Extensa™ 670 Series Notebook Computers User's Guide

Extensa Notebook Computer

Model_____Serial No._____Purchase Date_____

Contents

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 device 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/television technician for help

Notice: Shield 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.

Caution

Changes or modifications not expressly approved by the manufacturer could void the user's authority, whiãh is granted by the Federal Communications Commission, to operate this computer.

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 respected toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Duracell Notice

The Texas Instruments Extensa 670CD and 670CDT use a Duracell DR35 or DR201 Rechargeable Battery. Texas Instruments participates in the Duracell pro.link program. If you would like to purchase additional batteries, please call the Authorized Duracell Purchase Hotline at 1-800-603-8225. If you have questions about battery performance, recycling a used battery, or any other battery-related question, please call Duracell Consumer Relations at 1-800-551-2355 (9:00 AM - 5:00 PM EST).

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Preface

This manual describes features of the Texas Instruments Extensa™ 670 Series notebook computers. The Extensa series computers are similar in appearance and incorporate such features as CardBus, 16-bit stereo audio, module bay, Fast Infrared and internal pointing device.

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

Use the *Just for Starters…* instructions that came with your computer to get your computer running for the first time.

You should also take advantage of the online help files that are available with almost all of the programs shipped with your computer.

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 the instructions in *Just for Starters...*, read this chapter to learn about the important functions of your computer. Some functions, such as *Creating Backup Disks*, should be performed as soon as possible after the purchase of your computer.

Contents

Creating Backup Disks

You should create your backup system disks as soon as possible after purchasing your computer. The process you follow depends on the operating system you selected when you installed the computer for the first time.

Windows®95

Backing up Windows 95 requires approximately 43 formatted 3½-inch, 1.44 MB floppy disks. Labels for the floppy disks are included with the manual.

To create backup system disks, use the Create System Disk tool from Windows 95.

Windows for Workgroups

Backing up MS-DOS® and Windows for Workgroups requires approximately twenty 3½-inch, 1.44 MB floppy disks.

To create backup system disks, use the Make Disk utility, which is located in the Main program group.

Features of the Computer

Standard Features

The following list displays the standard features of your Extensa computer:

❑ PCI Bus architecture

❑ 16 MB EDO (Extended Data Out) memory

❑ 2 MB EDO video memory

❑ Fast video graphics accelerator

❑ 0-Volt Suspend, 5-Volt Suspend and Standby power saving modes

❑ No-reboot setup function

❑ STN or TFT color display

❑ 16-bit stereo audio

❑ Fast infrared communication

❑ Duracell NiMH (Nickel-Metal-Hydride) or optional Li-Ion (Lithium-Ion) battery pack

❑ 1.43 GB (or higher) capacity hard disk drive with Local Bus

❑ Internal touchpad pointing device

❑ Small, lightweight AC adapter

Features of the Computer

Customizing Features

The following features allow you to customize your computer to fit your requirements.

❑ Modular bay that accepts a 3½ inch floppy disk drive module or CD-ROM drive module

❑ PS/2 port for connecting an external keyboard, numeric keypad, or mouse

❑ 9-pin serial port for connecting external devices such as a modem or mouse

❑ Simultaneous display with external CRT

❑ One Type III or two Type II/I Cardbus PC Card slots; lower slot accepts Zoomed Video port enabled PC cards

❑ Parallel port with EPP and ECP for connecting to a printer or the floppy disk drive module

❑ 8 MB, 16 MB and 32 MB EDO 64-bit type small outline dual inline memory module (soDIMM) upgrades

❑ Advanced PCI Card slot for installing a feature upgrade option

Environmental Specifications

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

Temperature

Operating: 50° to 95°F
                    (10° to 35°C)

Storage: -4° to 140°F
                    (-20° to +60°C)

Relative Humidity (Noncondensing)

Operating: 20% to 85%

Storage: 20% to 85%

Shock

Operating: Maximum 5g pulse in X, Y, and Z orientations

Storage: Maximum 50g pulse in X, Y, and Z orientations

Vibration

Operating: Sinusoidal 5 to 25.6 Hz limited to 0.015 inch peak-to-peak maximum displacement

                    0.5g, 25.6 to 250 Hz

Storage: Sinusoidal 5 to 27.1 Hz limited to 0.016 inch peak-to-peak maximum displacement

                    2.0g, 27.1 to 500 Hz

Environment

Note: Your computer is equipped with a fan to keep the computer cool under extreme high temperature conditions. The fan will not normally operate, but may turn on when the computer's internal components become warm. You will hear the fan when it turns on, this is nothing to be concerned about.

❑ Never pick up or carry the computer by the display.

❑ 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 drive or floppy disk(s) to strong magnetic fields, such as those generated by audio system speakers, telephone handsets, or hand-held metal detectors.

❑ To avoid overheating the computer, never place anything on top of the computer when it is operating or recharging the battery.

❑ Before moving an active computer, press the **0V Suspend** hot key (**Fn**+**F2**) to put the computer into 0V Suspend mode and close the display (refer to *0V Suspend Mode* in the next section).

❑ Do not try to force the display beyond its fully opened position —about 180 degrees.

Using the Computer

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

1. Turn off the power.
2. Disconnect the AC adapter from the power source and the computer.
3. Remove the battery pack.
4. Contact your Extensa dealer or service center.

Power Savings Options

Your Extensa system offers several options for you to extend your battery life while you are not actively using your computer. These options power off different sections of the computer that are not currently being used.

These options are listed in the POWER MANAGEMENT page of the System Setup screen (accessed via **Fn+F1** anytime or F2 during boot up). They are described below:

Power Management	This option determines when power management is enabled. .
	ALWAYS: Enables the time out settings regardless of whether the computer is on AC or battery power.
	BATTERY ONLY: Only enables the time outs when the computer is running off of the battery power
	DISABLE: Disable all power time out settings.
Standby Timeout	The amount of time the computer needs to be idle before the computer enters Standby mode.
5V Suspend Timeout	The amount of time the computer needs to be idle before the computer enters 5V Suspend.

Power Saving Modes

0V Suspend Timeout	The amount of time the computer needs to be idle before the computer enters 0V Suspend.
Hard Disk Timeout	The amount of time the computer needs to be idle before the hard disk will spin down the motor.
Display Timeout	The amount of time the computer needs to be idle before the display back light turns off

The computer will not enter any of the power management time out modes if the hard disk drive, CD ROM, or floppy disk drive is active.

Note: If the "Auto Insert Notification" option is enabled in the CD ROM setting, the computer will not time out on any of the power management time outs because Windows 95 will constantly be actively looking for a new CD to be inserted. This option is set to a default of DISABLED.

0V Suspend Mode

0V Suspend mode saves the exact spot you are at on your computer, then removes all power without losing any data.

In 0V Suspend mode, the computer saves the current computer state onto your hard disk drive then shuts off. When you turn the computer on again, it restores the computer to the saved state within about a minute.

Press the **0V Suspend** hot key (**Fn**+**F2**) to enter 0V Suspend mode. To resume normal operation, press the power switch. 0V Suspend mode occurs automatically if the 0 VOLT SUSPEND TIMEOUT parameter in Setup is enabled and times out or if the BATTERY LOW SUSPEND option is enabled and your battery runs down to a critically low level.

Note: Your computer will not enter 0V Suspend mode if the 0V Suspend file is missing or is the incorrect size. Refer to Chapter 2, *Adding Memory* section for further information.

5V Suspend Mode

5V Suspend mode consumes very little power when you are not using your computer, yet still resumes quickly. With a fully charged battery, your computer can remain in 5V Suspend mode for days.

Power Saving Modes

⚠ **Caution: If your computer loses power while in 5V Suspend, you will lose all of your unsaved data.**

In 5V Suspend mode, the computer saves the current computer state into your system memory then shuts off power to most of the devices except the system memory. The standby indicator flashes to indicate the computer is in 5V Suspend mode. When the computer resumes from 5V Suspend mode, it restores the computer to the saved state.

Press the **5V Suspend** hot key (**Fn**+**F3**) or close the display cover to enter 5V Suspend mode. The computer also enters 5V Suspend mode if the 5V SUSPEND TIMEOUT parameter in Setup is enabled and times out.

To resume normal operation, press any key on the internal keyboard or press the power switch. The computer also resumes from 5V suspend if the RESUME ON MODEM RING or RESUME ON ALARM options are enabled in the System Setup and a modem ring or alarm occurs.

Note: It takes the computer a few seconds to resume from a 5V Suspend. You may see the screen blank a few times while the computer restores all of the system states.

Standby Mode

Standby mode saves some computer power by turning off a few of the unused devices and still allows you to resume your work instantly. The standby indicator lights up in Standby mode.

Press the **Standby** hot key (**Fn**+**F4**) to enter Standby mode. The computer also enters Standby mode if the STANDBY TIMEOUT parameter in Setup is enabled and times out.

To resume from Standby mode, press any key or touch the touchpad. The computer also resumes from Standby if the RESUME ON MODEM RING or RESUME ON ALARM options are enabled in the System Setup and a modem ring or alarm occurs.

Note: The computer acts on the key you press. To prevent unintended results, press a non-printing character such as **Shift, Ctrl or Alt.**

Refer to Chapter 3, *Responding to Low Battery Conditions* section, for more ideas on how to conserve power.

Securing the Computer

Your computer comes with a Kensington® lock notch. If your computer store does not carry Kensington locks, you can buy one directly from Texas Instruments. To secure your computer, follow these steps:

1. Wrap the cable of a portable computer Kensington security lock around a table, desk drawer handle or any immovable object.

2. Locate the Kensington lock icon **K** at the rear of the left side of the computer and insert the lock into the notch.

3. Turn the key to secure the lock.

4. Remove the key from the lock.

Notch
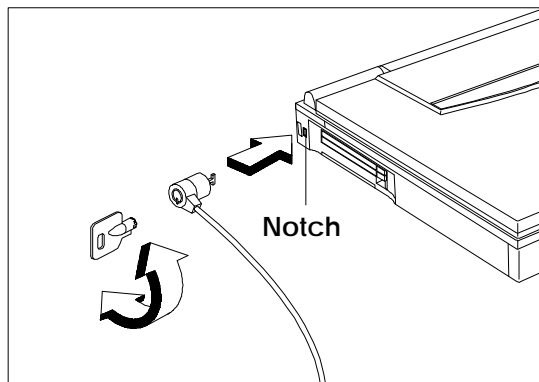
Securing the Computer

Using the AC Adapter
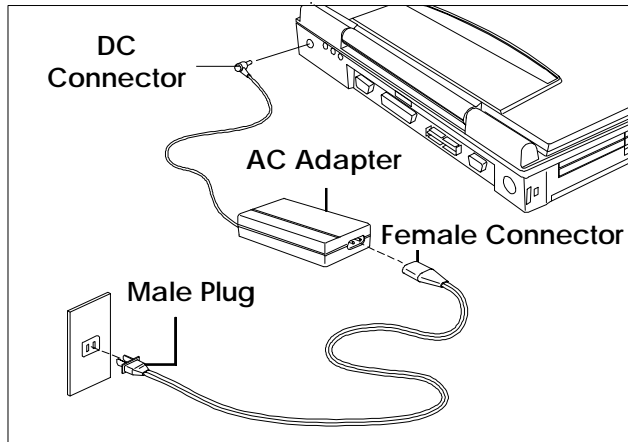
AC Adapter

AC
Adapter

Charges the internal battery pack and operates the computer on AC power whether or not a battery pack is installed. The AC adapter can be operated anywhere where the outlet supplies between 100-240 volts AC at 50 - 60 Hz. The AC adapter has a detachable AC power cord.

⚠ **Caution: Use only the AC adapter supplied with your computer. Another adapter can damage your computer and create a safety hazard.**

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 notebook computer.

Contents

Power Switch

Power Switch   Turns the computer on and off for both AC and battery operation; also resumes from 0V Suspend and 5V Suspend modes.

The power switch is software controlled to allow for a proper shutdown from the Windows 95 operating system. If the operating system locks up and cannot shutdown, press and hold the power switch for 1-2 seconds to force the computer to turn off.

Using the Brightness and Contrast Controls

You can adjust the screen brightness and contrast levels using hot keys.

Note: The hot keys for brightness and contrast are continuous keys. They will adjust as long as you hold them down.

Brightness Control Press **Fn**+↑ and **Fn**+↓ to increase and decrease the brightness of the display respectively.

The brighter the screen, the more power is used during battery operation.

Contrast Control Press **Fn**+→ and **Fn**+← to increase and decrease the contrast of the display respectively.

The higher the contrast setting, the more power is used during battery operation.

Turning the Speakers On and Off

Your computer comes with 16-bit stereo audio. Two built-in speakers are located near the LCD hinges.
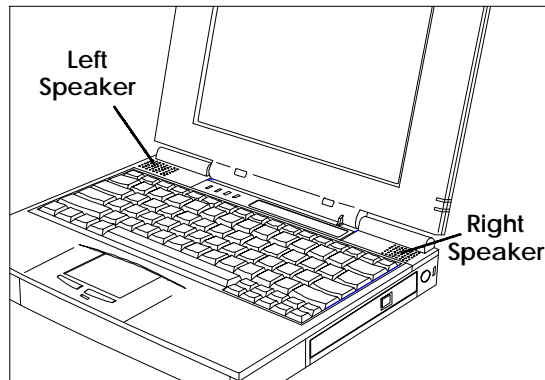
Built-in Speakers

You can turn the built-in speakers on and off using a hot key.

Speaker On/Off	Press **Fn**+**End** to toggle the speaker output on and off.

You can also enable or disable the speaker from your Setup screen. The setting in Setup determines whether the speakers are enabled when you reboot or turn on your computer. Pressing **Fn**+**End** overrides the setting.

Using the Microphone

Your computer has a built in microphone located in front of the touchpad (inside the LCD latch)
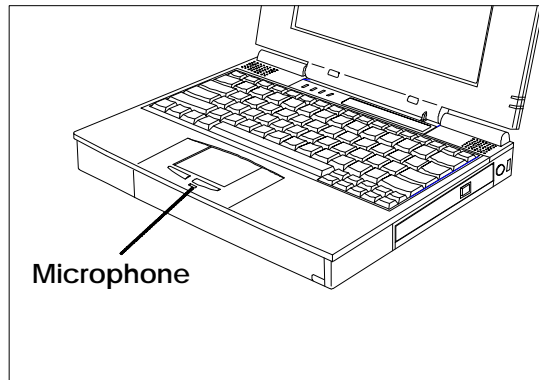
Built-in Microphone

To use the microphone, face your computer from a normal distance and speak in a normal voice. You do not need to bend down to speak directly into the microphone.

Inserting PC Cards

You can insert up to two Type I or Type II PC cards, or one Type III PC card, into the slots on the side of the computer. You can install PC Cards while the computer is running.
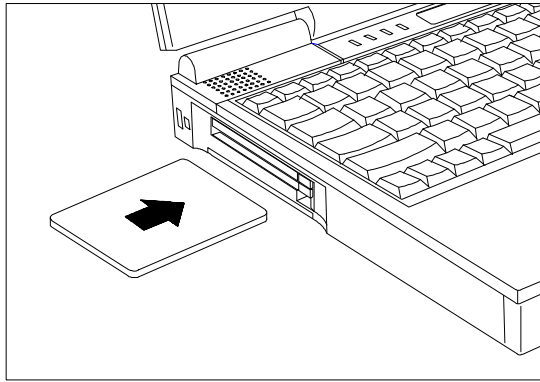
Inserting a PC Card

In Windows 95

Windows 95 beeps to indicate it has detected a PC card when you insert one. If Windows 95 recognizes the PC card, it sets up the necessary drivers. If Windows 95 does not recognize the PC card, you are asked to load the driver for the card.

Using PC Cards

In Windows for Workgroups

Windows for Workgroups beeps to indicate it has detected the card. If a driver for the PC card has already been loaded, you can use the card immediately. If a driver has not been loaded, you must manually load the driver. Windows for Workgroups does not ask you to load a driver.

Ejecting PC Cards

Eject buttons are located beside each PC card slot. Pressing an eject button ejects the PC Card from the slot. To eject a Type III card, press both eject buttons.

The eject buttons fold out of the way when a PC card is inserted in the slot. To eject the card, flip out the corresponding eject button, and press in on the eject button.

PC Card
Eject Buttons
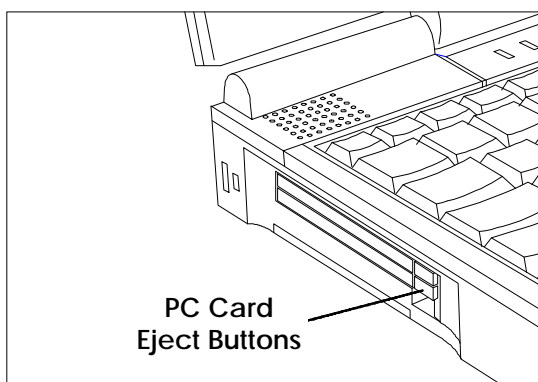
PC Card Eject Buttons

Using PC Cards

In Windows 95

Follow these steps to eject a PC Card while using Windows 95.

1. Open the Control Panel.

2. Click on the **PC Card** icon.

3. Select the card you want to eject.

4. Click on **Stop**.

5. When Windows 95 responds with the message "You may safely remove this device", click **OK**, flip out the eject button and press it to eject the PC Card.

In Windows for Workgroups

Windows for Workgroups has no special procedure for ejecting PC cards. Simply press the eject button for the card and remove the card.

Using Indicator Lights

The computer uses the following indicator lights.

Power/
Battery-Low
Indicator

Standby
Mode
Indicator
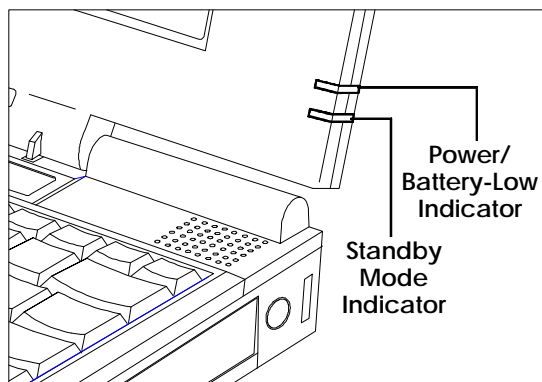
LCD Panel Indicator Lights

⚡	**Power/ Battery-low Indicator**	Lights when the computer is on and there is power to the computer.
		Flashes when the battery power is low. Connect a powered AC adapter to the computer as soon as possible.
Z^Z	**Standby Mode Indicator**	Lights when the computer is in Standby mode. Flashes when the computer is in 5V Suspend mode.

Power/ Battery-low Indicator

Lights when the computer is on and there is power to the computer.

Flashes when the battery power is low. Connect a powered AC adapter to the computer as soon as possible.

Standby Mode Indicator

Lights when the computer is in Standby mode. Flashes when the computer is in 5V Suspend mode.

The computer enters Standby mode if the **Standby** hot key (**Fn**+**F4**) is pressed or the STANDBY TIMEOUT parameter in Setup is enabled and expires.

The computer enters 5V Suspend mode when you press the **5V Suspend** hot key (**FN+F3**), the 5 VOLT SUSPEND TIMEOUT parameter in Setup is enabled and expires, or the display is closed.

Using Indicator Lights
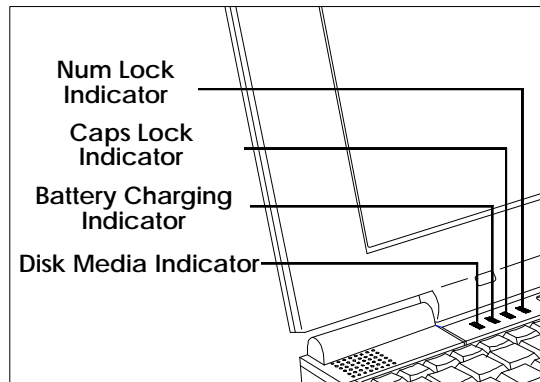
Front Indicator Lights

Disk Media Indicator   Lights when the computer writes to or reads from the hard disk drive, or reads from the CD-ROM drive.

Battery Charging Indicator   Lights when a powered AC adapter connected to the computer is charging the battery.

Flashes when there is a problem with the battery or the battery is not recognized by the smart charger.

Turns off when the battery is fully charged and the AC adapter is connected or when operating on battery only.

Using Indicator Lights

Caps Lock Indicator   Lights when the caps lock function is toggled ON using the Caps Lock key.

Num Lock Indicator   Lights when the embedded numeric keypad is toggled ON using the Num Lock hot key (Fn+F7). Refer to Using the Internal Numeric Keypad later in this section for further details.

Moving the Cursor

The embedded touchpad offers a unique and efficient way of pointing and selecting in a Windows environment. The following figure shows the touchpad.
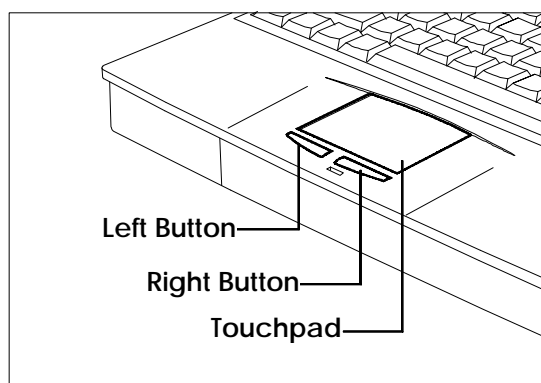
Touchpad

The touchpad responds to finger movements on its surface. To move the cursor, move your finger on the touchpad surface.

Once the cursor is in the proper place, tap once on the surface of the touchpad or use the left button to click just as you would a mouse. Tap twice to double-click.

Note: You can also connect an external PS/2 or serial mouse to your computer. Refer to *Using Connectors and Ports* later in this chapter.

Using the Touchpad

Configuring the Touchpad

You can personalize the control of the touchpad by configuring various setting using the Synaptics Touchpad utility. Configure the touchpad using the Mouse utility located in the Control Panel Window. Follow these steps to configure the touchpad:

In Windows 95

1. Select the **Start** button, then select **Settings**.
2. Select **Control Panel** to display the Control Panel window.
3. Double-click on the **Mouse** icon.
4. Select the Touchpad tab to customize the touchpad to your preference.
5. Click on **Enhancements** to bring up additional features and to get to the online help for the Synaptics Touchpad drivers.

In Windows for Workgroups

1. From the **Program Manager** double-click on the **Main** program group.
2. Double-click on the **Control Panel** icon.
3. Double-click on the **Mouse** icon.
4. Select the Touchpad tab to customize the touchpad to your preference.
5. Click on **Help** for the Synaptics Touchpad drivers online documentation.

Using Disk Drives

Hard Disk Drive   The Extensa computer comes with a 1.43 GB or higher capacity hard disk drive. The hard disk drive is formatted and loaded with software during manufacture. **Do not** format the hard disk drive.

CD-ROM Drive   The high-speed CD-ROM drive brings you portable multimedia. The CD-ROM drive is a removable module that interchanges with the floppy disk drive in the modular bay. Refer to *Swapping Modules* later in this section.

Floppy Disk Drive   The floppy disk drive can access formatted 3.5-inch, double-sided, high-density (2HD), 1.44 MB floppy disks and lower capacity, 720 KB, double-density (2DD) floppy disks. The floppy disk drive does not function at low speed with the OS/2™ or Xenix operating systems.

The floppy disk drive can be installed into the modular bay, replacing the CD-ROM drive. You can also use the floppy disk drive externally by connecting it to the parallel port. This setup allows you to use your floppy disk drive and CD-ROM drive simultaneously. Refer to *Connecting the Floppy Disk Drive Externally*.

Using Disk Drives

Hard Disk Drive Guidelines

If you format the hard disk drive, all data on the hard disk drive will be erased.

Do not move the computer when the Disk Media indicator is on. Press the **0V Suspend** hot key (**Fn**+**F2**) to suspend the computer or turn off the computer before moving it.

If the HARD DISK TIMEOUT parameter in Setup is enabled and expires, the hard disk drive will spin down to save power.

⚠ **Caution: If the hard disk drive is damaged, you can lose data. To reduce the impact of data loss, back up data frequently.**

Removing the Hard Disk Drive

You can remove your hard disk drive for safe keeping away from your computer or to swap drives with other 670 series computers. The following steps show you how to remove and install your hard disk drive. You may also purchase upgrades to your current hard disk drive by contacting Texas Instruments.

⚠ **Caution: Turn off the computer and disconnect all source of power before removing or installing a hard disk drive.**

1. Turn off the computer. Disconnect the AC adapter and remove the battery.

2. Disconnect all external devices such as a keyboard or monitor.

3. Turn the computer over and locate the hard disk drive bay cover.

4. Locate the release tab on the bottom side of the hard disk drive bay cover. While pressing down slightly on the release tab Ⓐ, slide the cover to the right Ⓑ and set aside.

Bottom View
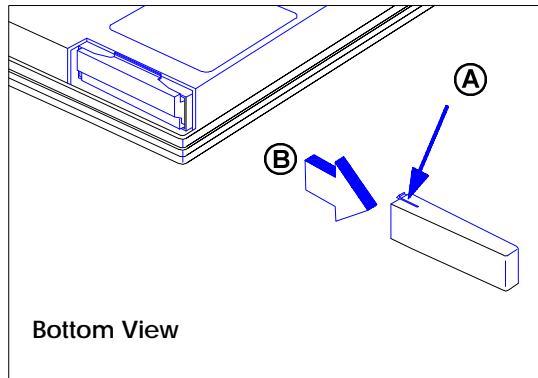
Removing the Hard Disk Drive Bay Cover

5. While lifting up the hard disk drive release tab on the front of the hard disk drive module, use both finger grip areas to pull the module out of the computer.

Using Disk Drives
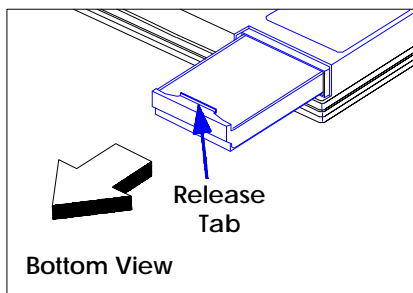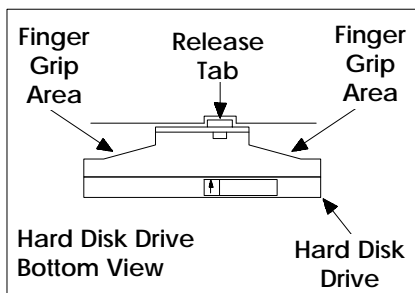
Removing a Hard Disk Drive

Inserting the Hard Disk Drive

Use the following instructions to insert a hard disk drive. Follow the instructions that came with your hard disk drive upgrade kit for inserting a new hard disk drive.

1. Insert the hard disk drive into the bay with the release tab facing up. Slide the hard disk drive in until you feel the connectors engage with a slight click.
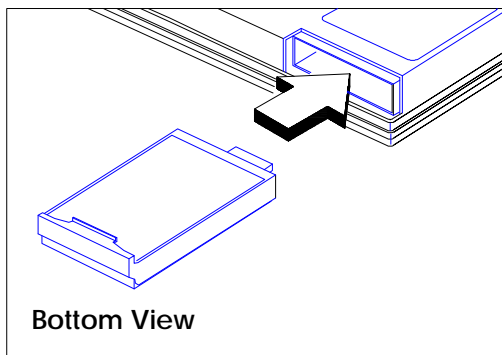
Inserting a Hard Disk Drive

2. Replace the hard disk drive cover by aligning the release tab as shown at point Ⓒ on the computer and then seat the cover into the slot Ⓐ making sure the back edge of the cover Ⓑ is flush with the computer. Make sure the bottom of the cover is also flush with the computer.
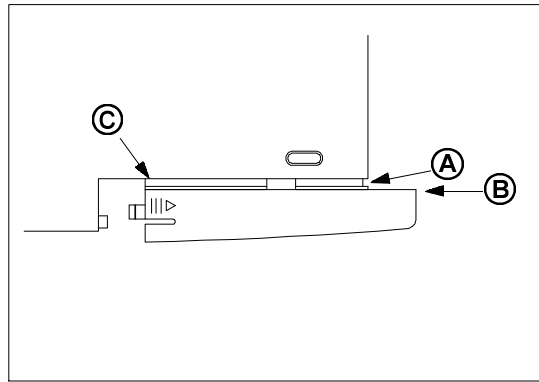
Aligning the Hard Disk Drive Bay Cover

3. Slide the hard disk drive bay cover to the left until the release tab snaps into place.
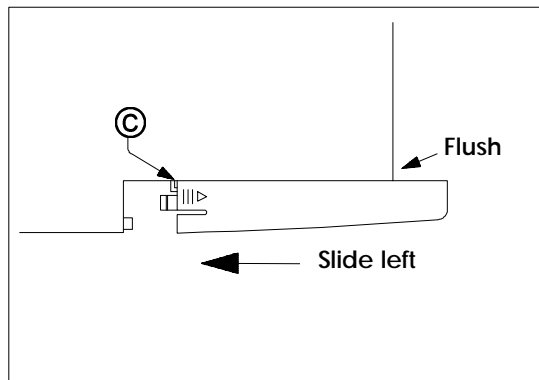
Replacing the Hard Disk Drive Bay Cover

Using Disk Drives

CD-ROM Drive Guidelines

Failure to observe the following precautions can damage both the CD-ROM drive and the data on the CD-ROM:

❑ Do not open the disc tray except when inserting or removing a disc.

❑ Never push down on an open disc tray.

❑ When handling discs:

    ❑ Always handle a disc by its edges. Do not touch the surface of the disc.

    ❑ Never write on a disc or place a label on the disc surface.

    ❑ Always store a disc in its case to prevent dust contamination, scratches, bending and other damages.

    ❑ To remove dust or fingerprints, use a clean, soft and dry cloth. Never use benzene or anti-static fluids.

    ❑ Do not subject a disc to high temperature or direct sunlight.

Ejecting the Disc Tray

To eject the disc tray, press the eject button on the CD-ROM drive. You can eject the disc tray even when the computer is off.

CD-ROM Eject Button
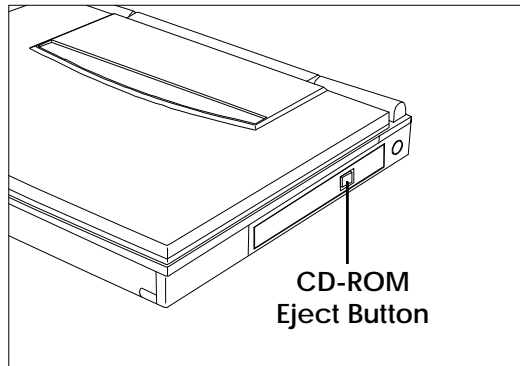
Ejecting the Disc Tray

Swapping Modules

To swap modules, follow these steps:

1. Unlatch the module by pushing the module lock toward the unlock icon ◼.

2. Grab the recessed grip area on the module then pull the module out.

Module Lock

Grip Area
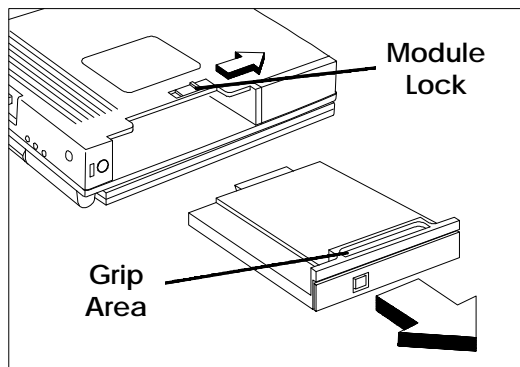
Removing a Module

Using Disk Drives

3. Insert another module into the bay, pushing the module in until it clicks into place.

4. Latch the module by pushing the module lock towards the lock icon 🔒.
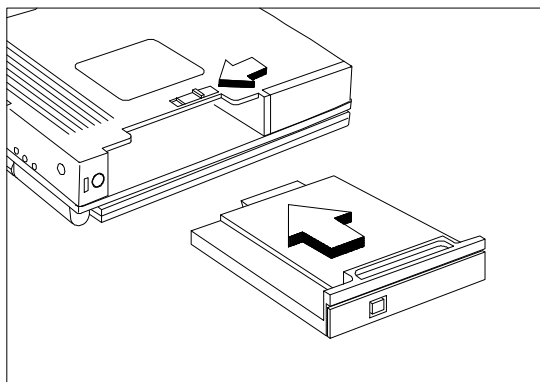
Replacing a Module

Note: You will not be able to access the module unless your module is locked.

Connecting the Floppy Disk Drive Externally

You can use your floppy disk drive module externally through a connection to the parallel port. This allows you to use a CD-ROM drive and a floppy disk drive simultaneously. To connect the floppy disk drive to your computer, follow these steps.

1. Plug the 25-pin end of the floppy disk drive cable into the parallel port on the rear panel of the computer.

2. Attach the other end of cable to the floppy disk drive.
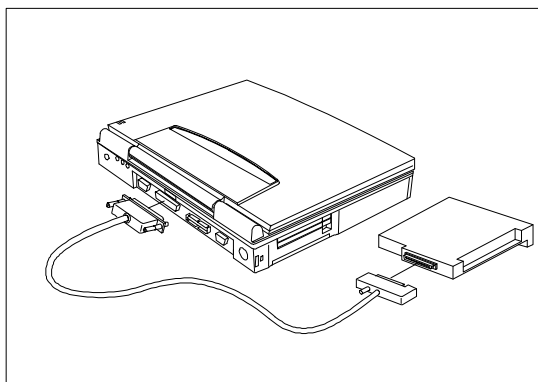
Connecting the Floppy Disk Drive Externally

Floppy Disk Drive Guidelines

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

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

Using Disk Drives

❑ To remove a floppy disk, press the eject button until the floppy disk pops out.

❑ Never remove a floppy disk while the indicator on the floppy disk drive is on.

❑ Never force open the access shutter on a floppy disk.

❑ Always remove a floppy disk from the floppy disk drive before turning off the computer.

❑ Never transport the computer with a floppy disk in the floppy disk drive. Doing so can damage the drive head.

❑ If a floppy disk is damaged, try to make a copy of it and immediately discard it.

❑ When floppy disks are not in use keep them in a storage box to protect them from damage or loss.

❑ When using an external floppy disk drive, make sure the connecting cable is securely connected to the drive and to the parallel port on the computer's rear panel.

Adding Memory

Your computer has 16 MB of EDO dynamic random access memory (DRAM) for computer system memory. You can increase the amount of your computer system memory (up to 80MB) by adding industry standard, small outline Dual Inline Memory Modules (soDIMM) into the memory upgrade slots.

⚠️ **Caution: TI does not warrant the use of non-TI memory. TI will not be held responsible for problems or degradation of performance incurred by using any memory other than TI memory described in this document.**

To ensure compatibility and best performance, you should purchase soDIMMs from your local Texas Instruments dealer. Refer to Chapter 4, *Options*, for ordering information.

To add memory, locate the memory options door indicated by the memory icon ▭ on the bottom of your computer.
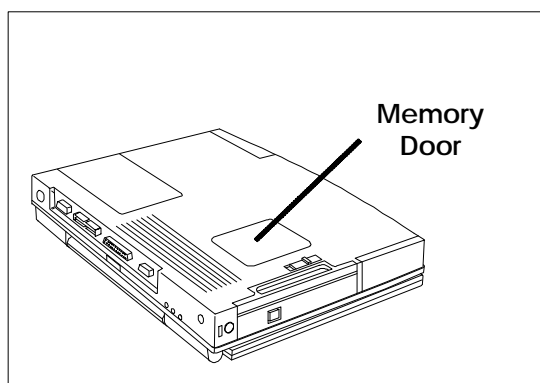
Memory Options Door

Adding Memory

Remove the screw from the memory door. Lift up the memory door from the recess in the screw area, then remove. Follow the instructions that came with your Memory upgrade option to install the additional memory.

Whenever you change your memory size, you should run the PHDISK utility to re-size your Suspend to Disk file. This file is used to store all your computer information onto the hard disk drive for the 0V Suspend function. If you do not re-size the Suspend to Disk file, you will not be able to use the Suspend to Disk utility.

⚠	**Caution: The Suspend to Disk file is a hidden file named SAVE2DSK.BIN; DO NOT delete or alter this file in any way except by using the PHDISK utility. Improper deletion or alteration of this file could cause you to lose all access to your computer.**

Running PHDISK

To run PHDISK follow the instructions below.

In Windows 95

1. From the Taskbar, select **Start** then **Shut Down**.

2. Select the "Restart the Computer in MS-DOS

3. Click on **Yes**.

4. Type **PHDISK /C /F** at the DOS Prompt.

Adding Memory

In Windows for Workgroups

1. Save and Exit all applications.

2. From the Program Manager Window, select **File**.

3. Select **Exit Windows**.

4. When asked to confirm, click on **OK**.

5. Type **PHDISK /C /F** at the DOS Prompt.

Note: If you are using an operating system other than Windows95, Windows for Workgroups, or DOS, you may need to re-partition your hard disk drive to allow for the additional memory. Check with your system administrator.

Using the Keyboard

The computer has many special keys, most of which depend on an application for their functionality.

Special Keys

The following keys have special functions at the command level of MS-DOS and within many programs.

Ctrl+Pause Stops a command or application; primarily used to stop the screen from scrolling; pressing any other key resumes the execution of the command or application

Shift+Prt Sc Sends the contents of the screen to the printer port; prints only text characters unless you have run the GRAPHICS.COM utility to enable printing graphics

Ctrl+Break Terminates the current command or application

Ctrl+P Sets the computer to echo keystrokes to the printer; prints a line when you press **Enter**; continues until you press **Ctrl-P** again

Ctrl+Alt+Del Terminates all programs, reloads MS-DOS and executes the AUTOEXEC file; also called "warm start" or "warm

Ctrl+Alt+F1	Brings up the System Setup screen anytime from an external keyboard
Ctrl+Alt+F2	Invokes 0V Suspend from an external keyboard
Ctrl+Alt+F3	Invokes 5V Suspend from an external keyboard
Ctrl+Alt+F12	Toggles the screen output between the LCD, external CRT or both (SIMULSCAN) from an external keyboard
Ctrl+Alt+S	Toggles the internal speaker on and off from an external keyboard
F2 (during POST)	Loads the ROM-based Setup when pressed during POST (power on self test) at computer startup.
Fn+F1	Brings up the System Setup screen anytime
Fn+F2	Invokes 0V Suspend
Fn+F3	Invokes 5V Suspend
Fn+F4	Invokes Standby
Fn+F6	Toggles the scroll lock function **ON** and **OFF**. When **ON**, the screen moves one line up and down when you press the up and down keys.

Using the Keyboard

Fn+F7 Toggles the NumLock function **ON** and **OFF**. The internal numeric keypad is activated when NumLock is **ON**.   Refer to the *Using the Internal Numeric Keypad* section for more details.

Fn+F11 Turns the LCD backlight off (blanks the screen). Press any key to turn it back on.

Fn+F12 Toggles the screen output between the LCD, external CRT or both (SIMULSCAN)

Fn+T Enables/disables the internal touchpad

Fn+↑ Adjusts the brightness up

Fn+↓ Adjusts the brightness down

Fn+→ Adjusts the contrast brighter

Fn+← Adjusts the contrast darker

Fn+End Toggles the internal speaker on and off

Using the Keyboard

Windows 95 Keys

The keyboard also has two Windows 95-specific keys that allow you to perform special functions under Windows 95.

Windows logo key   Start button

             Combinations with this key performs special functions. The following are a few examples:

Windows logo key + Tab Activates next Taskbar button

Windows logo key + E Explore My Computer

Windows logo key + F Find Document

Windows logo key + M Minimize All

Windows logo key + R Display Run dialog box

Application key   Displays the application's context menu (same as a right-click)

Please refer to your Windows 95 manual for more information on these Windows 95-specific keys and their functions.

Using the Internal Numeric Keypad

The keyboard has an embedded keypad that provides the same functions as the discrete numeric keypad on an AT® enhanced keyboard.

The embedded numeric keypad keys shown in the following figure generate AT-keypad characters and functions when pressed in conjunction with **Num Lock**, **Fn** and **Shift**.

The embedded numeric keypad has two modes you can enter by toggling **Num Lock** (**Fn**+**F7**) as signaled by the **Num Lock** indicator: **ON** or **OFF**.

Num Lock On

When the **Num Lock** indicator is on, pressing a key generates the characters shown in the following figure.
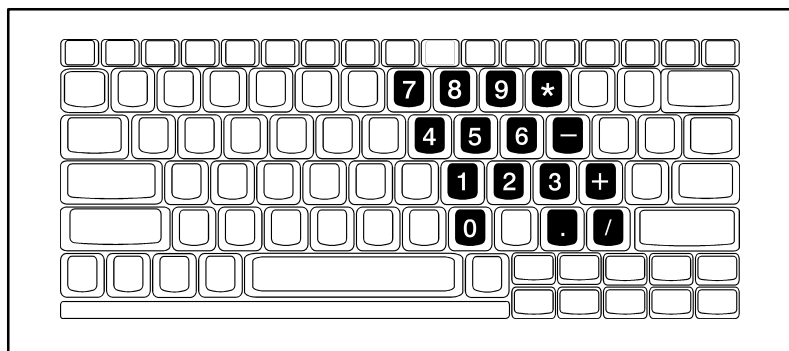
Num Lock On

Pressing **Shift** with a key generates the characters shown in the following figure.
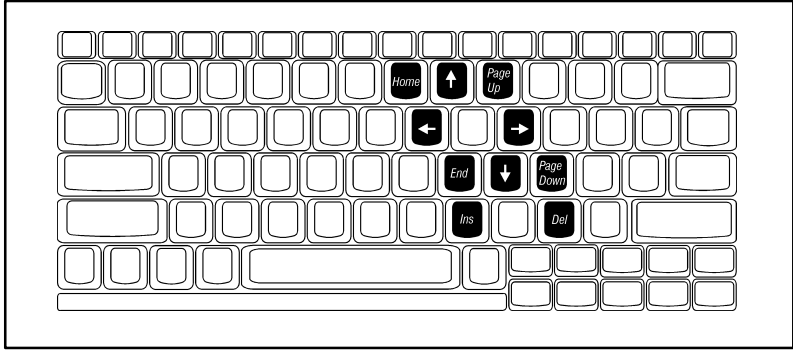
Num Lock On (with Shift)

If you press and hold **Fn** in this mode, the keypad generates their normal characters.

Num Lock Off

When the **Num Lock** indicator is **OFF** , the keyboard acts as normal.

Pressing **Fn** with a key generates the same characters shown in the previous figure, *Num Lock On (with Shift).*

Using Connectors and Ports

This section provides a description of connectors and ports on the rear and left side panel of the Extensa notebook computer.
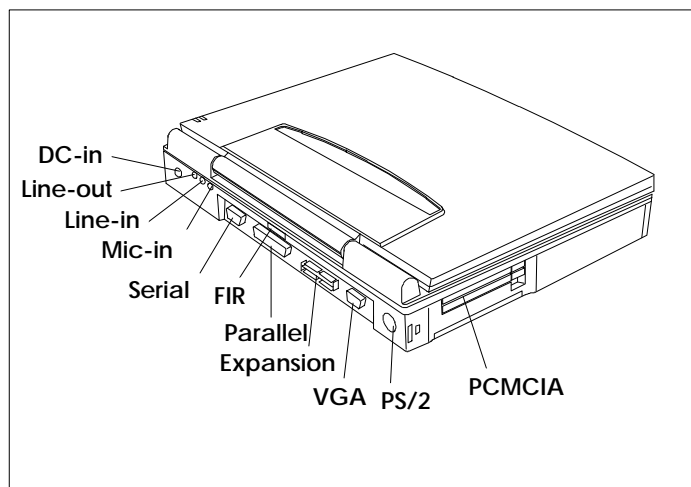
Ports

  DC In Connects the AC adapter output connector to this jack to recharge the battery and supply power to the computer

> ⚠ **Caution: Use only the supplied AC adapter with your computer. Other adapters can cause serious damage to the electronic circuits.**

Using Connectors and Ports

	Line out	Connects to a line out device such as headphones or amplified speakers
	Line in	Connects to a line in device such as a synthesizer, stereo walkman or audio CD player
	Microphone in	Connects to an external microphone
IOIOI	Serial (9-pin)	Connects to external devices such as a serial printer. 16550 UART compatible
	FIR	Connects to any IrDA compliant device (such as another IrDA computer or printer) without the use of a cord or cable. Transmits up to 4Megabits per second
	Expansion (120-pin)	Connects to the Extensa Port Replicator; see *Port Replicator Option* in Chapter 4
	Parallel (25-pin)	Connects to a parallel printer or other device that uses a standard parallel interface; EPP/ECP compatible; also connects to the floppy disk drive when used externally.

Using Connectors and Ports
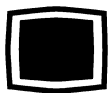
External Monitor (15-pin)   Connects to an external analog monitor.

PS/2   Connects to an external PS/2 keyboard, numeric keypad or mouse. If you are connecting a keyboard with a 5-pin DIN connector, you need to purchase a 6-pin mini-DIN adapter.

PC Card   The PC Card slots supports one Type III or two Type II/I PC Cards.

3
Using Battery Power

The primary difference between using battery power and AC power is the limited time you can operate before you must recharge the battery.

This chapter covers charging the battery and maximizing the time between charges and assumes that you installed and charged the battery as directed in *Just for Starters....*

Contents

Guidelines for Battery Use

⚠ **Caution: Never dispose of exhausted batteries in a fire. Recycle if possible.**

The battery should be handled carefully to ensure maximum life. In particular:

❑ Do not drop the battery or subject it to shocks.

❑ Do not expose the battery to direct sunlight, moisture, chemicals, or temperature extremes.

❑ Do not short the battery leads or insert the battery upside down.

❑ Charge the battery after several days of disuse to keep it fully charged. If your computer is idle for an extended period of time, charge the battery every 3 months.

❑ Never use the battery to power other products.

❑ The battery pack has thermal fuses to prevent unsafe computer operation. The computer may not operate on battery power after storage in a very warm place until the thermal fuses cool.

Guidelines for Battery Use

❑ Keep the Duracell smart battery properly calibrated to maintain a maximum charge by following the conditioning instructions in this chapter.

❑ This computer is designed to only work with the Smart Duracell battery packs. Only use the authorized DR35 and DR201 packs with this computer.

Note: The Texas Instruments Extensa 670 are designed to use a Duracell DR35 or DR201 Rechargeable Battery. Texas Instruments participates in the Duracell pro.link program. If you would like to purchase additional batteries, please call the Authorized Duracell Purchase Hotline at 1-800-603-8225. If you have questions about battery performance, recycling a used battery, or any other battery-related question, please call Duracell Consumer Relations at 1-800-551-2355 (9:00 AM - 5:00 PM EST).

Switching to Battery Power

To use battery power, install batteries as described in *Installing the Battery Pack* later in this section.

As long as the battery has a charge remaining, you can switch to battery power by removing the connection to the AC adapter, even if the computer is already on.

Your computer switches back to AC power when an AC adapter is plugged into the computer, even if the computer is already on.

To maintain a full charge on your battery, always reconnect the computer to the AC adapter whenever possible.

Responding to Low Battery Conditions

There are two battery low stages in this computer. When the battery capacity reaches 7% capacity (about 10 minutes remaining), the computer enters the first stage of battery-low warning. At this time the battery low LED found on the LCD panel flashes and an audible warning sounds. You can keep the battery audible warning from ever sounding by disabling the BATTERY LOW WARNING BEEP option in Setup.

When the battery capacity reaches 4% capacity (about 2 minutes remaining), a second audible warning sounds. If the BATTERY LOW SUSPEND option is enabled in Setup, the computer enters 0V Suspend mode if there is no system activity or if the AC is not plugged in.

The following actions can maximize the time before the battery is depleted and minimize the effect of losing power:

❑   Set the screen brightness and contrast control to the lowest possible setting.

❑   Save your work in progress to minimize the danger of losing data.

❑   If you are using a RAM disk, save the contents of the RAM disk to the hard disk drive.

Responding to Low Battery Conditions

❑   Whenever you are not actively using the computer, press the **5V Suspend** hot key (**Fn**+**F3**) or **Standby** hot key (**Fn**+**F4**) to put the computer into 5V Suspend mode or Standby mode respectively.

❑   Turn off the computer or put the computer in 0V Suspend mode (**Fn**+**F2**) if it does not need to be active. The computer does not consume power in 0V Suspend mode.

Once your computer enters 0V Suspend mode, you can install a fully-charged battery and then resume from 0V Suspend mode. AC power can be connected at anytime.

Recharging the Battery

⚠ **Caution: Never recharge the battery differently from the procedure described in this manual.**

The following procedure is acceptable under most circumstances:

1. Install the battery pack into your computer (if not already installed).

2. Connect the AC adapter.

To maintain a full charge, leave the computer connected to the AC adapter except when transporting the computer.

The computer charges the battery when it is on as well as when it is off, as long as the AC is plugged in.

Calibrating the Battery

This Extensa system uses either a Duracell Nickel-Metal-Hydride (NiMH) DR35 or Lithium-Ion (Li-Ion) DR201 rechargeable battery. Your new Duracell smart batteries keep extremely accurate track of the battery capacity. However, all rechargeable batteries lose capacity over time due to different charging and discharging conditions, as well as general wear and usage. In order to keep accurate track of the true capacity, the battery must be calibrated every once in awhile.

⚠ **Caution: If the battery loses track of the true capacity, it will not correctly predict low battery conditions and can cause the system to shut off prematurely and without warning.**

The battery itself keeps track of when it needs to be calibrated. The computer will post a warning when you boot up the system when it is time to re-calibrate. To calibrate the battery, you must first fully charge the battery, then fully discharge the battery.

Use the following instructions to calibrate your battery.

1. Charge the battery by leaving the battery in the computer and having the AC adapter plugged into the computer. The battery is fully charged when the charging LED ⊕ turns off.

2. Disconnect the AC adapter from the computer.

3. Turn the computer power ON, if not already on.

4. Exit the Windows operating System to DOS.

   a) From Windows 95, Exit by selecting **Restart in MS-DOS Mode** from the Shutdown menu.

   b) From Windows for Workgroups, Exit by selecting **FILE** then **EXIT WINDOWS** from the Program Manager.

5. Enter Setup by pressing the **Setup** hot key (**Fn**+**F1**).

6. Set the POWER MANAGEMENT FUNCTION parameter and the BATTERY LOW SUSPEND parameter to Disabled.

7. Save the changes, then Exit Setup.

8. Allow the computer to run down completely until it powers off on its own.

9. Re-connect the AC power.

10. Turn the Computer back ON. Enter **Setup** by pressing **Fn+F1**.

11. Set the POWER MANAGEMENT FUNCTION parameter and the BATTERY LOW SUSPEND parameter to your preferred settings.

12. Recharge the battery.

Removing and Installing the Battery Pack

Removing the Battery Pack

Follow these steps to remove the battery:

⚠️ **Caution: You will lose all power to the computer when the battery is removed unless an external AC source is attached.**

1. Unlatch the battery compartment door.

2. Slide the battery compartment door forward slightly then swing the door open.

3. Pull the battery out by pulling on the loop attached to the battery.
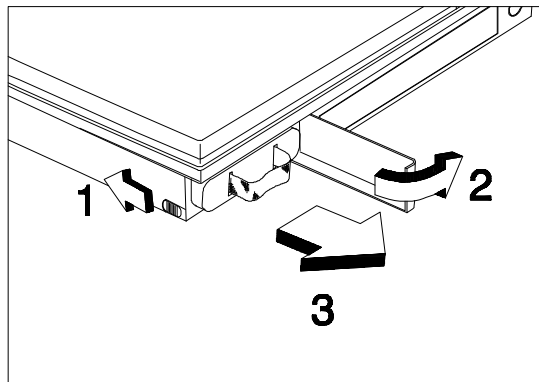
Removing the Battery

Removing and Installing the Battery Pack

Installing the Battery Pack

Follow these steps to install the battery:

1. Unlatch the battery compartment door.

2. Slide the battery compartment cover forward slightly then swing the door open.

3. Insert the battery pack (connector side up) into the compartment, then push the battery completely into the compartment until you feel the contacts engage.

4. Swing the door closed, then slide it back in until it clicks into place and the battery door latches.

5. Reconnect the AC adapter (if necessary).
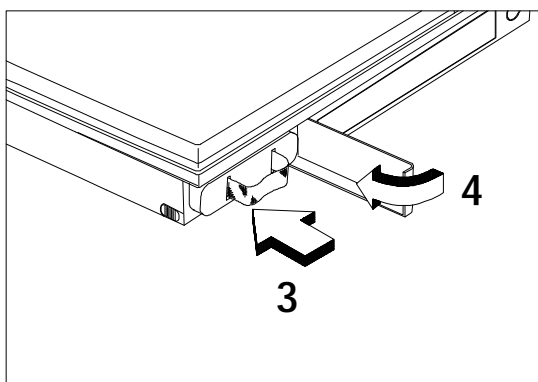
Sliding the Battery in Place

Re-Installing the Battery Compartment Door

The battery compartment door is designed to not break, but come off easily, when it has been forced open too far.

To re-install the battery compartment door, follow these instructions:

1. Align the battery compartment door hinge to the slots towards the back of the battery compartment.

Battery Door Hinge Slots
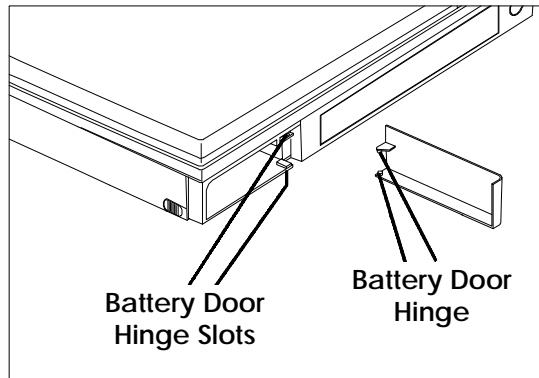
Battery Door Hinge

Re-Connecting the Battery Compartment Door

2. Insert the door hinge into the slot.

3. Swing the door closed, then slide it back until it clicks into place and the battery door latches.

Conserving Battery Power

The following tips can help you prolong the life of a battery charge:

❑ Keep the display at the lowest comfortable brightness and contrast level. Reducing brightness and contrast even a small amount can significantly reduce power consumption and increase operating time.

❑ Set the power management settings in Setup to optimize the time-outs.

❑ You can minimize the number of times the computer needs to access the hard disk drive by using disk caches or RAM disks.

❑ Disconnect or turn off external options that you are not using.

4
Options

This chapter provides some basic information on options available for your Extensa computer. For more detailed information and instructions please refer to the installation instructions that come with your option.

To get the most up to date list of options available with your Extensa computer, please call 1-800-816-2237 in the United States or Canada. Outside of the United States or Canada, please contact your local Extensa dealer.

Contents

AC Adapter

Your Extensa uses a small lightweight external AC adapter to charge and power the computer. The AC adapter can be operated anywhere between 100 - 240 volts AC and has a detachable AC power cord.

You can order power cords with specific plugs for the region you will be operating the computer in.

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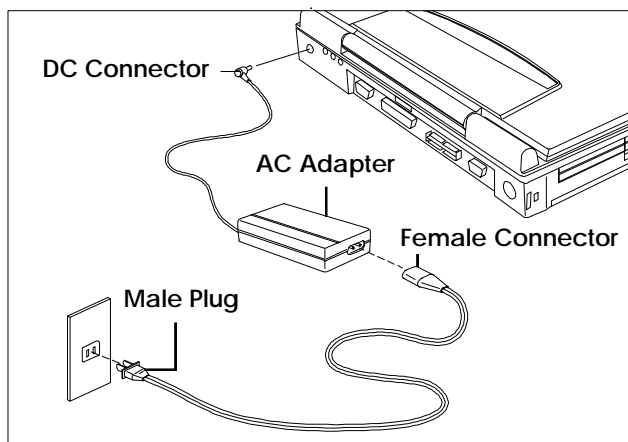
AC Adapter

Your Extensa computer supports all PCMCIA and Cardbus PC Cards. These PC cards are used to add functionality to your computer, such as communicating over a telephone or connecting to a network.

The computer has built-in slots that support one Type III or two Type II/I PC Cards. Type III PC Cards must be inserted into the lower slot.

Your Extensa computer is designed to support additional functionality on top of the standard Cardbus interface. These functions include the Zoomed Video port interface required by MPEG cards (on the bottom PC Card slot) and the DataRace Speakerphone modems.

PS/2 Devices

You Extensa computer supports external devices that connect to a PS/2 port. Such devices include an external numeric keypad, external keyboards, or external mouse.

Your Extensa computer supports standard analog external monitors with resolutions up to 1280 x 1024 modes. The computer also supports DDC compatible monitors allowing you to use the "Green" monitors (those monitors that meet the Energy Star standards).

When the computer is connected to an external monitor, you can use the computer with the display closed.

You can also display images on the external and internal display at the same time. This feature is called SimulSCAN™. To enable this feature, set the DISPLAY parameter in Setup to Both. You can also easily switch between the displays LCD, CRT, or both by using the **Fn**+**F12** hot key.

External Mouse

Your Extensa computer comes with a pointing device already installed, but you can use an external PS/2 or serial mouse.

❑ To connect a PS/2 mouse, insert the connector into the PS/2 port in the rear of the Extensa.

❑ To connect a serial mouse, attach the connector to the 9-pin serial port in the rear of the Extensa.

Note: A serial mouse is not a Plug and Play device. For Windows 95 to detect a serial mouse, use the **Add New Hardware** icon in the Control Panel.

Your Extensa computer comes with 16 MB of dynamic random access memory (DRAM). Your computer also has two memory upgrade slots. You can increase memory by installing an upgrade module into either or both slots. You can expand RAM from 16 MB up to 80 MB.

Caution: TI does not warrant the use of any memory other than that supplied by TI specifically for the Extensa computer. TI will not be held responsible for problems or degradation of performance incurred by using any memory other than TI memory described in this document.

Audio Options

Your computer comes with a set of built-in stereo speakers and a monaural microphone, but if you wish to use other stereo equipment, the computer comes with three audio jacks — Line-out, Line-in and Microphone-in.
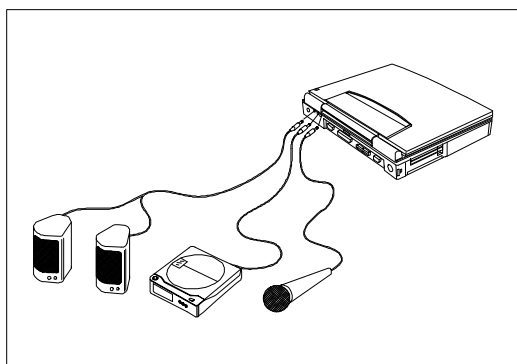
Connecting Audio Devices

Line-out allows you to use a headset or amplified external speakers. The computer's internal speakers are disabled when a headset or external speakers are plugged in.

Line-in connects to an external stereo source. This allows you to play an external CD through the computer speakers, for example, or make a recording if you have the correct software.

Microphone-in allows you to record input into the computer through an external microphone.

Docking Option

The docking option is a full-featured port replicator that duplicates all of the ports on your computer plus some additional ports. The port replicator allows you to have an easy one step connect/disconnect to the various cables in the back of your computer. See the instructions that come with your port replicator for more details.

Miscellaneous Options

Your Extensa computer can accept many additional options, and Texas Instruments is the best source for these options. Some of the additional options include:

Batteries	You can purchase spare batteries — Duracell NiMH or Li-Ion — from your local computer store or directly from Duracell. A list of phone numbers to call to order the Duracell batteries is listed in your computer. Click on the **Duracell** icon to view the directory.

For information on these batteries, refer to Chapter 3, Using Battery Power. |
| **Carrying Case** | Helps protect the computer and accessories during transport.

Several carrying cases are available including leather cases, accessory cases, portfolios and backpacks.

For the current list of available accessories, call 1-800-816-2237. |
| **Printers** | You can connect a parallel printer to the parallel port or a serial printer to the serial port connectors. |
| **Feature Upgrade** | You can enhance the capabilities of your Extensa computer by installing a proprietary Advanced PCI Card. For more information, call 1-800-816-2237. |

5
Using Software

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

Contents

Using Supplied Software

Your computer is shipped with the following
software installed on the hard disk drive:

❑ Operating system software, either Windows
95 or MS-DOS and Windows for
Workgroups or Windows NT

❑ Power-saving utilities

❑ Various third-party application software

The supplied software has online help files, which reduce the need to refer to printed manuals and provide you with help any time it's needed.

To obtain Windows 95 help, select the **Start** button and then select **Help**.

Guidelines for Installing Applications

Adjusting the Software for the Computer

Your computer can execute almost all programs written to execute on AT computers. When installing software, you may need to provide the following information to the installation program:

Display   The 11.3-inch or 12.1-inch display has an 800 x 600 (SVGA) resolution. When installing an application, select the highest resolution configuration that both the program and the computer can support. If you are using the computer with a high-resolution external monitor, you can select resolutions up to 1280 x 1024 depending on the model of your monitor.

If you select a resolution larger than that supported by your display, you can still view the display by panning the screen.

Keyboard   The computer keyboard emulates all functions of an IBM AT-101 enhanced keyboard. When installing an application, select the IBM 101 or AT enhanced keyboard configuration.

Guidelines for Installing Applications

Mouse   If you are using the built-in pointing device or an external PS/2 mouse, you may select the Microsoft® or Standard PS/2 port mouse.

You can also select Synaptics PS/2 touchpad for the built-in pointing device.

Configuring the Computer for the Software

Some programs require you to modify the way the computer operates to ensure compatibility.

Memory   Your computer comes with 16 MB of memory. This is sufficient to run most software. For improved operation, you may want to install additional memory (refer to Chapter 2 and Chapter 4 for information on upgrading your memory).

Using System Passwords

The computer has a two-password security system —Supervisor and User.

The Supervisor password is used by system administrators who manage multiple notebooks and gives an extra level of security while still allowing users to set their individual Setup preferences in the system Setup menu. If only one password is set, the Supervisor password is also the User password.

If both the Supervisor password and the User password are set, the Supervisor password must be entered to gain access to the Setup Security options: SUPERVISOR PASSWORD, DISKETTE ACCESS, AND FIXED DISK BOOT SECTOR.

Both passwords prevent unauthorized access to the computer at system startup or when the computer resumes from 0V Suspend mode if the PASSWORD CHECK DURING RESUME parameter in Setup is enabled.

Setting a System Password

Caution: If you forget the system password, you will not be able to use your computer. To regain access, you will need to send your computer to your authorized Extensa service represenative. *This service is not covered by warranty.*

To set a password in Setup, follow these steps:

1. Press **Fn**+**F1** (or **F2** during boot) to enter Setup.

2. Press the arrow keys to move to SECURITY.

3. Move down the screen to a Password parameter, then press **Enter**.

Note: The Supervisor password must be set before the User password can be set.

4. A window pops up requesting a new password.

5. Enter the new password (up to seven printable text characters) and press **Enter**, then retype the password for verification and press **Enter**.

6. The password becomes active after you save the changes and exit Setup.

Using System Passwords

If you set a password, you are prompted for the new password before starting your computer or entering Setup.

Disabling or Changing a System Password

To disable or change a system password:

1. Press **Fn**+**F1** (or **F2** during boot) to enter Setup.

2. Enter your password when prompted.

3. Press the arrow keys to move to SECURITY.

4. Move down the screen to a Password parameter, then press **Enter**.

Note: You will only be able to change the User Password if you used the User password to enter Setup. You can change both the User Password and the Supervisor Password if you used the Supervisor password to enter Setup.

5. Enter a new password to set a new password, or press **Enter** with no entries to clear the password. Verify your entry, then press **Enter**.

6. Save the changes then exit Setup.

6
Mobility

This chapter describes all the considerations to help you take advantage of your computer's mobility.

Contents

Disconnecting from the Desktop

Follow these steps to disconnect your computer from external accessories.

1. Save your work in progress.

2. Shut down the operating system.

3. Turn off the computer.

4. Disconnect the cord from the AC adapter.

5. Disconnect the keyboard, pointing device, printer, external monitor, and other external devices.

   If your external devices are connected to the optional port replicator, disconnect the notebook from the port replicator. You do not need to disconnect the external devices from the port replicator.

6. Disconnect the Kensington lock if you are using one to secure the computer.

Preparing the Computer

Before moving the computer, press **Fn+F3** to place it in 5V Suspend mode. After placing the computer in 5V Suspend mode, close and latch the cover. You can now safely take the computer anywhere you go within the building.

To bring the computer out of 5V Suspend mode, press a key or touch the touchpad.

What To Bring to Short Meetings

A fully charged battery runs the computer for 2-3 hours under most circumstances. If your meeting is shorter than that, you probably do not need to bring anything with you other than the computer.

What To Bring to Long Meetings

If your meeting will last longer than 3 hours or if your battery is not fully charged, you may want to bring the AC adapter with you to plug in your computer in the meeting room.

If the meeting room does not have an electrical outlet, reduce the drain on the battery by putting the computer in 5V Suspend mode (**Fn+F3**) or Standby mode (**Fn+F4**) whenever you are not actively using the computer.

Taking the Computer Home

Preparing the Computer

After disconnecting the computer from your desktop, follow these steps to prepare the computer for the trip home.

1. Remove all media from the drives. Failure to remove the media can damage the drive head.

2. Pack the computer in a protective case that can prevent the computer from sliding around and cushion it if it should fall.

⚠ **Caution: Avoid packing items next to the top cover of the computer. Pressure against the top cover can damage the screen**

What To Bring with You

Unless you already have some items at home, bring the following items with you.

❑   AC adapter and power cord

❑   The printed user's manual

Taking the Computer Home

Special Considerations

Follow these guidelines to protect your computer while traveling to and from work.

❑ Minimize the effect of temperature changes by keeping the computer with you.

❑ If you need to stop for an extended period of time and cannot bring the computer with you, leave the computer in the trunk of the car to avoid exposing the computer to excessive heat.

❑ Changes in temperature and humidity can cause condensation. Allow the computer to return to room temperature, and inspect the screen 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 temperature.

Taking the Computer Home

Setting Up a Home Office

If you frequently work on your computer at home, it may be worthwhile purchasing a second AC adapter for use at home. With a second AC adapter, you can avoid transporting the extra weight to and from home.

If you use your computer at home for significant periods of time, you might also want to add an external keyboard, monitor, or mouse.

Traveling with the Computer

Preparing the Computer

Prepare the computer as if you were taking it home. Be sure the battery in the computer is charged. Airport security often requires you to turn on your computer when bringing it to the gate area.

What To Bring with You

Bring the following items with you.

❑   AC adapter

❑   Modular bay accessories

❑   Spare, fully-charged battery packs

❑   Additional printer driver files if you plan to use another printer

Traveling with the Computer

Special Considerations

In addition to the guidelines for taking the computer home, follow these guidelines to protect your computer while traveling.

❏   Always take the computer as carry-on luggage.

❏   Have the computer inspected by hand. Do not put the computer through a security X-ray machine or a metal detector.

❏   Avoid exposing floppy disks to hand-held metal detectors.

Traveling Internationally with the Computer

Preparing the Computer

Prepare the computer as you would normally prepare it for traveling.

What To Bring with You

Bring the following items with you.

❑ AC adapter

❑ Power cords that are appropriate to the country to which you are traveling

❑ Modular bay accessories

❑ Spare, fully-charged battery packs

❑ Additional printer driver files if you plan to use another printer

❑ Proof of purchase, in case you need to show it to Customs officials

Special Considerations

Follow the same special considerations as when traveling with the computer.

7
Care and Troubleshooting

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

Contents

Cleaning the Computer

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

⚠️ **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 turn off	□ The Operating System is locked up; press and hold the power switch for 2 seconds to force the computer to turn off.
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.
	□ Connect AC adapter to another outlet.
Computer power is on but screen is blank	□ Adjust contrast and brightness control.
	□ 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, use **Fn+F12** to switch to LCD panel display or plug in an external monitor or use Fn+F11.
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 **Fn**+**F1** to ensure all settings are correct.
Modular bay option does not work	□ Make sure the module lock is in the locked position.

Startup Error Messages

Disk drive A error	❑ Drive A: is present but fails the BIOS POST disk tests. Enter Setup and check that the drive is defined with the proper disk type.
Extended RAM Failed at offset: *nnnn*	❑ Extended memory is not working or configured properly at offset *nnnn*. Contact your dealer or an authorized service center.
Failing Bits: *nnnn*	❑ The *nnnn* is a map of the bits at the RAM address which failed the memory test. Contact your dealer or an authorized service center.
Fixed Disk 0 Failure **Fixed Disk Controller Failure**	❑ Hard disk drive is not working or not configured properly. Run Setup and see if the hard disk drive type is correctly identified (try setting this to [Auto]).
Incorrect Drive A type	❑ The disk drive type is not correctly identified in Setup. Run Setup and set the correct disk drive type.
Invalid NVRAM media type	❑ There is a problem with NVRAM (CMOS) access. Contact your dealer or an authorized service center.
Keyboard controller error	❑ The keyboard controller failed the test. Contact your dealer or an authorized service center.

Startup Error Messages

Keyboard error
- ❑ The keyboard is not working.
- ❑ Contact your dealer or an authorized service center.

Keyboard error *nn*
- ❑ BIOS discovered a stuck key and displays the scan code *nn* for the key. Locate the stuck key, and loosen the key.

Operating system not found
- ❑ Operating system cannot be located on either Drive A: or Drive C:.
- ❑ Enter Setup and verify that these two parameters are properly identified.
- ❑ Reset the HDD or reinsert the floppy disk.

Press <F1> to resume, <F2> to Setup
- ❑ This message is displayed after any recoverable error message. Press **F1** to continue the boot process or **F2** to enter Setup and change any settings.

Previous boot incomplete - Default configuration used
- ❑ Previous POST did not complete successfully. POST then loads default values and offers to run Setup. Run Setup to check for incorrect settings.

Startup Error Messages

Real time clock error   ❑ Realtime clock fails test. This may require board repair. Contact your dealer or an authorized service center.

Shadow Ram Failed at offset: *nnnn*   ❑ Shadow RAM failed at offset *nnnn* of the 64K block at which the error was detected. Contact your dealer or an authorized service center.

System battery is dead - Replace and run SETUP   ❑ The CMOS clock battery indicator shows that the battery is dead. Contact your dealer or an authorized service center.

System cache error - Cache disabled   ❑ RAM cache failed the BIOS test and BIOS disabled the cache. Contact your dealer or an authorized service center.

System CMOS checksum bad - run SETUP   ❑ System CMOS has been corrupted or modified incorrectly, perhaps by an application program that changes data stored in CMOS. Run Setup and reconfigure the system either by restoring default values and/or making your own selections.

System RAM Failed at offset: *nnnn*   ❑ System RAM failed at offset *nnnn* of the 64K block at which the error was detected. Contact your dealer or an authorized service center.

Startup Error Messages

System timer error   ❑   The timer test failed. This requires
                               system board repair. Contact your
                               dealer or an authorized service
                               center.