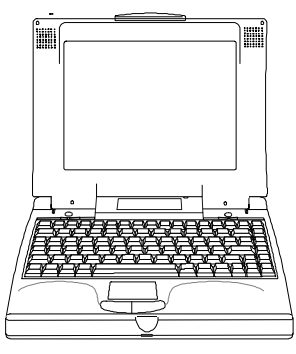
Extensa



Extensa Series Notebook User's Guide
TI Part No. 9803942-0001
Original Issue: July 1995
Revision C: January 1996

Changes may be made periodically to the information in this publication. Such changes will be incorporated in new editions of this manual.

Record the serial number, purchase date, and model number in the space provided below. The serial number and model number are recorded on the label affixed to the case. All correspondence concerning your unit should include the serial number, model number, and date of purchase.

Extensa Notebook Computer

Model_____Serial No._____Purchase Date_____

FCC Notice

This device has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device 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 device does cause harmful interference to radio or television reception, which can be determined by turning the device 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 device into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Notice: Shielded Cables

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations.

Notice: Peripheral Devices

Only peripherals (input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this equipment. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

FCC Notice

Use Conditions

This part complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Notice: Canadian Users

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

Remarque à l'intention des utilisateurs canadiens

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

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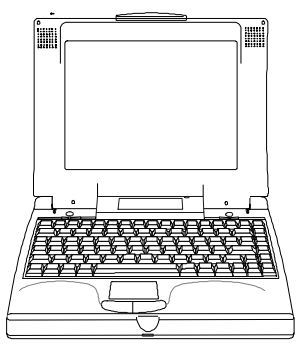
Preface

This manual describes features of the Texas Instruments Extensa notebook computers. The Extensa series computers are similar in appearance and incorporate such features as PCMCIA, internal pointing device, infrared interface, and 16-bit sound (CD and CDT models only).

The following figure displays the Extensa.



This manual should answer most of the questions you have about the operation of your Extensa notebook.

Use the Quick Start instructions that came with your computer to get your computer running for the first time.

We hope you enjoy your Extensa computer. With proper care, your computer will provide you with years of productive service.

1
Before You Begin

After completing procedures in the Quick Start instructions, read this chapter to learn about important functions of your computer.

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Features

The notebook includes a variety of innovative features designed to meet the most demanding computing requirements:

- An Intel Pentium CPU series
  - SPGA package
  - CPU speed 75/100 MHz
- 8MB on board memory up to 40MB DRAM
- 1MB of video memory on the PCI bus
- Two type II or one type III PCMCIA slot
- One NiMH battery pack
- One 9-pin female serial port
- One 15-pin male parallel port
- A large integrated Glidepad
- Integrated audio system (CD and CDT models only). Fully compatible with the Sound Blaster and Windows Sound System. Comes with audio input and output ports, a built-in microphone, and stereo speakers.

Features

- An optional removable CD-ROM drive (CD and CDT models only), supporting CD-ROM/XA, Video CD, Audio CD which could be replaced by diskette disk drive (FDD).

- Advanced power management capabilities which conserve 98-99% of battery power by automatically shutting down inactive peripheral devices and system components.

Environment

This section provides information on the optimum operating environment for your notebook computer:

Temperature	
Operating:	41°F to 104°F (5°C to 40°C)
Nonoperating:	-4°F to 140°F (-20°C to 60°C)
Relative Humidity (Noncondensing)	
Operating:	20% to 80%
Storage:	20% to 90%
Shock	
Operating:	Maximum 10 pulse in X, Y, Z orientations
Non-operating:	Maximum 50 pulse in X, Y, Z orientations
Vibration:	
Operating:	0.58G, 5-500 Hz
Non-operating:	2G, 5-500 Hz

Usage

- Never pick up or carry your unit by the LCD.
- Never use the computer in harsh environments where it could be subjected to rapid temperature changes or excessive dust.
- Never expose the computer to excessive vibration.
- Never expose the hard disk, diskettes, and CD-ROM to strong magnetic fields, such as those generated by audio system speakers or telephone handsets.
- Avoid leaving your computer in storage for more than two weeks without a charged battery if the computer is not connected to the AC Adapter. The battery that maintains the configuration, time, and date will discharge.
- To avoid overheating the computer, never place anything on top of it when it is recharging or operating.
- Before moving an active computer, press the Suspendbutton to put it into sleep mode and close the display (see Standby and Suspend in the next section).
- Do not try to force the cover beyond its fully opened position - about 180 degrees.

Usage

Caution: In the rare event that you should see or smell anything that indicates overheating (smoke or a strange smell)

1. Turn the power off.
2. Disconnect the AC Adapter from the power source.
3. Remove battery pack.
4. Call 1-800-TI-TEXAS (USA or Canada) or the dealer in your local country.

Using the AC Adapter

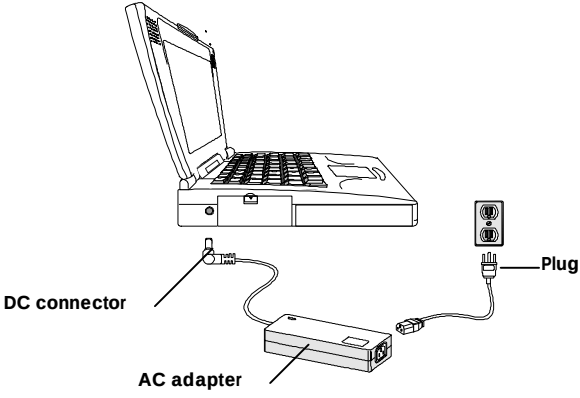
The AC Adapter charges the internal battery pack(s) and operates the computer on AC power whether or not a battery pack is installed. The AC adapter can be operated between 100-240 volts AC and has a detachable AC power cord.

Caution: Use only the AC adapter supplied with your computer. Another adapter may damage your computer.

To connect the AC adapter, complete the following steps:

1. Set the power switch to the off position.
2. Connect the female connector of the AC cord to the inlet on the AC Adapter.
3. Plug the DC connector into the matching jack on the left rear panel of the computer.
4. Plug the male end of the AC cord into a wall receptacle using the correct voltage.
5. Turn the computer on.

Using the AC Adapter



Introduction to the PCI Bus

The Peripheral Component Interconnect (PCI) bus provides a solution to I/O bottlenecks on Pentium processors. While this technology is available on many desktops, Texas Instruments is one of the first to offer PCI architecture at the notebook level. The following are some of the other features of your PCI bus:

- Bus speeds up to 25MHz and high transfer rates. This allows for faster running applications.
- Video runs off the internal PCI bus allowing for superior graphics performance.
- High end processing speeds offer growth protection for your system.
- Your system processor operates quickly and independently of the PCI bus.

2
Using Your Computer

Before beginning this chapter, ensure you have read and understood Chapter 1. Chapter 2 describes how to start and use your Extensa computer.

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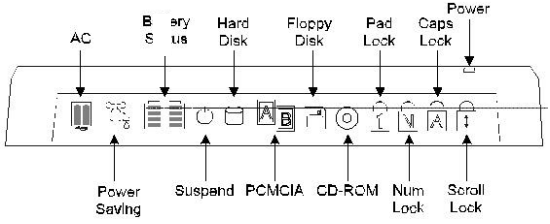
LCD Status Panel



Power LED — Powered on when lit.

AC Adapter. Lights when the notebook is connected to and drawing power from the AC adapter, and the AC adapter is recharging the battery (if necessary). The battery shaped symbol disappears after the battery is fully charged.

Power saving mode. Lights when the notebook's power saving mode features are enabled. Refer to the section on power management in Chapter 4 for details on enabling the notebook's power saving mode.

Battery. Lights when the battery is in use. When the battery is running critically low, the icon blinks and the notebook emits an intermittent audible beep.

LCD Status Panel

Suspend mode. Blinks when the system is in Suspend mode.

Hard disk drive. Lights when the computer reads from or writes to the hard disk.

PCMCIA slots. Lights when using the PCMCIA card.

Diskette disk drive. Lights when the CPU writes to or reads from the diskette disk drive. Never remove a diskette from the drive while the Diskette Disk icon is lit. You could destroy data and damage the drive.

CD-ROM drive. Lights when there is activity on the DC-ROM drive.

Num Lock. Lights when the Num Lock function or embedded numeric keypad is engaged.

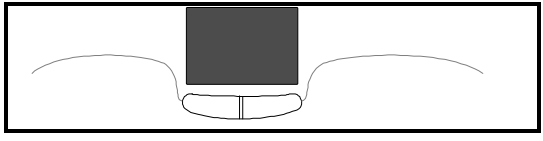
Caps Lock. Lights when the Caps Lock function is engaged.

Scroll Lock. Lights when the Scroll Lock function is engaged.

Pad Lock. Lights when the keyboard Pad Lock function is enabled and the keyboard's embedded editing keys are engaged.

Using the Glidepad

The embedded Glidepad device offers a unique and efficient way of pointing and selecting in a Windows environment. The following figure displays the embedded pointing device.



The Glidepad is touch-sensitive. To move your cursor, place your finger on the pad and push in the direction you want your cursor to go. You can select the sensitivity of the pad by changing its value from the mouse setup program.

Once your cursor is in the proper place and you want to select, use the left button to click or double click just as you would a mouse.

Note: You may also connect an external PS/2 serial mouse to your computer. See using Connectors and Ports later in this chapter.

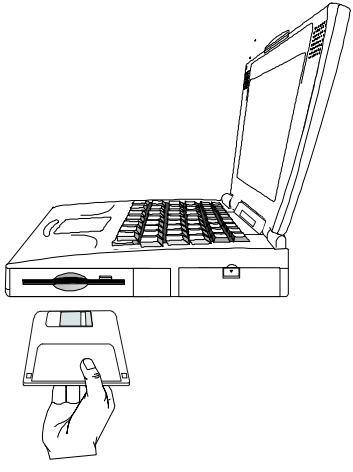
Using the Hard Drive

The notebook comes with a replaceable 2.5 inch hard drive. The hard disk is formatted and loaded with software at the factory. **Do** not format the hard disk. If you format the hard disk, all data on it will be erased.

To avoid damaging your drive, and to protect your valuable data, you should take the following precautions:

- ❑ Never turn off or reset the notebook while the hard disk drive (HDD) status icon is lit.
- ❑ Make regular backups of your hard drive and keep a backup copy on hand.
- ❑ Keep the AC adapter at least 6 inches away from your hard drive(s).

Using Diskettes



Failure to observe the following precautions can damage both the diskette drive and the data on the diskette:

- Insert the diskette into the diskette drive slot with the label side up and the metal-shutter end first. Gently push the diskette into the diskette drive slot until the diskette clicks into place.

- To remove a diskette, press the eject button until the diskette pops out.

Using Diskettes

- ❑ Never remove a diskette while the diskette disk (FDD) icon is lit
- ❑ Never force open the access shutter on a diskette.
- ❑ Always remove a diskette from the diskette drive before turning off the computer.
- ❑ Never transport the computer with a diskette in the diskette drive. Doing so can damage the drive head.
- ❑ If a diskette appears to be damaged, try to make a copy of it, and immediately discard it.
- ❑ Keep all diskettes (when not in use) in a disk storage box to protect them from damage or loss.

Using the Optional CD-ROM Drive

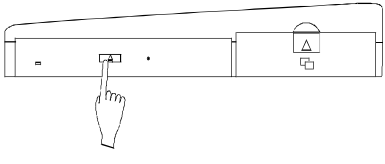
The CD and CDT models of the notebook come with a removable CD-ROM drive.

Uncovering the CD-ROM Drive

A small door covers the extra space when the Diskette Drive option is installed. After sliding the door into the compartment, you can install the CD-ROM drive.

Inserting a CD

1. Press the eject button near the CD-ROM drive to eject the disk tray.
2. Remove the disk tray.
3. Place the CD disk on the tray labeled side up.
4. Press the eject button again to return the tray to the drive.

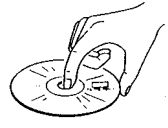


Using the Optional CD-ROM Drive

Handing CDs

Follow these guidelines to avoid damaging your CDs.

- ❑ When removing a disk from its protective case or loading a disk to a drive, hold it by its central hole and outer edge. Never touch the disk data surface (non labeled side.)



- ❑ To protect the disk against scratches and dirt when not in use, keep it in its protective case.
- ❑ When cleaning a CD, always wipe from center to edge. Don't wipe the CD in a clockwise or counterclockwise direction.
- ❑ Keep the disks away from high temperature and high pressure.

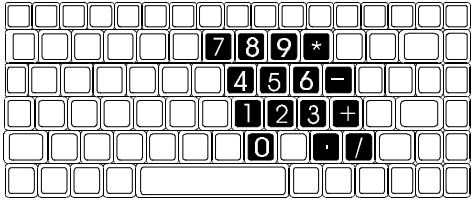
Using the Keyboard

The notebook has special system function keys. When pressed in conjunction with the Fn key, these keys are sometimes referred to as "hot keys".

Fn+Esc	Suspend Hot key. Suspend puts the computer in a deep sleep mode. To wake up the computer, press any key or move the mouse.
Fn + F10	Toggles between LCD, CRT, or the LCD/CRT simultaneous display.
Fn + F11	Panel backlight off
Fn + Pad	Pad lock enable
Fn + ↑	Increase contrast
Fn + ↓	Decrease contrast
Fn + →	Increase brightness
Fn + ←	Decrease brightness

The keyboard is also equipped with four cursor direction (or arrow) keys which control the movement of the cursor.

Using the Internal Numeric Keypad



Embedded Numeric Keypad

The notebook is equipped with an embedded numeric keypad. This keypad offers an optional method for entering a series of numbers and arithmetic operators similar to an ordinary adding machine. The embedded numeric keys are color-coded in blue on your keyboard, and can be engaged by pressing and engaging the NUM LOCKkey.

When the embedded numeric keypad is operational, the Num Lock status icon is on. To return to normal keyboard operation, press the NUM LOCKkey again.

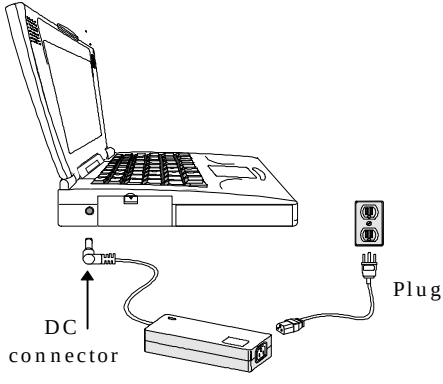
Power Source

The notebook is designed to operate with one of the following power sources:

- With AC power using the AC adapter connected to a wall outlet
- With a NiMH battery pack

You should use the AC adapter and AC power whenever possible, relying on the battery pack only when AC power is unavailable.

Using the AC Adapter



AC adapter

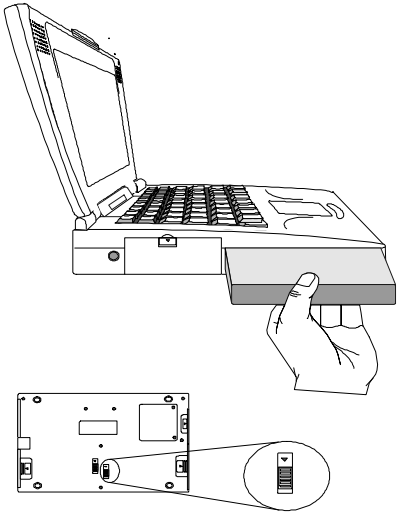
To operate your notebook from a wall outlet using the AC adapter, follow the steps below.

1. Ensure the notebook is powered off.
2. Connect the AC power cord to the AC adapter, and then connect the AC adapter cord to the DC in connector at the rear of the computer.

Note: Use only the AC adapter that came with your notebook. Adapters for other electronic devices (including other notebook computers) may look similar, but can damage your notebook.

Using the Battery

Description of the Battery



The rechargeable NiMH battery pack allows you to operate the notebook without an external power source. When fully charged, a single battery pack can supply power to your notebook for over two hours. You will be alerted to a low battery power level by a blinking battery status icon and intermittent audible beep sounds. Take action immediately to avoid loss of data.

Removing the Battery Pack

To remove or replace the battery pack, follow the steps below.

Note: Save all data to disk before completing these procedures.

1. Power off the notebook.
2. Release the battery locking latch below the battery pack on the bottom of the notebook, and carefully slide the battery pack out from its bay.
3. Insert a new or recharged battery pack into the battery compartment bay. Make sure that the contacts are facing up and to the rear of the compartment. Check the label (facing up when inserted) indicating the positive and negative poles of the battery.

When the battery pack is securely in place, the battery locking latch locks into place.

Charging Battery Pack

The following procedure is acceptable under most circumstances.

1. Install the battery pack in your computer (if not already installed).
2. Connect the AC Adapter.

The battery icon lights while the battery is charging. When the battery is 100% charged, the battery icon is extinguished.

If the system is on, it takes approximately 3 hours to charge a fully-depleted battery. If the system is off, it takes 1.5 to 2 hours to recharge a fully-depleted battery.

Conditioning the Battery

The Nickel-Metal-Hydride (NiMH) battery in your computer requires an occasional deep discharge and full recharge to maintain full battery charge. Perform the following procedure initially and every 2-3 months thereafter to keep your battery in condition.

1. Disable Power Management in Windows 95.
2. Exit Windows 95, and when prompted, select DOS boot.
3. After the DOS C:\ prompt appears, unplug the AC adapter and run the computer on battery power until the computer shuts down.
4. Connect the AC adapter, and charge the battery until at least 90 minutes after the power indicator turns green.

Your battery should now be at its maximum charge.

3
Connecting Peripherals

This chapter describes how you attach optional devices to your notebook.

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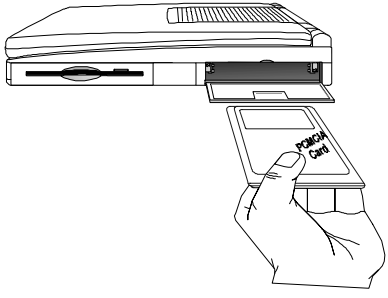
Using PCMCIA Cards

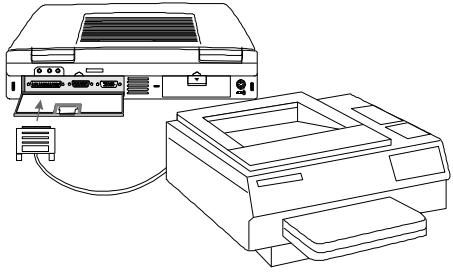


Insert PCMCIA cards on the right side of the computer by opening the PCMCIA compartment cover.

- To insert a PCMCIA card, align the card with the appropriate socket and slide the card into the socket until the card locks into place. Both slots can accept either a Type I or II device.

- To eject a PCMCIA card, first ensure that the notebook is not accessing the memory card or device, and then press the corresponding eject button for the socket.

Connecting a Printer

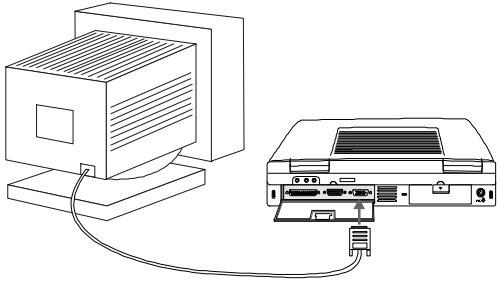


To connect a printer to the notebook, complete the following steps:

1. Be sure both the notebook and the printer are turned off.
2. Open the I/O port cover at the rear of the notebook with your finger and locate the parallel and serial ports labeled.
3. If you are using a parallel interface, connect the 25-pin male connector of your printer cable to the 25-pin female parallel port on your notebook.

Refer to the manual that accompanied your printer for instructions on configuring your system for use with the printer.

Connecting an External Monitor



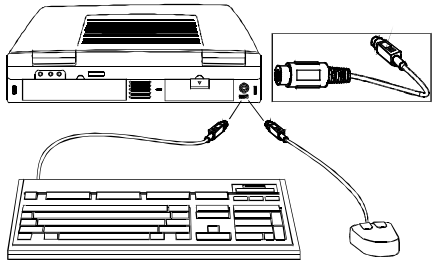
To use an external monitor with your system, follow these steps.

1. Be sure that both the notebook and the external monitor are turned off.
2. Open the I/O port cover at the rear of the notebook and locate the 15-pin female VGA port.
3. Attach the appropriate end of the monitor cable to the VGA port on your notebook. If the monitor cable connectors have retaining screws, tighten them.
4. If necessary, connect the monitor power cable to the monitor, and plug the monitor power cable into an electrical outlet.
5. Turn the monitor on.

6. Turn on any other peripheral device connected to the notebook.

7. Turn on the notebook.

Connecting a Keyboard or Mouse



If you want to use a full size desktop keyboard or external PS/2 mouse with your notebook, complete the following steps;

1. Be sure that the notebook is turned off.
2. Locate the external PS/2 port at the rear of the notebook.
3. Attach the PS/2 cable from your mouse or keyboard cable to the PS/2 port.
4. Turn on any other peripheral devices you may have connected to the notebook, and then turn on the notebook.
5. When the external PS/2 mouse is connected to the notebook, the built-in Glidepad will be automatically disabled after bootup.

Connecting a Serial Device

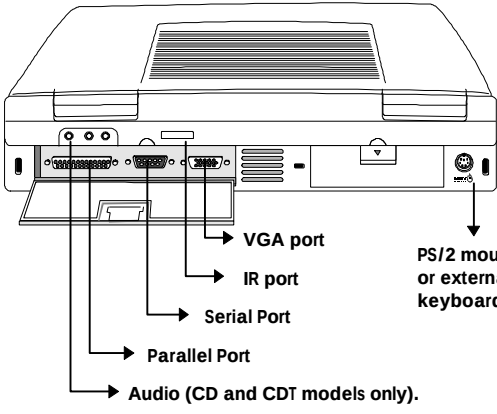
To attach a serial device (such as a pointing device) to the notebook, complete the following steps:

1. Be sure the notebook and any other peripheral devices connected to the notebook are turned off.
2. Open the I/O port cover at the rear of the notebook and locate the 9-pin male serial port.
3. Attach the interface cable from your serial device to the notebook's serial port.
4. Turn on any other peripheral devices you may have connected to the notebook, and then turn on the notebook.

Refer to the manual that accompanied your serial device for instructions on configuring your operating environment to recognize the device

Connectors on the Rear Panel

This section provides a description of connectors and ports on the rear panel of the computer.



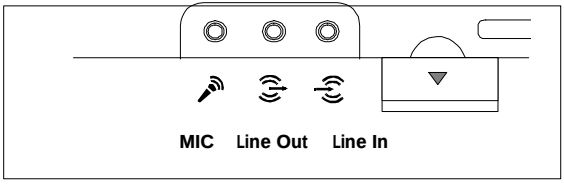
SIR port	The Serial Infrared port allows you to connect serial devices (such as another IRDA-compliant computer) without the use of a cord or cable.
Parallel port	Connects to a parallel printer or other device that uses a standard parallel interface. EPP/ECP compatible.
Serial port	Connects to external devices such as a serial printer, serial mouse, etc.

Connectors on the Rear Panel

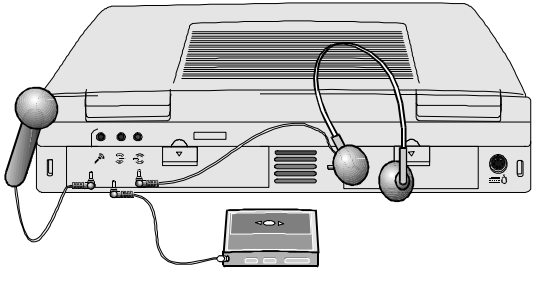
VGA	Connects to an external analog VGA monitor
PS/2	Connects to an external PS/2 keyboard
DC-In	Connect the AC Adapter output connector to this jack to recharge the battery and supply AC power to the computer.

Audio Connections

The CD and CDT models of the notebook come with 16-bit sound and audio connections.



Line in	Connects to miscellaneous sound input devices such as a radio or CD player.
Line out	Connects to miscellaneous sound input devices such as headphones or speakers.
MIC	Allows you to connect an external microphone for use in place of the notebook built-in microphone.



Using the SIR Port

The Serial Infrared (SIR) port offers wireless communication with a variety of IRDA-compliant devices made by other manufacturers. Ensure that the third-party manufacturer supplies you with the appropriate SIR drivers before attempting connection.

To use the SIR port, align the SIR ports of the 2 devices making sure that the distance separating them is between 6 inches and 3 feet (15 centimeters and 1 meter).

4
Customizing Your Notebook

This chapter describes the software supplied with the computer and how to configure application software to run on it.

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Running the Setup Program

Your notebook should have been properly setup and configured by your dealer prior to delivery. However, you may find it necessary to use the notebook's BIOS (Basic Input-Output System) Setup program to change system configuration information. The Setup program is accessed by pressing the F2 key.

The Setup program is organized into five menus. This allows easy access to a variety of configurable options.

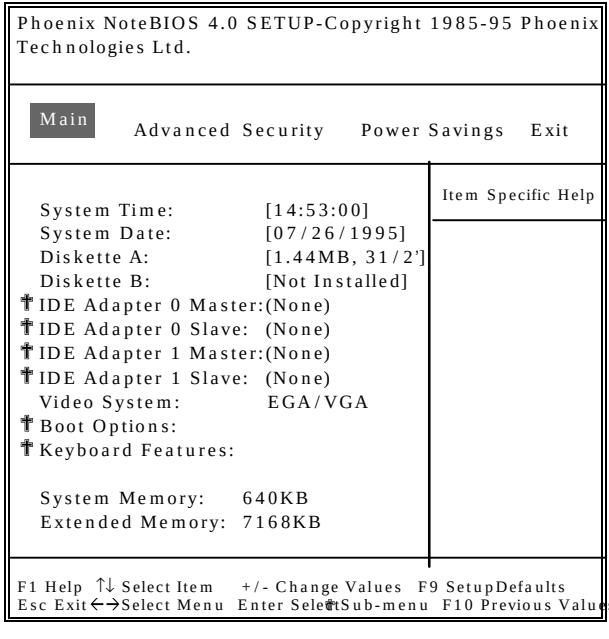
Function Keys in the Setup Program

The setup program has the following functions keys.

Action	Keys to press
Moving between different items	↑ or ↓
Changing the value of a field	− or +
Selecting a different menu	→ or ←
Loading default values	F9
Loading the previous setup values	F10

Main Setup Menu

The Main Setup menu of the Setup program allows you to change the following information.



Running the Setup Program

The following table describes the functions on the main setup menu

System Time	Uses the format hours:minutes:seconds.
System Date	Uses the format month/day/year.
Diskette A	The notebook is equipped with a 3.5", 1.44 MB disk drive.
IDE Adapter 0 Master (Slave)	Attempts to automatically detect the drive type for drives that comply with ANSI specifications.
Video System	This option selects video type.
Boot Options	This option selects system boot options.
Keyboard Features	This option selects keyboard options.
System Memory	Amount of base memory found during self-test; should always be 640 KB
Extended Memory	Amount of extended memory (above 1MB) found during self-test should be at least 7168 KB.

Defining Power Management in the Setup Program

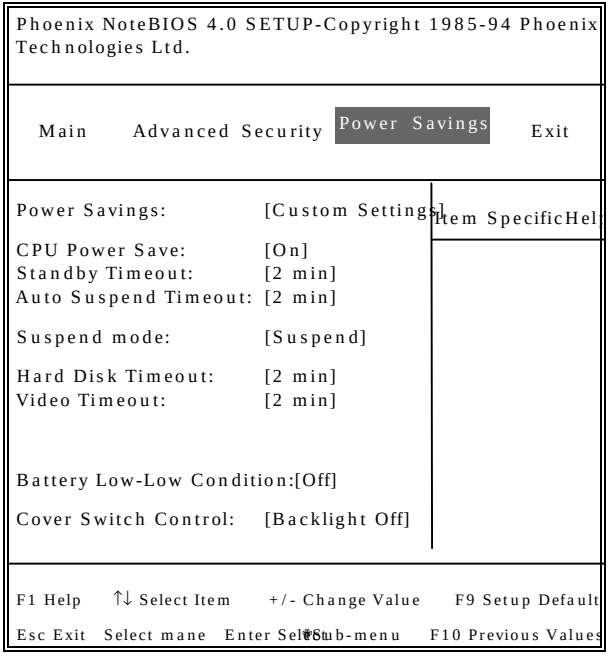
You can use the setup program to control current to peripheral devices and put them in suspend or sleep mode when not in use. By monitoring selected devices and shutting off the flow of current to idle devices, the computer can extend battery life.

To enter the BIOS Setup program to set power management parameters, follow these steps.

1. Press the F2 key when prompted on the screen after you have turned on or reset the computer.
2. Press→ to display the power management menu.

   The following screen appears.

Power Management



The following table describes your choices on this screen.

Power Management

Item	Option	Effect
Power Savings	Longest Battery Life	Maximum conservation of system power
	Highest Performance	Best system performance; conserves power when possible
	Custom settings	Permits modified settings
	Power Management Off	Power management disabled
Suspend Mode	Suspend	System saves its state and remains in a low power mode
	Save-to-Disk	System saves its state to disk and turns off
Battery Low-Low Condition	On	System saves to disk and shuts off if battery low
	Off	System takes no special action when battery low
Cover Switch Control	Backlight Off	Turns off backlight when cover closed; all other operations continue as usual
	Suspend	Enters suspend mode when cover closed

Suspending Operations

Suspend Modes

The following table describes the types of suspend modes.

Suspend Type	Effect
Suspend	Memory receives current while computer in suspend mode. Advantage: Enables immediate resumption upon exiting suspend mode Disadvantage: Drains battery slightly faster than suspend-to-disk mode.
Save-to-disk	Information in memory is saved to a special partition on the hard drive and the system turns off. Advantage: Provides maximum power savings Disadvantage: Takes longer to start back up after exiting suspend mode

Activating Suspend Mode

Suspend mode is activated in the following ways:

- Pressing the Suspend function key: Fn + Esc
- After a certain period of notebook inactivity
- Lowering the display panel and locking it into place

Resuming from Suspend Mode

Any one of the following options will resume operation from Suspend mode:

- If Suspend-to-Memory is active, operation is automatically resumed by opening the display panel or pressing a key.
- If Suspend-to-Disk is active, operation is triggered by turning the notebook on.
- When an event resumes operation to your notebook, the system returns to where it was when the Suspend mode was entered.

5
Traveling with Your Computer

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Tips for the Traveler

Your Extensa Computer is a precision instrument containing many sensitive components. It should be handled with care. Here are some suggestions for traveling:

- ❑ Never expose the computer to excessive vibration.
- ❑ Do *not* check the computer as baggage: take the computer as carry-on luggage if traveling by air.
- ❑ Do not put the computer through a security X-ray machine or a metal detector; have the computer inspected by hand. Be sure the computer is loaded with a charged battery in case airport security requires you to turn on the computer.
- ❑ If you are traveling internationally, carry a proof of purchase with you in case you need to show it to customs officials.
- ❑ Avoid placing the computer where it can be stepped on or knocked around.
- ❑ Disconnect all peripherals before packing the computer.
- ❑ Transport the computer with the display closed and the power off.

- ❑ Changes in temperature and humidity can cause condensation. Allow the computer to return to room temperature, and inspect the LCD for condensation before turning on the computer. If the temperature change is greater than 18°F (10°C), allow the computer to come to room temperature slowly. If possible, leave the computer for 30 minutes in an environment with a temperature between outside and room temperatures.

- ❑ Always carry the computer in a protective case.

Cautions:

When packing the computer, do not pack items next to its top cover. Too much pressure against the top cover can damage the LCD.

Do not travel with a diskette in the diskette drive. This can damage the drive head.

What To Take When Traveling

If you plan to use your computer when traveling, you should consider taking the following items:

- ❑ This manual
- ❑ AC adapter
- ❑ Power cords and adapters for the AC adapter and peripherals appropriate for the countries to which you will be traveling
- ❑ Fully-charged spare battery pack(s)
- ❑ Optional battery charger and accompanying AC adapters and power cords
- ❑ Additional printer driver files if you plan to use another printer
- ❑ Quick Reference Cards for the programs you will be using

Packing the Computer and Accessories

1. Turn off the computer. Disconnect the AC adapter from the computer and from the AC outlet.
2. Close and latch the display.
3. Tie up cables using twist ties or rubber bands.
4. Enclose peripherals in plastic bags.
5. Place computer, peripherals, documentation, and diskettes in a carrying case. If you do not have a carrying case, put the computer in a briefcase you plan to carry and the other supplies in luggage you plan to check.

6
Care and Troubleshooting

This chapter tells you how to clean your computer safely and solve operational problems.

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Cleaning the Computer

Regularly take the time to check your computer and clean the screen, keyboard, and case to ensure trouble-free computing.

Caution: Never use alcohol, benzene, thinner, or strong chemical agents that could damage the computer's case, and never apply liquid directly to the computer, only to a clean cloth. Never spray cleaning fluid or any liquid directly onto the case or screen.

Keep the case of the computer free of dust. Apply a small amount of mild liquid cleaner to a dry, lint-free cloth, and wipe the case with the cloth.

The surface of the screen is covered with a protective plastic film that may become smeared and accumulate dust during use. Avoid touching the screen with your fingers.

Clean the screen regularly by applying a small amount of diluted neutral detergent to a dry, lint-free cloth. Gently rub the surface of the screen with the cloth.

Troubleshooting Tips

Computer does not come on when power switch is pressed	❑ Low battery; use AC adapter and recharge battery. ❑ Ensure AC adapter cable and power cord are securely connected. Verify that the AC adapter LED is on. ❑ Connect AC adapter to another outlet.
Computer power is on but screen is blank	❑ Adjust contrast switch. ❑ The LCD standby timer in Setup is enabled and has expired. Press any key or move the mouse. ❑ Computer set for external monitor; cycle power or change the LCD display control parameter in Setup.
Special functions (Setup, Ctrl-Alt-Esc, etc.) do not work	❑ Applicaiton is overriding computer BIOS interrupts; notify your application provider. ❑ Computer model does not support special function.
Computer indicates an error at start-up	Turn the computer off; wait several seconds; then turn the computer on again. If error persists, check list of error messages for corrective action. Press Ctrl-Alt-Esc to ensure all settings are correct.

Startup Error Messages

If your system displays following messages, write down the messages and contact your dealer. If your system fails after you made changes in the Setup menus, you may be able to correct the problem by entering Setup and restoring the original values.

The following is an explanation of each of the messages listed above.

Diskette drive A error or Diskette drive B error

Drive A: or B: is present but fails the BIOS POST diskette tests. Check to see that the drive is defined with the proper diskette type in Setup and that the diskette drive is attached correctly.

Extended RAM Failed at offset: nnnn

Extended memory not working or not configured properly at offset nnnn.

Failing Bits: nnnn

The hex number nnnn is a map of the bits at the RAM address (in System, Extended, or Shadow memory) which failed the memory test. Each 1 (one) in the map indicates a failed bit.

Fixed Disk 0 Failure or Fixed Disk 1 Failure or Fixed Disk Controller Failure

Fixed disk is not working or not configured properly. Check to see if fixed disk is attached properly. Run Setup be sure the fixed-disk type is correctly identified.

Startup Error Messages

Incorrect Drive A type - run SETUP

Type of floppy drive A: not correctly identified in Setup.

Incorrect Drive B type - run SETUP

Type of floppy drive B: not correctly identified in Setup.

Keyboard error

Keyboard not working.

Keyboard error nn

BIOS discovered a stuck key and displays the scan code nn for the stuck key.

Monitor type does match CMOS - Run SETUP

Monitor type not correctly identified in Setup.

Operating system not found

Operating system cannot be located on either drive A: or drive C:. Enter Setup and see if fixed disk and drive A: are properly identified.

Press <F1> to resume, <F2> to Setup

Displayed after any recoverable error message. Press <F1> to start the boot process or <F2> to enter Setup and change any settings.

Press <F2> to enter SETUP

Optional message displayed during POST. Can be turned off in Setup.

Startup Error Messages

Previous boot incomplete - Default Configuration used

Previous POST did not complete successfully. POST loads default was caused by incorrect values and they are not correct, the next boot will likely fail. On systems with control of wait states, improper Setup settings can also terminate POST and cause this error on the next boot. Run Setup and verify that the wit-state configuration is correct. This error is cleared the next time the system is booted.

System cache error - Cache disabled

RAM cache failed the BIOS test. BIOS disabled the cache.

System CMOS checksum bad - run SETUP

System CMOS has been corrupted or modified incorrectly, perhaps by an application program that changes data stored in getting the Default Values and/or making your own selections.

Startup Error Messages

If you have following error messages, please contact your dealer or an authorized service center.

Invalid NVRAM media type

Problem with NVRAM (CMOS) access.

Keyboard controller error

The keyboard controller failed test. You may have to replace keyboard or controller.

Real time clock error

Real-time clock fails BIOS test. may require board repair.

Shadow Ram Failed at offset: nnnn

Shadow RAM failed at offset nnnn of the 64K block at which the error was detected.

System battery is dead - Replace and run SETUP

The CMOS clock battery indicator shows the battery is dead. Replace the battery and run Setup to reconfigure the system.

System RAM Failed at offset: nnnn

System RAM failed at offset nnnn of in the 64K block at which the error was detected.

System timer error

The timer test failed. Requires repair of system board.

Where To Get Help

Texas Instruments and your Texas Instruments authorized reseller want you to succeed with your TI product. If you are in the United States or Canada and have questions about or operating difficulties with your TI product, follow these steps to get support. If you are outside the United States or Canada, contact one of the numbers listed in the back of this appendix.

1. Call your dealer.

Your dealer should be the first person you call when you have questions or difficulties. Your dealer is familiar with your system requirements and should be able to provide you with the needed informaiton or service.

2. Call the appropriate TI number.

Customer Satisfaction Line 1-800-TI-TEXAS (Option 3,1)
FAX: 817-774-6660
TDD: 817-774-6582

Call the TI Customer Satisfaction Line (CSL) with service, warranty, service contracts, or product support questions. Hours of operation are 24-hours a day, 7 days a week.

- ❑ Have the following information available when calling or faxing:
- ❑ Name, address, daytime phone number
- ❑ Product model
- ❑ Serial number
- ❑ Brief description of the symptoms being observed (include the software applicaton you are using)

Where To Get Help

Call TI Express to order options

In the U.S. and Canada **1-800-TI-TEXAS (Option 2,1)**
FAX: 1-800-443-2984

For all other locations, dial direct: 1-817-774-6969
FAX: 1-817-774-6869

TI Express hours of operation are 8:00 am to 6:00 pm Central Standard Time, Monday through Friday.

For information about other TI products, call the Customer Response Line

In the U.S. and Canada **1-800-336-5236**

For all other locations **1-214-995-6611**

If you have a question about any other TI product, the Customer Response Center can put you in touch with the right person.

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Glossary

AC Adapter — The device that converts AC voltage from a standard wall socket into the proper DC voltage required to power your notebook. The AC adapter provides enough power to recharge the NiMH battery pack while you operate the notebook on AC voltage.

BIOS— An abbreviation for Basic Input/Output System, which refers to programs that are permanently stored in the system's CMOS RAM. Examples for your notebook include the POST diagnostic and the Setup programs.

Bit— A binary digit, representing the smallest unit of data used by a computer.

Boot— To load a program or an operating system into system memory.

Bus— An electrical circuit within the system, used to transmit data from one device to another.

Byte— A group of eight contiguous bits.

Cache memory — Static column RAM where code and data are stored for fast retrieval by the CPU. Processors in the 80486 family used in the notebook feature a small, integrated high speed cache, which significantly reduces memory accesses by the CPU to the system's slower main DRAM.

Clock— An electrical timer, used to synchronize system operations.

Glossary

CMOS RAM— A special type of low-power memory that records and stores information about your notebook's configuration. CMOS RAM is not erased when you power off the notebook.

Command — An instruction you issue to your operating system, e.g., to execute a software application.

Configuration — The specific combination of hardware components of the notebook, and their operating status. The configuration of your notebook includes a specified amount of memory, type and speed of microprocessor, type of hard drive, etc.

Data— The information the system stores and processes.

Default value — The preprogrammed value the system uses if a different value is not specified.

Disk — A general term referring to either a diskette or hard drive.

Diskette — A flat magnetic-coated material used to store programs and data.

Disk drive — The physical device that allows the system to read from, and write to, a disk. A diskette drive allows you to insert and remove diskettes, while a hard disk is permanently sealed inside a disk drive.

DOS— An abbreviation for Disk Operating System.

Driver— Software that allows an application program to communicate with a particular piece of equipment.

Glossary

Enhanced VGA — A video interface which offers higher resolution and/or deeper color depths than standard VGA.

Expanded memory — Special additional memory designed to extend the 640KB limit imposed by DOS, and recognized by many, but not all, DOS application programs.

Extended memory — Memory beyond the first 1MB of memory recognized by DOS.

Floppy Disk - (see Diskette)

Format — The process of preparing a diskette or hard drive for use by an operating system.

Function key — The set of twelve keys on the keyboard, labeled F1 through F12. The purpose of these keys varies from one application program to another.

Hard Disk — A sealed mass storage device used for storage and fast retrieval of programs and data.

Hardware — Any physical component of a computer system (such as a printer or CPU).

IDE— An acronym for Integrated (or Intelligent) Drive Electronics. A type of hard drive that features controller electronics on the drive itself.

I/O— An acronym for Input/Output. The process of transferring data between different devices.

Glossary

I/O port— An acronym for Input/Output port. An input/output connection to which you can attach a peripheral device (such as a modem).

Interface — A software or hardware connection for the transmission of data between hardware or software.

Kilobyte (KB) — A unit of 1024 bytes measuring storage space, typically in memory or on storage media such as a diskette or hard disk.

LCD— An abbreviation for Liquid Crystal Display, the type of flat panel display your notebook is equipped with.

Local bus — A bus which is electrically coupled to and operates at the same speed as the microprocessor bus. Your notebook features a local bus video interface.

Low-level format — The process of initializing a hard drive. The IDE hard drives used by the notebook do not require this procedure.

Megabyte (MB) — A unit measuring storage space, typically in memory or on storage media such as a diskette or hard disk, and equal to 1048KB.

Megahertz (MHz) — A unit measuring the oscillation frequency (typically of a computer's internal timing clock). One MHz equals one million cycles per second.

Memory — The area used by a computer to store currently-in-use program code and data.

Memory expansion module — An optional card that increases your notebook's memory.

Glossary

NiMH battery — A nickel metal-hydride battery used by your notebook.

Operating system — A group of control programs that directs the internal operation of a system.

Parallel port — A type of interface through which data is transferred in groups of data bits (a binary unit).

Partition — A logical unit created on a hard disk, that appears to the operating system as a separate drive.

PCMCIA — An acronym for Personal Computer Memory Card International Association. An organization that sets standards for add-in cards for portable computers.

Peripheral device — A non-essential component of a system that performs a specific task. Examples might include a printer, mouse, or modem.

Pixels — Image elements (tiny dots) that compose a screen image.

POST (Power-On-Self-Test) — A diagnostic program the notebook performs automatically whenever it is powered on or reset.

PMU — An acronym for the Power Management Unit, which is designed into your notebook's hardware.

Program — An integrated series of coded instructions telling the system what to do and how to do it.

Glossary

RAM — An abbreviation for Random Access Memory. A hardware component of your system that temporarily stores active program code and data.

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

Resolution — The number of pixels displayed on the screen. A higher resolution provides greater clarity and allows more information to be displayed on the screen at once.

Resume — A return to the active, operational state of the system.

ROM— An abbreviation for Read Only Memory. The portion of your notebook's memory that contains permanent instructions, and cannot be modified.

Serial port— A type of interface through which data is transferred one bit, or binary unit, at a time.

Shadow RAM — A technique for copying BIOS routines from their permanent location in slower ROM, to a temporary location in faster RAM while the system is powered on. Shadow RAM can enhance system and video performance substantially, and is a standard feature of the notebook.

Status indicator — An LED indicator which shows the current status of a particular device or hardware component.

STN — An acronym for a type of passive-matrix display panel.

Glossary

Suspend mode — A power conservation mode in which current is shut down to all components of the system. The notebook supports two types of suspend modes. A Suspend-to-Memory feature cuts off current to all system components except memory. A Suspend-to-Disk feature cuts off current to all system components after the content of memory has been saved to a special partition on the hard drive.

System disk — A disk that contains the core files of an operating system and can boot the operating system. The creation of a system disk must usually be specified during the initial format process.

TFT— An acronym for a type of active-matrix display panel. A TFT display panel uses thin film transistors (or TFTs) to controller each pixel on the display screen.

VGA— The video display standard originally introduced by IBM with the PS/2 series of personal computers. Your notebook is fully compatible with this standard.

Write-protect — To prevent a diskette from being overwritten. When a diskette is write-protected, its data cannot be erased or changed.

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