problem	Possible Cause	Possible Solution
Power Failures		
You turn on your notebook and nothing seems to happen.	1. The installed battery is completely discharged, and there is no Power adapter (AC or auto/airline) installed.	1. When the battery is dead there will be a beep when the power is turned on and the notebook will immediately go into Dead Battery Suspend mode. *(See page 28.)* Check the Status Indicator panel to determine the presence and condition of the battery. *(See pages 22-23.)* Install the battery if it is not installed or a Power adapter if all batteries are dead or unavailable. *(See pages 97-98 and 12-13.)*
	2. The battery is installed but is completely discharged and the Power adapter (AC or auto/airline) is not plugged in properly.	2. When the battery is dead there will be a beep when the power is turned on and the notebook will immediately go into Dead Battery Suspend mode. *(See page 28.)* Check the Status Indicator panel to deter mine the presence and condition of the battery and adapter. *(See Figures 3-3 and 3-4 on pages 22-23.)* Verify that your adapter is connected correctly. *(See pages 12-13.)*

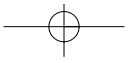




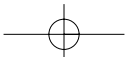
Problem	Possible Cause	Possible Solution
	3. The battery is installed but is completely discharged and the Power adapter (AC or auto/airline) has no power from the AC outlet, airplane seat jack, or the car's cigarette lighter.	3. When the battery is dead there will be a beep when the power switch is turned on and the notebook will immediately go into Dead Battery Suspend mode. *(See page 28.)* Check the Status Indicator cigarette lighter panel to determine the presence and condition of the battery and adapter. *(See Figures 3-3 and 3-4 on pages 22-23.)* 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.
	4. The battery is installed but is completely discharged and the Power adapter (AC or auto/airline) is faulty.	4. When the battery is dead there will be a beep when the power switch is turned on and the notebook will immediately go into Dead Battery Suspend mode. *(See page 28.)* Verify the cause using the Status Indicator panel to determine the presence and condition of the battery and adapter. *(See Figures 3-3 and 3-4 on pages 22-23.)* Try a different Power adapter or install a charged optional second battery.



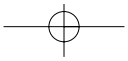
Problem	Possible Cause	Possible Solution
	5. There is no battery installed and there is no Power adapter (AC or auto/airline) installed.	5. Use the Status Indicator panel to verify the presence and condition of the battery. *(See Figure 3-3 on page 22.)* Install a Power adapter. If the battery is not charged use a Power adapter until it is charged.
	6. The battery is installed but is faulty and there is no Power adapter (AC or auto/airline) installed.	6. Use the Status Indicator panel to verify the presence and condition of the battery. *(See Figure 3-3 on page 22.)* If a battery is indicating a short, remove that battery and operate from another power source or replace that battery.
	7. The battery is low.	7. If the battery is dead there will be a beep when the power is turned on and the notebook will immediately go into Dead Battery Suspend mode. *(See page 28.)* Check the Status Indicator panel to deter mine the presence and condition of the battery. *(See Figure 3-3 on page 22.)* Use a Power adapter to operate until a battery is charged or install a charged battery.



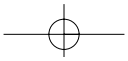
Problem	Possible Cause	Possible Solution
Your notebook turns off all by itself.	1. The power management parameters are set for auto timeouts which are too short for your operating needs.	1. Use the keyboard or pointer and if that does not restore operation, push the Suspend/ Resume button. Check the PowerPanel - settings or close your applications and go to the setup utility Power menu and adjust the timeout values to better suit your operation needs. *(See Power menu on pages 75-80.)*
	2. You are operating on battery only and have ignored a low battery alarm until the batteries are all at the dead battery state and your machine has gone into Dead Battery Suspend mode.	2. Install a Power adapter and then push the Suspend/Resume button. *(See Low Battery State on page 28.)*
	3. You have a battery failure.	3. Verify the condition of the batteries using the Status Indicator panel *(Figure 3-3 on page 22)*, and replace or remove any that are shorted.
	4. Your Power adapter has failed or lost it's power source.	4. Make sure the adapter is plugged in and the outlet has power.



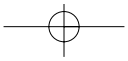
Problem	Possible Cause	Possible Solution
Your notebook won't work on battery alone.	1. The installed battery is dead.	1. When the battery is dead there will be a beep when the power switch is turned on and the notebook will immediately go into Dead Battery Suspend mode. *(See page 28.)* Replace the battery with a charged one or install a Power adapter.
	2. No battery is installed.	2. Install a charged battery.
	3. The battery is improperly installed.	3. Verify that the battery is properly connected by re-installing it.
	4. Your installed battery is faulty.	4. Verify the condition of the battery using the Status Indicator panel *(Figure 3-3 on page 22)*, and replace or remove any that is shorted.
The battery seems to discharge too quickly.	1. You are running an application which uses a great deal of power because of frequent hard drive access or CD-ROM access, use of a modem PC Card or of a LAN PC Card.	1. Use a Power adapter for this application when at all possible.
	2. The power savings features may be disabled.	2. Check the Power Management and/or setup utility settings in the Power menu and adjust according to your operating needs. *(See pages 75-80).*



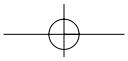
Problem	Possible Cause	Possible Solution
	3. The brightness is turned all the way up.	3. Turn down the brightness adjustment. The higher the brightness the more power your display uses.
	4. The battery is very old.	4. Replace the battery.
	5. The battery has been exposed to high temperatures.	5. Replace the battery.
	6. The battery is too hot or too cold. *(See Batteries on page 26.)*	6. Restore the notebook to normal operating temperature. (The Charging icon on the Status Indicator panel will flash when the battery is outside its operating range.)
Shutdown and Startup Problems		
The Power button does not work.	1. The Power button is disabled from the Advanced submenu of the Power menu of the setup utility.	1. Enable the button from the setup utility. *(See page 81.)*
	2. You did not hold the button in long enough.	2. Hold the button longer. This may need to be a very long time if your application is preventing the CPU from checking for button pushes.
	3. There may be a conflict with the application software.	3. Close all applications, and try the button again.



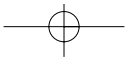
Problem	Possible Cause	Possible Solution
The system powers up, and displays power on information, but fails to load the operating system.	1. The boot sequence settings of the setup utility are not compatible with your configuration.	1. Set the operating source by pressing the **Esc** key while the Fujitsu logo is on screen or use the **F2** key and enter the setup utility and adjust the source settings from the Boot menu on page 83.
	2. You have a secured system requiring a password to load your operating system.	2. Make sure you have the right password. Enter the setup utility and verify the Security settings and modify them as appropriate. *(See Security Menu on pages 71-73.)*
	3. Internal hard drive was not detected.	3. Use the BIOS setup utility Main menu, Primary Master submenu to try to auto detect the internal hard drive.
An error message is displayed on the screen during the notebook turn on (boot) sequence.	1. Power On Self Test (POST) has detected a problem.	1. See the Power On Self Test (POST) Messages *(See pages 128-130)*, to determine the meaning and severity of the problem. Not all messages are errors; some are simply status indicators.



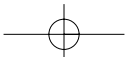
Problem	Possible Cause	Possible Solution
Your notebook appears to change setup parameters when you start it.	1. BIOS setup changes were not saved when you made them and exited the BIOS setup utility returning it to previous settings. 2. The BIOS CMOS hold-up battery has failed.	1. Make sure you select Save Changes And Exit when exiting the BIOS setup utility. 2. Contact your support representative for repairs. This is not a user serviceable part but has a normal life of 3 to 5 years.
Video Problems		
The built-in display is blank when you turn on your notebook.	1. Something is pushing on the Closed Cover switch. *(See Figure 1-3 on page 5.)* 2. The notebook is set for an external monitor only. 3. The angle of the display and the brightness settings are not adequate for your lighting conditions.	1. Clear the Closed Cover switch. 2. 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. 3. Move the display and the brightness control until you have adequate visibility.



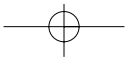
Problem	Possible Cause	Possible Solution
	4. The power management timeouts may be set for very short intervals and you failed to notice the display come on and go off again.	4. Press any key or move the pointer, if this doesn't work press the Suspend/Resume button. (The display may be shut off by Standby mode, Auto Suspend, or Video Timeout.)
	5. The notebook turned on with a series of beeps.	5. Power On Self Test (POST) has detected a failure which does not allow the display to operate. Contact your support representative.
The display goes blank by itself after you have been using it.	1. The notebook has gone into Video timeout, Standby mode, Suspend mode or Save-to-Disk mode because you have not used it for a period of time.	1. Use the keyboard or pointer and if that does not restore operation, push the Suspend/Resume button. You may want to close your application and go to the setup utility Power menu *(See pages 75-80)*, and adjust the timeout values to better suit your operation needs.
	2. Something is pushing on the Closed Cover switch. *(See Figure 1-3 on page 5.)*	2. Clear the Closed Cover switch.
	3. The power management timeouts may be set for very short intervals and you failed to notice the display come on and go off again.	3. Press any key or move the pointer, if this doesn't work press the Suspend/Resume button.



Problem	Possible Cause	Possible Solution
The Built-in Display does not close.	1. A foreign object, such as a paper clip, is stuck between the display and the keyboard.	1. Remove all foreign objects from the keyboard.
The Built-in Display has bright or dark spots.	1. If the spots are very tiny and few in number, this is normal for a large LCD display. 2. If the spots are numerous or large enough to interfere with your operation needs.	1. This is normal; do nothing. 2. Display may be faulty; contact your support representative.
The application display uses only a portion of your screen and is surrounded by a dark band.	1. You are running an application that does not support 800 x 600 pixel resolution display and display compression is enabled.	1. Display compression gives a clearer but smaller display for applications that do not support 800 x 600 pixel resolution. You can fill the screen but have less resolution by changing your display compression setting, *(See Video Features Submenu of the Advanced Menu on pages 69-70.)*
You have connected an external monitor and it does not come on.	1. Your BIOS setup is not set to enable your external monitor. 2. Your external monitor is not properly installed.	1. 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 of the Advanced Menu on pages 69-70.)* 2. Reinstall your device. *(See External Monitor on page 101.)*



Problem	Possible Cause	Possible Solution
	3. Your operating system software is not setup with the correct software driver for that device.	3 Check your device and operating system documentation and activate the proper driver.
	4. Your external monitor is not compatible with your notebook.	4. See your monitor documentation and the External Monitor Support portions of Appendix A on pages 142.
Miscellaneous Problems		
An error message is displayed on the screen during the operation of an application.	1. Application software often has its own set of error message displays.	1. See your application manual and help displays screens for more information. Not all messages are errors; some may simply be status.



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 *. Comments in italics are suggestions of possible actions for you to consider, or risks resulting from ignoring the message. The most common errors are marked with a #. If an error message is displayed that is not in this list, write it down and check your operating system documentation both on screen and in the manual. If you can find no reference to the message and its meaning is not clear, contact your support representative for assistance.

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

***Diskette drive A error or Diskette drive B error** Drive A: or B: is present but fails the BIOS Power On Self Test diskette tests. Check to see that the drive is defined with the proper diskette type in the Utility Setup *(see page 55)*. If the disk drive is properly defined and installed, avoid using it and contact your support representative.

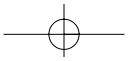
***Extended RAM Failed at offset: nnnn** Extended memory not working or not configured properly. If you have an installed memory upgrade module, verify that the module is properly installed. If it is properly installed, you may want to check your Windows Setup to be sure it is not using unavailable memory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

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

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

***Incorrect Drive A type – run SETUP** Type of floppy drive A: not correctly identified in Setup. This means that the floppy disk drive type identified in your Setup Utility does not agree with the type detected by the Power On Self Test. Run the Setup Utility to correct the inconsistency.



***Incorrect Drive B type – run SETUP** Type of floppy drive B: not correctly identified in Setup. This means that the floppy disk drive type identified in your Setup Utility does not agree with the type detected by the Power On Self Test. Run the Setup Utility to correct the inconsistency.

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

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

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

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

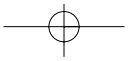
***Monitor type does not match CMOS – Run SETUP** Monitor type not correctly identified in Setup. This error probably means your BIOS is corrupted, run the Setup Utility and set all settings to the default conditions. If you still get this error, contact your support representative.

#***Operating system not found** Operating system cannot be located on either drive A: or drive C: Enter the Setup Utility and see if 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 is probably 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 an error message. 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 an error message. This is a potentially data destroying failure. Contact your support representative.

#***Press <F1> to resume, <F2> to SETUP** is 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. Power On Self Test loads default values and offers to run Setup. If the failure was caused by incorrect values and they are not corrected, the next boot will likely fail also. If using the default settings does not allow you to complete a successful boot sequence, you should turn off the power with the Power Switch and contact your support representative.

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

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

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

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

System BIOS shadowed System BIOS copied to shadow RAM.

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

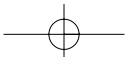
***System RAM Failed at offset: nnnn** System memory failed at offset nnnn of in the 64k block at which the error was detected. This means that there is a fault in your built-in memory. If you continue to operate you risk corrupting your data. Contact your support representative for repairs.

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

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

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

Video BIOS shadowed Video BIOS successfully copied to shadow RAM.



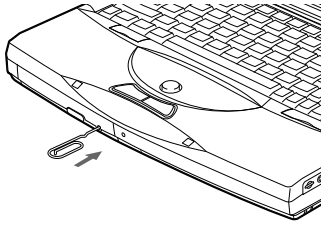


Figure 6-1 Emergency CD-ROM Tray Release

EMERGENCY CD-ROM TRAY RELEASE

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

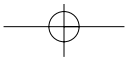
MODEM SETUP AND COMMANDS

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 56000
(Connection complete at 56,000 bps.)
ERROR
FAX
RING (This means an incoming call.)
BUSY
NO ANSWER

When using the internal modem with applications which are not factory installed see the application documentation.



RECOVERY CD-ROM

Included with your notebook (in the Accessories box) is an Emergency Recovery CD-ROM with the following content:

A backup copy of the software originally installed by Fujitsu on your new Fujitsu LifeBook (can only be used on the listed LifeBook models).

Sets of device drivers and utilities (in specific directories) that are unique to your notebook configuration for use as documented below.

Read-me files that provide additional use information for items on this CD-ROM.

If you have access to the internet, visit the Fujitsu PC Corporation Web Site at www.8fujitsu.com to check for the most current information and hints on how to perform recovery and system updates.

Restoring Your Pre-installed Software from CD-ROM

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

You have two options available when performing recovery:

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

POINT

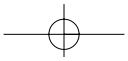
It is recommended that you back-up all data files prior to performing either of the recovery options.

POINT

Make certain you have your Operating System Product ID # available (from the Certificate of Authenticity) prior to performing recovery. Once the process is complete and you re-start your notebook, you will be required to perform all the setup steps as when the computer was first bought. *(See the section Starting Your LifeBook for the First Time).*

CAUTION

User data and user installed software CAN NOT be recovered from the Emergency Recovery CD.



To Run the Emergency Recovery Program
To use this portion of the CD-ROM, your notebook must BOOT (upon power up or full system reset/restart) from the CD-ROM drive. *(See Section Four, pages 85-86.)*

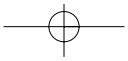
1. Insert the Emergency Recovery CD in the CD-ROM drive.
2. If your notebook is running when you insert the CD, exit your operating system and power down the notebook.
3. Start (power up) your notebook.
4. At this point, you must either change you BIOS setup configuration (F2 key) to have the computer boot from the CD-ROM "first" (if you have not previously done so), or use the Esc key during this boot-up sequence and select the CD-ROM from the menu which will appear. *(For more information and detailed instructions on changing the BIOS setup, refer to Section Four of this manual.)*
5. If correctly configured to boot from the Recovery CD-ROM, you will notice your system run a full virus scan of the hard drive and then reach the Emergency Recovery Welcome screen. If this is not what is displayed, check to see that the Recovery CD is installed in the CD-ROM drive and repeat the previous steps (starting with 2.).

   If you received a message, "This program may not be used on your computer", you are using the wrong Recovery CD for the model of notebook.
6. Read the information displayed on the Welcome screen, then Click OK.
7. Select one of the two icons displayed in the Emergency Recovery menu and follow the instructions that follow.
8. When recovery is complete, remove the Recovery CD, replace it in its sleeve and store it in a safe location (with your Operating System Manual/Certificate of Authenticity).
9. Restart your notebook.
10. Reset your boot device priority in the BIOS setup as desired.

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

POINT

As long as there is no bootable disk in the CD-ROM drive or the floppy disk drive, your notebook will boot from the hard drive regardless of the BIOS Boot Device Priority setting.



Device Drivers, Utilities and Read-me Files
The Emergency Recovery CD also includes a section for providing device driver files/directories and specific Lifebook model utilities that give you additional flexibility and functionality for using your Fujitsu notebook.

This section of the CD is only available if your notebook is already functioning from either your hard drive boot/operating system or as a result of using a bootable floppy disk that is configured to recognize the CD-ROM drive.

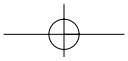
Please locate and read any of the Read-Me files that are included on the CD. These files will provide information that pertains specifically to the additional files and utilities that are provided on the Recovery CD for your particular Lifebook model.

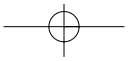
CAUTION

Do not boot your notebook from the CD-ROM drive as is done for restoring your pre-installed software.

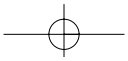
POINT

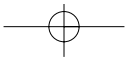
Look for and open files with the extensions .DOC and .TXT.





Care and Maintenance





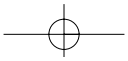
SECTION SEVEN

CARE AND MAINTENANCE

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

CARING FOR YOUR NOTEBOOK

- The LifeBook C Series is a durable but sensitive electronic device. Treat it with respect and care.
- Make a habit of transporting it in a suitable carrying case.
- Keep it away from food and beverages.
- If you accidentally spill liquid on your notebook:
  1. Turn it off.
  2. Position it so that the liquid can run out.
  3. Let it dry out for 24 hours, or longer if needed.
  4. If your notebook will not boot after it has dried out, call your support representative.
- Avoid exposure to water, sand, dust, and other environmental hazards.
- Do not expose your notebook to direct sunlight for long periods of time as temperatures above 140° F (60° C) may damage your notebook.
- Keep the covers closed on the connectors and slots when they are not in use.
- Do not put heavy or sharp objects on the computer.
- If you are carrying your notebook in a briefcase, or any other carrying case, make sure that there are no objects in the case pressing on the lid of your notebook.
- Do not drop your notebook.
- Clean your notebook with a damp, lint-free cloth. Do not use abrasives or solvents.
- Use a soft cloth to remove dust from the screen.



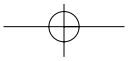
INCREASING BATTERY LIFE

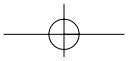
To increase battery life:

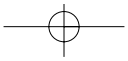
1. Power your notebook through the AC or optional auto/airline adapter whenever possible.
2. If your notebook is running on battery power all day, connect it to the AC adapter overnight to recharge the battery.
3. Keep brightness to the lowest level comfortable.
4. Set the power management for maximum battery life.
5. Put your notebook in Suspend mode when it is turned on and you are not actually using it.
6. Limit your CD-ROM and modem usage.
7. Disable the Windows 98 CD automatic insertion function. *(See page 24.)*
8. Always use fully charged batteries.

CARING FOR YOUR BATTERIES

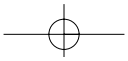
If your notebook is to be stored for a month or longer, turn the machine off and remove the internal Lithium ion battery. Store your notebook and batteries separately in a cool, dry location. If you store your notebook with a battery installed, the battery will discharge, and battery life will be reduced. In addition, a faulty battery might damage your notebook.

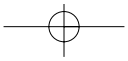






Specifications and Glossary





APPENDIX A SPECIFICATIONS

Appendix A provides the hardware and environmental specifications and the model and part numbers for your LifeBook C Series and its peripherals.

WARRANTY

Your notebook is backed by a one year International Limited Warranty and includes toll-free technical support; call 1-800-8FUJITSU (1-800-838-5487.) Check the service kit that came with your notebook for warranty terms and conditions.

LIFEBOOK C SERIES SPECIFICATIONS

Microprocessor

C340
Intel Pentium II 233MHz with MMX technology, L1 and L2 cache, PCI bus architecture, and CardBus architecture.

C350
Intel Pentium II 266MHz with MMX technology, L1 and L2 cache, PCI bus architecture, and CardBus architecture.

MEMORY

System Memory
32MB SDRAM.

L1 Cache Memory
32KB within CPU.

L2 Cache Memory
512KB Pipeline Burst SRAM.

Expansion Memory
16MB, 32MB and 64MB SDRAM Modules extend system memory up to 96MB; installable in a single DIMM (dual in-line memory module) slot in a compartment in the bottom of the notebook. SDRAM Modules are recommended but EDO RAM Modules will work.

Fujitsu product numbers:
16MB SDRAM, FPCEM05.
32MB SDRAM, FPCEM06.
64MB SDRAM, FPCEM07.

Installing an EDO RAM Module will cause your entire system to operate at slower EDO timing.
16MB EDO RAM, FPCEM02A.
32MB EDO RAM, FPCEM03.
64MB EDO RAM, Third Party Only.

BIOS Memory
512KB Flash ROM.
256 Bytes CMOS-RAM with back-up battery.

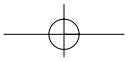
Video RAM
2MB RAM.

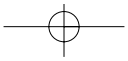
Floppy Disk Drive
One 3.5" floppy disk drive which accommodates a 1.44MB or a 720KB floppy disk.

Hard Drive
C340
One factory installed 3.2GB, 2.5", 9.5 mm height fixed hard drive unit.

C350
One factory installed 4.0GB, 2.5", 9.5 mm height fixed hard drive unit.

CD-ROM Drive
One 20-speed maximum, 5.25", 12.7 mm height fixed drive.





Audio

SoundBlaster Pro-compatible 16-bit stereo PCM/FM sound chip.
Stereo headphone jack, 1 Vrms, or less, minimum impedance 32 Ohms.
Stereo line in jack, 880 mVrms or less, minimum impedance 10K Ohms.
Mono microphone jack, 125 mVp-p or less, minimum impedance 10K Ohms.
Two built-in speakers, 28 mm diameter (Stereo).
One built-in monaural microphone.

Communication

Internal 56K fax/data/voice modem, with V. 90 support (56 Kbps data transmission; 14.4 Kbps fax transmission).

Video

MPEG-1 video data decompression software.
Zoomed Video support via PC Card Slot 1.

CAUTION

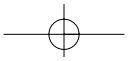
Your internal modem is designed to allow faster downloads from v.90 compliant digital sources. Maximum achievable download transmission rates may not reach 56kbps and will vary with line conditions.

Pre-Installed Software

Microsoft Windows 98.
LapLink by Traveling Software.
SoftPEG by CompCore Multimedia Inc.
McAfee VirusScan by Network Associates, Inc.
PMSet 98
PC Doctor
Quicken 98 Basic by Intuit.
Netscape Communicator by Netscape, Inc.
Microsoft Works by Microsoft.

Input/Output Connections

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



Displays

Built-in color flat-panel HPA dual-scan (DSTN) LCD display with simultaneous display capability.

C340

Diagonal dimension: 12.1"
800 x 600 pixel resolution, 64K colors.
640 x 480 pixel resolution, 64K colors.
SVGA and VGA compatible.

C350

Diagonal dimension: 13"
1024 x 768 pixel resolution, 64K colors.
800 x 600 pixel resolution, 64K colors.
XGA and SVGA compatible.

External Monitor Support.

XGA, SVGA, and VGA compatible CRT displays.

1024 x 768 pixel resolution, 64K colors. (C350)
800 x 600 pixel resolution, 16M colors.
640 x 480 pixel resolution, 16M colors.

Keyboards

Built-in keyboard with all functions of 101 key PS/2 compatible keyboards.

Total number of keys: 86.
Function keys: 12, **F1** through **F12**.
Feature extension key: **Fn**.
Windows keys: 3, two **Start** keys and one **Application** key.
Key pitch: 19 mm.
Key stroke: 3 mm.
Built-in ErgoTrac pointing device with left and right buttons.
Built-in palmrest.

External Keyboard Support

PS/2 compatible.

External Numeric Keypad Support

PS/2 compatible.

External Mouse Support

PS/2 compatible.

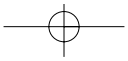
Power

Batteries

One Lithium ion battery, Fujitsu Model FPCBP19. Rechargeable, 10.8V, 2800mAh. Operating time of up to two andf a half (2.5) hours. Rapid charge (notebook off or in suspend mode) in about three (3) hours. Standard charge (normal use with limited CD and hard drive access) in about nine (9) hours.

CAUTION

Actual battery life will vary based on screen brightness, applications, features, power management settings, battery conditioning, and other customer preferences. CD-ROM or hard drive usage may also have a significant impact on battery life.



AC Adapter
Autosensing 100-240V AC, 43W, supplying 16V DC to the Notebook, Fujitsu Model FPCAC07 which includes an AC cable.

Optional Auto/Airline Adapter
Autosensing 12/24V DC, 43W supplying 16V DC to the Notebook, Fujitsu Model FPCCAA02.

Power Management
Save-to-Disk, Suspend, Idle and Standby power savings modes. When the battery is fully charged the computer can remain in Suspend mode for approximately 24 hours or more.

Dimensions and Weight

Overall Dimensions
Approximately 12.3" x 10.2" x 1.95".
(313.5 mm x 258 mm x 49.5 mm.)

Weight
Approximately 7.6 lbs (3.5 Kg) with floppy disk drive and battery (FDDB) installed.
C350 = 8.05 lbs (3.65kg)
C340 = 7.94 lbs (3.60kg)

Environmental Requirements

Temperature
Operating: 5° to 35° C (41° to 95° F).
Non-operating: –15° to 60° C (5° to 140° F).

Humidity
Operating: 20% to 85%, relative, non-condensing.
Non-operating; 8% to 85%, relative, non-condensing.

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

Electro-Static Discharge (ESD)
9 kV.

Theft Prevention Lock

Lock slot on the right side panel for use with physical restraining security systems.

APPROVALS

Emissions

FCC Part 15, FCC Part 68, FTZ.

Safety

UL, C-UL, CSA.

FCC Certification

See statement at the front of this User's Guide.

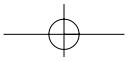
DOC (Industry Canada) Certification

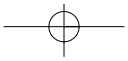
See statement at the front of this User's Guide.

POPULAR ACCESSORIES

Other accessories are available, contact your authorized Fujitsu reseller or check our Web site at www.fujitsu-pc.com or call 1-800-733-0884 for a catalog.

Optional second modular Lithium ion battery, Fujitsu Model FPCBP19.





APPENDIX B GLOSSARY

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

ACPI 1.0
Advanced Configuration and Power Interface specification version 1.0. Conforming systems contain BIOS support to allow next generation Windows operating systems to manage power consumption of system components.

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

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

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

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

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

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

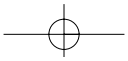
Bus
An electrical circuit which passes data between the CPU and the sub-assemblies inside your computer.

Byte
8 bits of parallel binary information.

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

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

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



CHS Translation
Cylinder, head and sector translation. Conversion of hard drive access addressing to the cylinder, head and sector form. The terminology is historical, left from the days when data was stored on a series of cylindrical drums. The head designates the reading device, similar to the head on a cassette recorder only mounted on a movable arm. Another addressing method is LBA.

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

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

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

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

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

Data
The information a system stores and processes.

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

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

DIMM
Dual In-line Memory Module.

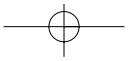
Disk
A spinning platter of magnetic data storage media. If the platter is very stiff it is a hard drive, if it is highly flexible it is a floppy disk, if it is a floppy disk in a hard housing with a shutter it is commonly called a diskette.

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

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

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

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



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

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

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

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

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

FCC
Federal Communication Commission.

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

GB
Gigabyte.

Gigabyte
1,073,741,824 bytes
(2 raised to the thirtieth power).

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

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

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

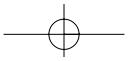
I/O Port
The connector and associated control circuits for data entering and leaving your computer in electronic form.

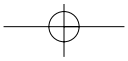
IDE
Intelligent Drive Electronics. A type of control interface for a hard drive which is inside the hard drive unit.

Impedance
The amount of resistance to the flow of electric current.

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

IR
An abbreviation for infrared.





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

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

KB
Kilobyte.

Kilobyte
1,024 bytes (2 raised to the tenth power).

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

LBA
Logical Block Addressing. A method of locating data stored on a disk.

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

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

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

MB
Megabyte.

Megabyte
1,048,576 bytes (2 raised to the twentieth power).

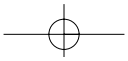
Megahertz
1,000,000 cycles per second.

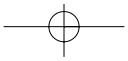
Memory
A repository for data and applications which is readily accessible to your computer CPU.

MHz
Megahertz.

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

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





MMX Technology
MMX technology is an Intel processor enhancement that improves multimedia and communication applications. The Pentium processor with MMX technology boasts three primary architectural design enhancements: 57 powerful new instructions specifically designed to manipulate and process video, audio and graphical data efficiently; Single Instruction Multiple Data (SIMD) enabling one instruction to perform the same function on multiple pieces of data; and more L1 cache for a total of 32KB.

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

MPU-401
A standard for MIDI interfaces and connectors.

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

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

PAL
Phase Alternation by Line. The standard for color television in Western Europe and most of Asia and Africa.

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

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

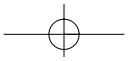
PCMCIA
A trademark of the Personal Computer Memory Card International Association. The Personal Computer Memory Card International Association is an organization that sets standards for add-in cards for personal computers.

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

PIO
Parallel Input/Output.

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

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



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

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

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

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

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

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

Restart
See Reset.

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

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

SCSI
Small Computer Systems Interface (pronounced scuzzy). An American National Standards Institute (ANSI) standard for connecting multiple (up to 7) high speed parallel devices to a computer.

SDRAM
Synchronous Dynamic Random Access Memory.

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

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

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

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

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

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

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

SVGA
Super VGA.

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

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

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

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

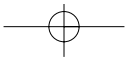
VGA
Video Graphics Array. A video display standard originally introduced by IBM with the PS/2 series of personal computers.

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

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

XGA
Extended VGA.

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



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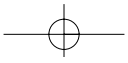

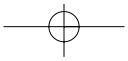

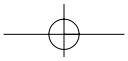

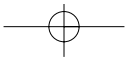

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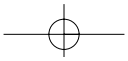

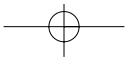

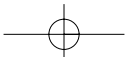

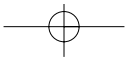

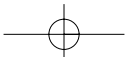

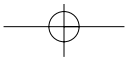

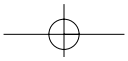

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