



ALR Ranger User's Manual

Preface

The *ALR Ranger User's Manual* provides the information necessary to operate your new notebook computer, as well as detailed descriptions of all system components.

This manual assumes you have some experience using IBM-type personal computers and are familiar with DOS operating systems. You should know how to use a standard keyboard and understand special keys (for example, **CTRL**). You can obtain background in these areas by referring to your DOS system documentation or various instruction manuals for IBM PC, AT, and PS/2 systems, which you can purchase at your local bookstore.

Chapters and Appendixes in This Manual

The ALR Ranger User's Manual is organized as follows:

- Chapter 1 General Information** — describes the major components of the standard Ranger system, introduces the standard software that is preconfigured on the system— MS-DOS™ 5.0— and gives a brief explanation of the utilities diskette included with the system.
- Chapter 2 Using the Keyboard** — describes the keyboard layout and provides explanations of the various groups of keys.
- Chapter 3 Using the Video Display** - describes the standard video display and its various capabilities.
- Chapter 4 Using the SETUP Program** — discusses the SETUP program which has been provided to allow you to reconfigure your system when you install new options. The program's many special features, such as power management and password support are also discussed.
- Chapter 5 Using the Battery Pack and Adapter** - describes the battery pack and adapter, various ways in which the battery can be charged, removing and installing the battery pack, using the AC adapter, international wall connectors, and international voltages.
- Appendix A System Specifications** - supplies complete, detailed specifications on the standard Ranger system.
- Appendix B System Exploded** - illustrates the system disassembled with callouts for each component.
- Appendix D Hard Drive Characteristics** - Lists the 49 drive types supported by the Ranger system.

The following have also been provided for your convenience:

- List of Acronyms and Abbreviations
- Glossary

Conventions Used in This Manual

The following conventions are used in this manual:

<Enter>

<Enter> means you press the Enter (↵) key. After you type a keyboard entry, you press the Enter key to execute the entry.

Keyboard Entries

Boldface type is used to denote commands you are to type from the keyboard. In the following example, at the system prompt (C>), the system asks you if you want to proceed. Your keyboard entry in this example is **Y** (yes), which is shown in boldface type.

A>PROCEED WITH FORMAT (Y/N)? **Y**<Enter>

Keyboard Sequence

When two or more keys must be pressed to perform a function, they appear hyphenated, and must be pressed in the order shown. All keys must remain pressed until the keyboard sequence is complete. For example:

CTRL-C

means you hold down the CTRL key first, then press the C key (CTRL-C generally ends a program).

CTRL-ALT-DEL

means you hold down the CTRL key first, then hold down the ALT key and press the DEL key. The CTRL-ALT-DEL sequence re-boots the system.

Typing Commands

You can enter commands in either upper-or lower-case letters. For example, typing:

A>**dir** <Enter>

is the same as typing:

A>**DIR** <Enter>

Variables

Words within < > angle brackets are variables and can have many names.

Options

Words or items within [] square brackets are options.

Enter only one of the options from the list provided.

Acronyms and Abbreviations

BIOS	Basic Input/Output System
CMOS	Complementary Metal-Oxide Semiconductor
CPU	Central Processing Unit
DOS	Disk Operating System
DMA	Direct Memory Access
EMM	Extended Memory Manager
EMS	Expanded Memory Specification
FDD	Floppy Disk Drive
HDD	Hard Disk Drive
IDE	Integrated Device Electronics
I/O	Input/Output
ISA	Industry Standard Architecture
LCD	Liquid Crystal Display
LED	Light Emitting Diode
NiMH	Nickel Metal-Hydride
NSTN	Neutral Super Twisted Nematic
RAM	Random Access Memory
ROM	Read-Only Memory
SCSI	Small Computer System Interface
VGA	Video Graphics Array

Chapter 1, Introduction

The ALR Ranger Series is a new generation of modular notebook PCs for those who won't compromise at all on power. This powerful 486-based machine represents the latest in compact computer technology. It operates reliably at high speed and has features you would expect to see in a full-size desktop PC, yet is small enough to carry comfortably in a standard-size briefcase.

The ALR Ranger is fully IBM-PC/AT compatible. The lightweight, fast-access hard disk drive gives plenty of portable storage. The 9-inch diagonal paper-white LCD screen is backlit for easy readability and has full tilt adjustment for minimizing glare in bright light.

This User's Manual describes the general features and the standard system components of the Ranger.

General System Features

The standard system incorporates the following features (each feature is discussed in detail later in this manual):

System Bus

Industry Standard Architecture (ISA) Architecture

Memory

4-MB standard of high-performance (80-ns), interleaved, page-mode RAM is provided. Expandable up to 16-MB on the system board using proprietary 4-MB and 16-MB Genuine ALR RAM Upgrade Kits.

Display

9-inch diagonal backlit paper-white LCD display, having a 640 x 480 resolution with 32 shades of gray, and 1: 1 aspect ratio. The NSTN display has an LCD backlight OFF timer which turns off the LCD backlight at a specified time after operation has ceased (press any key to re-light). The OFF timer value can be set during the initial setup.

Screen

Brightness and contrast are easily adjusted with slider controls. The screen can be tilted a full 180 degrees for easy viewing and minimizing glare in bright light.

Graphics

The LCD display incorporates a VGA mode capability as well as EGA and CGA capabilities.

Diskette Drive

3.5-inch 1.44-MB double-sided/high density floppy disk drive.

Fixed Disk Drive

60-, 80-, or 120-MB fast-access 2.5-inch hard drive using IDE controller

Keyboard

High-quality tactile response 82-key key-board with 101/102-key functionality; full size keys with sculpted key caps; 10 function keys; inverted-T cursor control key pad found in desktop PCs; numeric keypad over-lay, LED status indicator lights

Interfaces	One serial port, one parallel port, one mouse port, one external VGA port, one external keyboard/keypad port (mini-DIN plug for connection to an 84-key or 101-key PC/AT keyboard; pin assignment is compatible with PS/2), one optional SCSI or Scanner port, one optional Fax/Modem port (in/out), one Quick Snap™ pointing device receptacle. Two internal I/O connectors.
ALR Docking Station Port	Station 160-pin port for ALR Docking Expansion Station (available Q3 '92)
Case	Ergonomically designed, lightweight
Physical	11.75-inches wide by 8.5-inches deep by Dimensions 2.3-inches high
Weight	7.6-pounds
Power Sources	Universal, autosensing 100-250v AC Adapter Power Plus NiMH battery pack
Environmental Operational Temperature:	5-35° C Requirements Operational Relative Humidity: 10-80% Non-Condensing
Electrical	Voltage: 30V DC
Requirements	Power Consumption: 1.3 AMPS
Standard Software	MS-DOS™ 5.0; Power Management, ALR Advanced Control™, ALR Utilities

Standard System Component Overview

It is a good idea to become thoroughly familiar with the location of each of your system components before operating the computer. This section provides an overview of the standard system's components and identifies their location.

- These parts are discussed in detail in the chapters that follow.
- For complete details on using the keyboard, refer to Chapter 2.
- For complete details on using the video display, refer to Chapter 3.
- For complete details on using the SETUP program, refer to Chapter 4.
- For complete details on using the battery pack and adapter, refer to Chapter 5.

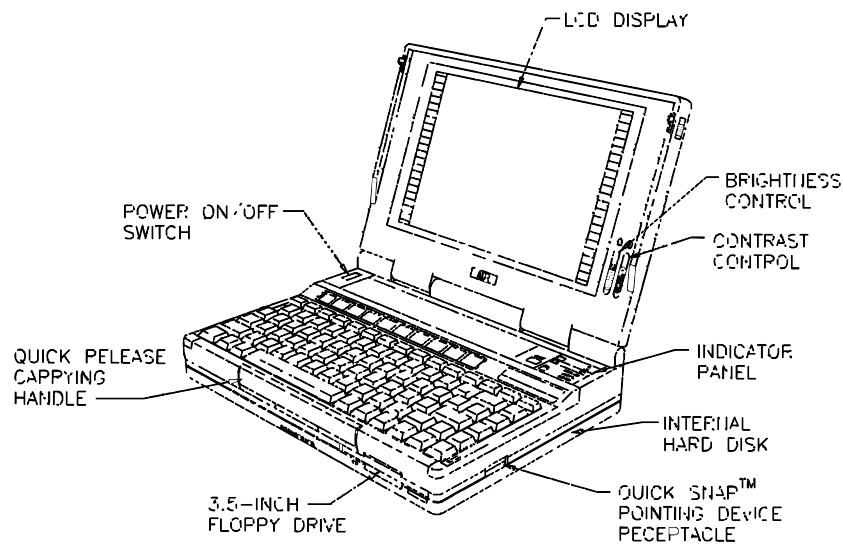


Figure 1-1: System Overview

ON/OFF Switch

Turns system power on and off

LCD Display	9-inch diagonal paper-white LCD display
Brightness Control	Adjusts characters—brighter or dimmer
Contrast Control	Adjusts background—darker or lighter
Quick Snap™	ALR's external pointing device receptacle
3.5-inch Floppy	1.44-MB double-sided/high-density floppy Drive disk drive
Internal Hard Disk	60-, 80-, or 120-MB IDE 2.5" drive
Carrying Handle	Imbedded, quick-release carrying handle

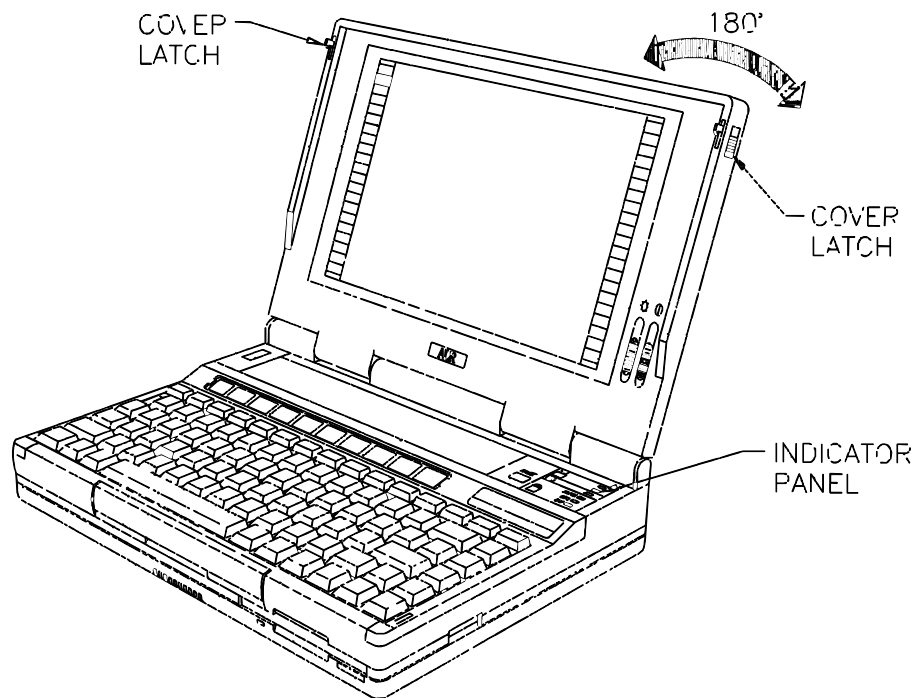


Figure 1-2: Opening the Adjustable Display

Cover Latch	Releases the top of the computer in preparation for work; pull both latches towards you to release
Adjustable Display	the screen tilts 180 degrees for easy viewing and minimizing glare. The hinge holds the display in any position you choose.

Indicator Panel

LED indicator lights communicate the status of various system components such as charging/low battery, hard disk drive in use, scroll lock, caps lock, and number lock.

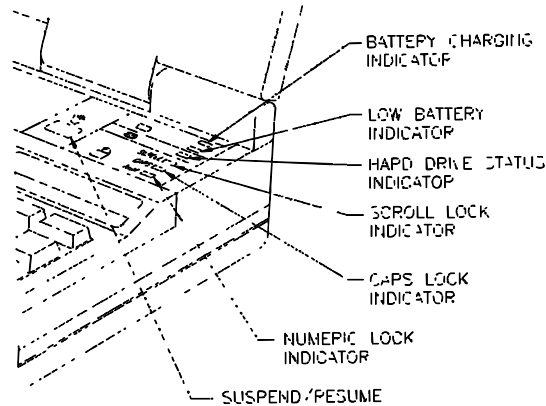


Figure 1-3: Indicator Panel

Battery Charging Indicator

lights when the battery is being charged. When the battery has been fully charged, this light will go out.

Low Battery

lights when the battery has approximately 7% of its charge remaining; you should immediately save your data and charge the battery using the AC adapter. Otherwise, you may lose all data that has not been copied to a disk.

HDD Status

lights or flashes when the hard disk drive Indicator (HDD) is in operation.

Note: never turn the computer off when the HDD status indicator light is on.

Scroll Lock Indicator

lights when Scroll Lock key has been depressed and the cursor is locked on a specific line of the screen; to release, press the Scroll Lock key again.

Caps Lock Indicator

lights when the Caps Lock key has been depressed and all letters typed are capitalized; to release, press the Caps Lock key again.

Numeric Lock Indicator lights when the Num Lock key has been depressed and the keypad overlay has been activated (that is, the numbers on the overlay are activated); to release, press the Num Lock key again.

Suspend/Resume performs a user-initiated system suspend. All subsystems are turned off except the memory and keyboard controller. Current operations are suspended, data is not lost.

To exit suspend mode, press the Suspend/Resume button again; operations resume at the point where they were interrupted and all subsystems are turned on again. When the system is in suspend mode, the ON/OFF button does not function; when pressed, it acts as a resume button. The Suspend/Resume button is also used to exit a system-initiated auto-suspend.

NOTE: When battery power is critical (when the Low Battery LED has been on for some period of time), the system enters suspend mode before it is forced to completely shut down. When this happens, the Suspend/Resume button will not restore operation. In this event, immediately plug in the AC adapter to charge the battery.

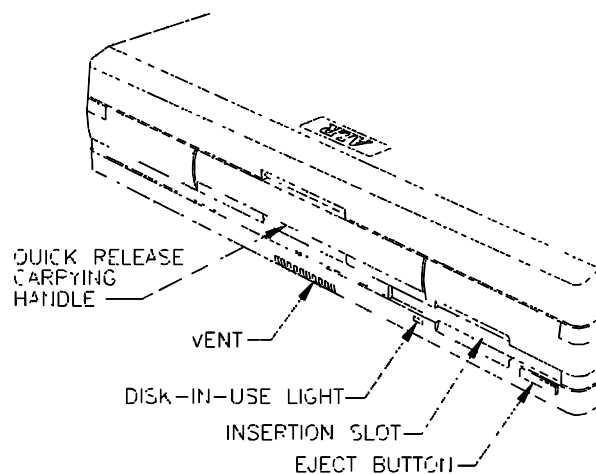


Figure 1-4: Front View

Carrying Handle imbedded, quick-release carrying handle

Vent must be kept clear of obstructions in order to keep the system from overheating when operating

Floppy Disk Drive	internal 3.5-inch 1.44-MB double-sided/high density floppy disk drive
Disk-In-Use Light	green LED lights when floppy disk drive (FDD) operates.
Note:	never remove a diskette or turn the computer off when the disk-in-use light is on.
Insertion Slot	insert floppy diskette (FD) until it is seated properly (eject button pops out)
Eject Button	push button to eject and remove a floppy diskette

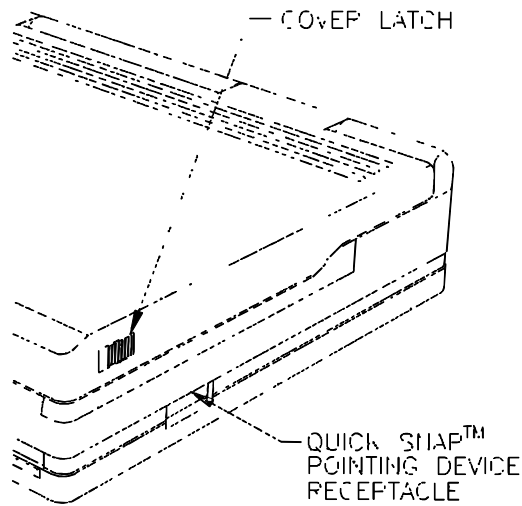


Figure 1-5: Right Side View

Quick Snap™	ALR's external Quick Snap™ pointing device receptacle accepts a trackball mouse, such as the Microsoft BallPoint™ mouse. You simply snap the mouse in, without the aid of clamps and screws, and adjust its tilt angle to a comfortable position.
Cover Latch	releases the top of the computer in preparation for work; pull the latches on both the right and left side of the computer towards you to release.

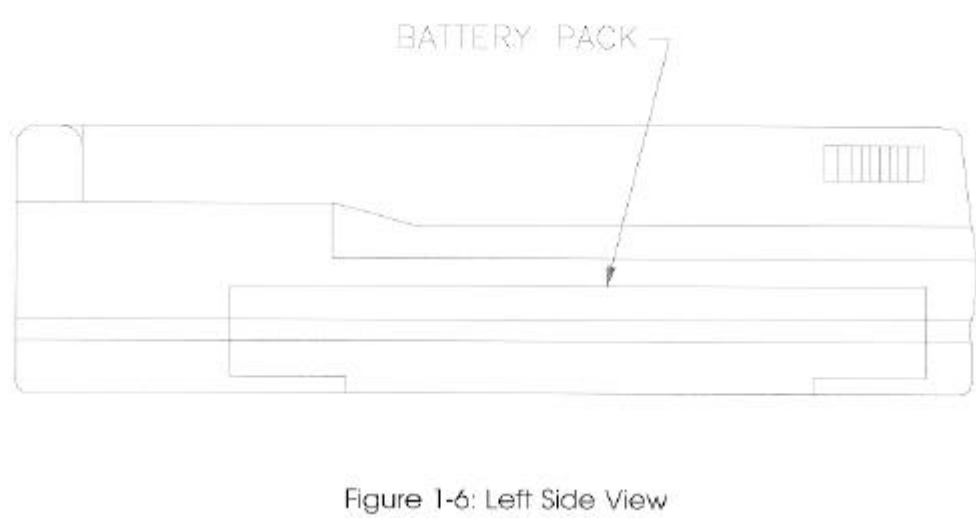


Figure 1-6: Left Side View

Power Plus Battery Pack

Computerized Power Plus NiMH rechargeable/removable battery pack supplies internal power when external power is unavailable.

Remove the battery pack by pushing the battery handle recess button downwards and pulling the pack out. Replace the battery pack by inserting it and pushing in until the pack clicks into place.

WARNING: DO NOT put in fire or mutilate; may burst or release toxic materials. DO NOT short circuit; may cause burns. DO NOT attempt to open or service the battery pack. Disposal of the Ranger NiMH battery pack should be done in accordance with local regulations.

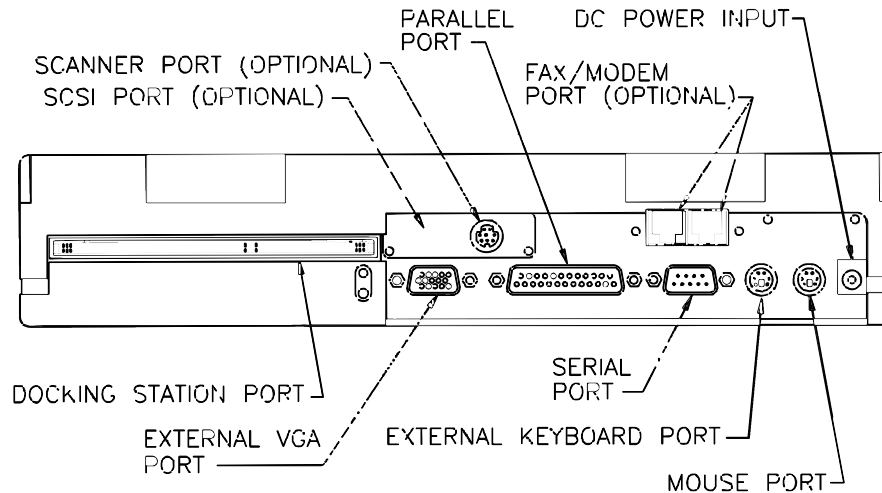


Figure 1-7: Rear View

Docking Station

used for a 160-pin ALR Docking Expansion Station interface

External VGA

used for connecting an optional external VGA display (supports 800 x 600; 16 colors)

NOTE: Turn the machine off when connecting the external VGA; when the machine is turned back on, the internal LCD display is disabled and the external VGA display is enabled. Press **CTRL-ALT-V** to switch between the external and the internal display.

Serial Port

used for connecting optional serial devices

Mouse Port

used for connecting an external pointing device such as Microsoft's BallPoint mouse

External Keyboard/Keypad

used for connecting an optional external PS/2-compatible enhanced keyboard

NOTE: Turn the machine off when connecting the external keyboard; when the machine is turned back on, the external keyboard is enabled. If you do not turn the system off, you will have to reboot the system in order for the external keyboard to be recognized.

SCSI

used for connecting an optional SCSI drive when the optional SCSI Controller card is installed

Scanner	used for connecting an optional scanning device when the optional scanner card is installed (<i>available Q4 '92</i>)
Parallel Port	used to connect a parallel printer
Fax/Modem	used for connecting phone lines when the optional fax/modem card (9600/2400 Baud) is installed
DC Power Input	used for connecting the provided AC power adapter

When you connect the power supply, make sure that the power switch is OFF before you connect the AC power adapter cord to the system unit. Then you may plug it into a properly grounded wall outlet.

CAUTION: Use only the power cord designed for the Ranger. You may severely damage the computer if you try to use any other cord.

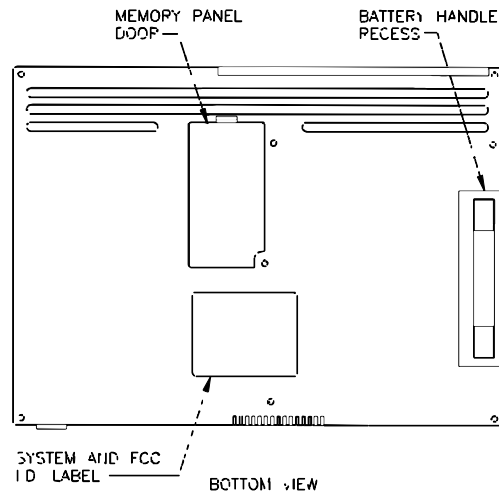


Figure 1-8: Bottom View

Memory Panel	Removable panel that covers the memory connectors where additional memory is installed. To remove the panel, simply depress the top tab and pull the panel outwards.
Battery Handle	the handle used to grasp the battery pack as you remove it from the system. For details on how to install/remove the battery, refer to Chapter 5, "Using the Battery and Adapter."

Standard Software

The system is shipped with:

- MS-DOS™ 5.0 (preconfigured)
- Power Management (preconfigured)
- ALR Advanced Control™
- ALR Utilities Diskette

Features of MS-DOS™ 5.0

Your system comes preconfigured with MS-DOS™. If you have used earlier versions of MS-DOS™, you will find many improvements and new features. The following are just a few of its performance-enhancing features:

- Ability to run MS-DOS in the high memory area
- Ability to run certain device drivers and programs in the upper memory area on an 80386 or higher system
- MS-DOS shell, an improved graphical interface that you can use to manage pro-grams and switch between them
- Added data security provided by two new commands: unformat and undelete
- Online help for all DOS commands
- MS-DOS editor, a new full-screen text editor
- Ability to create large disk partitions easily
- Ability to search files through multiple levels of directories
- Added functionality to the DIR command
- DosKey, a program you can use to recall, edit, and carry out commands that you have already used

- MS-DOS QBasic, an improved Basic programming environment
- Ability to access more than two hard disk drives
- Support for 2.88-MB floppy disks
- New Setup program with online help

Your Microsoft® software is provided by ALR under license from Microsoft®. For more detailed information on features, commands, and usage, please refer to the documentation included in your package.

For problems encountered with your Microsoft software, call ALR Technical Support at (714) 458-0863.

Features of Power Management

The Power Management software drivers (LAP.SYS and POWER.EXE) have already been preconfigured on your hard disk and are located in the CONFIG.SYS file. DO NOT delete these files. If you do, Power Management will not work.

Power Management is accessed from the BIOS SETUP program and can be used to conserve battery power and extend the operating life of the battery.

Refer to the “Using Power Management” section in Chapter 4 of this manual for complete details on Power Management.

Features of ALR Advanced Control™

ALR’s Advanced Control™ software utility interface allows you to monitor system battery life status and charge functions via a hot-key control. You can access such useful in-formation as:

- charge history
- time left on the battery (in hours and fractions of hours)
- many other useful functions

This software utility requires Windows V3.0 to run.

A READ.ME file provides instructions for installation and use.

Features of the ALR Utilities Diskette

The ALR Utility diskette contains a number of extended-resolution text- and graphics- drivers to enhance the operation of your VGA system. These drivers are provided primarily for use with CRTs, but also operate with LCD displays. With LCD displays, however, the resolution is always 640 x 480 regardless of the driver in use.

The VGA system needs no software drivers to run application software correctly in standard-resolution mode. However, the drivers supplied on this diskette provide an improved resolution display with many popular software packages such as:

- AutoCAD
- Lotus 1-2-3
- Windows
- WordStar
- Word Perfect

READ.ME files and on-screen menus describe each of the drivers and provide driver-installation procedures.

To display a READ.ME file on your screen, type the following at the system prompt:

Type READ.ME | more

This will display the READ.ME file one screen at a time; to display the next screen (more) press any key.

To print a READ.ME file on your printer, type the following at the system prompt:

Print READ.ME

Chapter 2, Using the Keyboard

The system keyboard has 82 keys arranged in five major groups:

- text keys
- function keys
- numeric keys
- numeric keypad overlay
- cursor control keys

Text keys are arranged in a standard keyboard layout.

Function keys are located on the top row.

Numeric keys are located at the top of the keyboard, directly under the ten function keys.

Numeric keypad overlay is located on the right side of the central part of the keyboard. The keypad overlay numbers and special characters (*, -, +, /) are dual function keys and are inscribed on the lower right-hand corner of the overlaid keys. To active the numeric keypad overlay, press the “Num Lock” key.

Cursor control keys (or arrow keys) are located on the bottom right-hand side of the keyboard and are arranged in an inverted-T format, similar to that found in desktop PCs.

Figure 2-1 on the following page shows the system keyboard. A detailed discussion of the keyboard keys follows the figure.

Additionally, **Hot Keys** (combinations of keys that are pressed at the same time) are available that allow you to control your system from the keyboard. Hot Keys do not reset the CMOS SETUP screen values; their effects are lost when the system is turned off or rebooted. For details, refer to the “Hot Keys” section of this chapter.

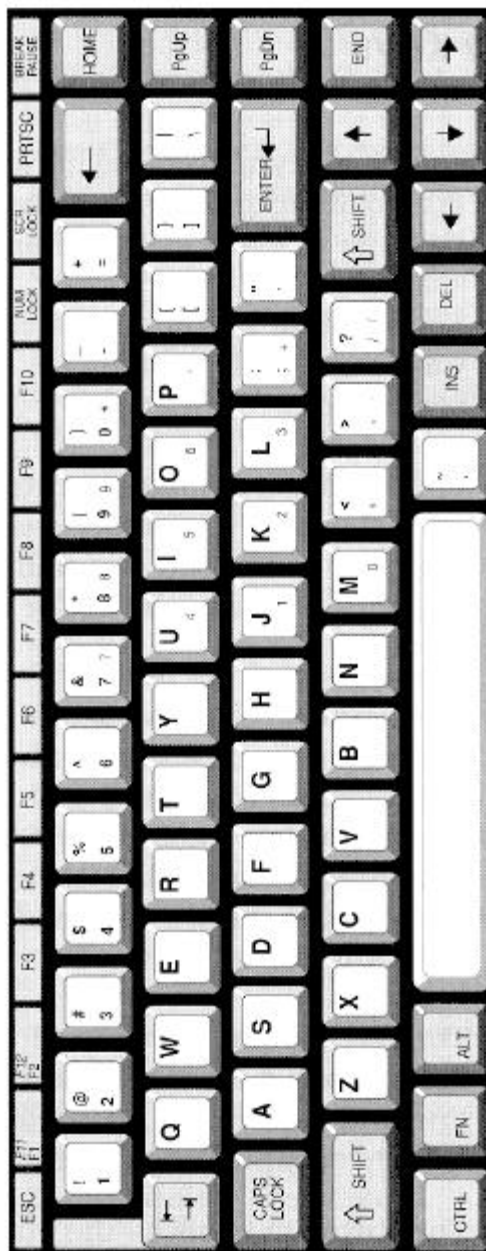


Figure 2-1: System Keyboard Layout

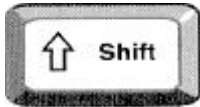
The Keyboard Keys



The **Tab** key moves the cursor to the next tab position to the right. The default tab position is at every eighth character.



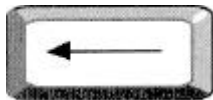
The **Control** key (abbreviated as Ctrl) is always used with another key to perform a command or a function.



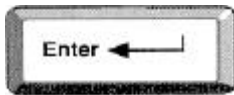
The **Shift** key enables you to change lower-case characters to upper-case characters and vice versa. You can find two shift keys located on either side of the keyboard.



The **Alternate** key (abbreviated as Alt) is always used in combination with other keys to perform a command or a function. For example, for fast entering of GW-BASIC (a programming language) statement key words, or (with the numeric keypad overlay) to enter ASCII codes.



The **Backspace** key is used to move the cursor one character to the left on the current line and deletes the character that previously occupied that location.

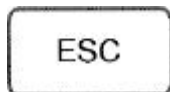


The **Enter** key moves the cursor to the first character of a new line. In most cases, pressing this key after a command results in the computer performing the given command.

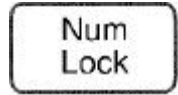


The **Caps Lock** key operates like the shift lock key on a typewriter, and affects (capitalizes) only the letter keys. To release the Caps Lock, press Caps Lock again.

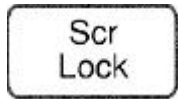
Note: The uppercase letter “O” is not interchangeable with the number zero (0). The lowercase letter “V” is not interchangeable with the number 1.



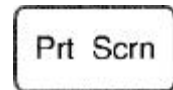
The **Escape** key performs various functions such as canceling a command or exiting from a utility program.



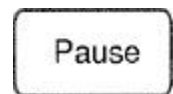
The **Num Lock** key gives access to the numeric keypad overlay which is located on the right side of the central part of the keyboard (refer to Figure 3-1). The keypad overlay numbers are dual function keys and are inscribed in the upper-left hand corner of the letter keys. To activate the numeric keypad overlay, press the Num Lock key.



The **Scroll Lock** key (Scr Lock) lets you lock the cursor on a specific line of a screen.



The **Prt Scrn** key prints the text you currently see on the screen.



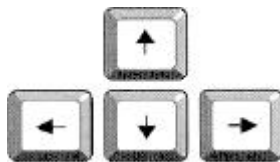
The **Pause** key can be used with the Ctrl key to perform the Break key function.



The **Insert** (Ins) key allows you to insert characters. Any characters you type are displayed on the screen. You can switch Insert mode off by pressing the Insert key again.



The **Delete** (Del) key deletes one character to the left of the current cursor position.



The **Cursor Control** keys move the cursor to the right, left, up, or down. Moving the cursor with these keys will not make any changes to the characters when using most application programs.



The **Home** key allows you to move the cursor to the beginning of the line.



The **Page Up** (PgUp) key allows you to move the screen display one page up.



The **Page Down** (PgDn) key allows you to move the screen display one page down.

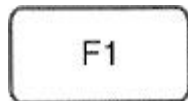


The **End** key allows you to move the cursor to the end of the line.



The **Fn** key is used with the F1 key to perform the functions of the F11 key. It can also be used with the F2 key to perform the functions of the F12 key.

Function Keys



The function keys (F1 - F10) at the top of the keyboard are used for special tasks by different application programs.

Either alone, or in combination with another key such as **Control** or **Alt**, a function key can be used for such purposes as calling up a program's on-screen help facility, extending or moving the cursor, or activating a special mode such as overtyping.

Function Key Template

A plastic template is mounted directly over the function keys. This template may be used for labeling the actions of each function key according to the application being used.

To remove the template, press upwards at both ends until the template bends as illustrated in Figure 2-2 on the following page.

Remove the template from its recessed slot.

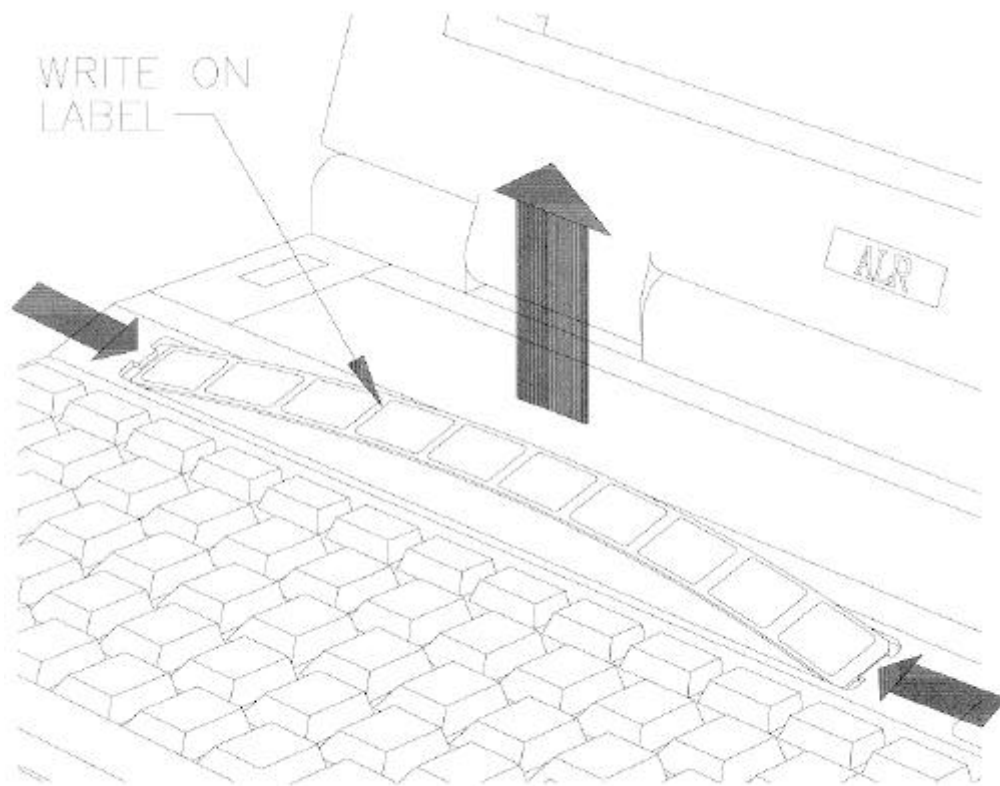


Figure 2-2: Removing the Function Key Template

Hot Keys

Several Hot Keys are available that allow you to control your system from the keyboard. Hot Keys do not reset the CMOS SETUP screen values; their effects are lost when the system is turned off or rebooted.

CTRL-ALT-V	Press CTRL-ALT-V to switch between the internal video display and the external video display.
CTRL-ALT-N	Press CTRL-ALT-N to invoke the normal video mode (dark characters/light background).
CTRL-ALT-R	Press CTRL-ALT-R to invoke the reverse video mode (light characters/dark background).
CTRL-ALT-PLUS (+)	Press CTRL-ALT-PLUS to increase CPU speed. CPU speeds are Fast, Medium, and Slow.

Example: If your CPU is on Slow speed, press CTRL-ALT-PLUS once to change to Medium speed; press CTRL-ALT-PLUS again to change to High speed.

CTRL-ALT-MINUS (-) Press CTRL-ALT-MINUS to decrease CPU speed. CPU speeds are Fast, Medium, and Slow.

Example: If your CPU is on High speed, press CTRL-ALT-MINUS once to change to Medium speed; press CTRL-ALT-MINUS again to change to Slow speed.

CTRL-ALT-ESC Press CTRL-ALT-ESC to call the SETUP program.

CTRL-ALT-DEL Press CTRL-ALT-DEL to reboot the system.

Power Management Mode Hot Keys

The following Hot Keys allow you to invoke different Power Management Modes from the keyboard.

For detailed information on Power Management Modes, refer to the “Using Power Management” section in Chapter 4 of this manual.

CTRL-ALT-H Press CTRL-ALT-H to invoke the High Power Management Mode.

CTRL-ALT-M Press CTRL-ALT-M to invoke the Medium Power Management Mode.

CTRL-ALT-O Press CTRL-ALT-O to invoke the Off Power Management Mode.

CTRL-ALT-U Press CTRL-ALT-U to invoke the User-Defined Power Management Mode.

Suspend/Resume Button Cautions

You should not use the Suspend/Resume button when the floppy disk drive Disk-In-Use Light is on. However, if you do press this button while the Disk-In-Use Light is on, the system will suspend, and when you restart you will receive several error messages, followed by the query “Abort, Retry, Ignore.” If you select Retry, the operation may be restored but you may have lost some or all of your data.

When the Suspend/Resume mode is in effect the ON/OFF button does not function; when pressed, it acts as a resume button.

To exit the suspend/resume mode, press the suspend/resume button again; operations resume at the point where they were interrupted and all subsystems are turned on again.

How long the system can be left in suspend mode depends on whether or not it is plugged in or operating on battery power alone. This feature is recommended for brief periods when you are away from your computer or possibly overnight use.

Although data is not lost in this mode, it is always a good idea to back up your data to guard against the unforeseen.

NOTE: When battery power becomes critical (after the Battery Low light has been on for approximately 15 minutes), the system will enter suspend mode before it is forced to completely shut down. When this happens the Suspend/Resume button, when pressed, will not restore operation. In this event, immediately plug the system in for re-charging.

Chapter 3, Using the Video Display

This chapter describes the LCD video display and its various capabilities.

Features List

- 9-inch diagonal backlit paper-white LCD display with 1:1 aspect ratio
- VGA graphic display featuring 640 x 480 resolution in 32 shades of gray
- 256-KB of onboard video memory
- Compatible with graphics software that supports a variety of industry-standard display adapters such as EGA, CGA
- 180 degree screen tilt adjustment capability for easy viewing and minimizing glare
- Adjustable brightness and contrast slider controls
- Normal or reverse video text and graphics display
- LCD Video Inactivity Time Out
- 50-row text line display capability

Video Display

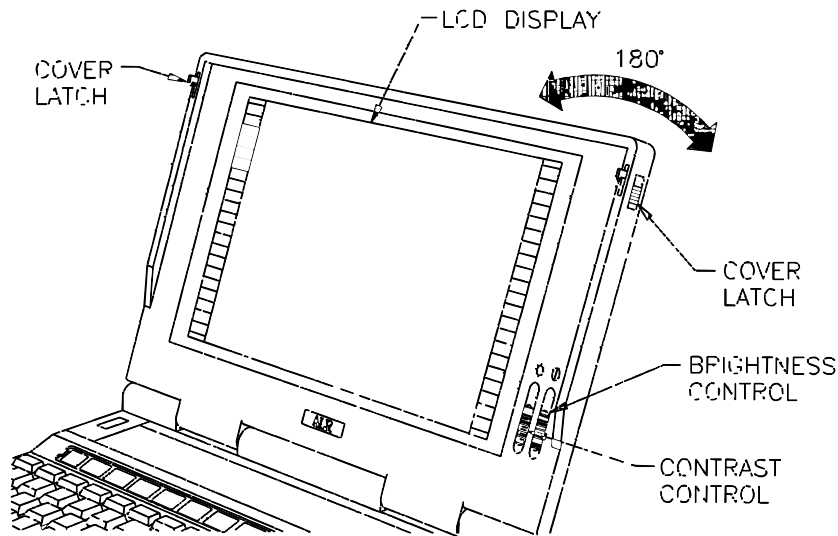


Figure 3-1: VGA LCD Display

ELECTRICAL SHOCK HAZARD! Do not remove the LCD video display housing cover. There are no user-serviceable parts inside.

Opening this cover will expose you to hazardous voltages, which are contained inside and could result in a risk of fire or electrical shock. Refer all servicing in this compartment to authorized service personnel.

LCD Display

9-inch diagonal backlit paper-white LCD display having 640 x 480 resolution, with 32 shades of gray, and 1:1 aspect ratio. The display has an LCD backlight inactivity timer which turns off the backlight at a preset time after operation has ceased (press any key to re-light). The inactivity timer (as well as normal and reverse video) can be set during the initial setup. These two options are explained in the next sections.

Cover Latch

releases the top of the computer in preparation for work; pull both latches towards you to release

Adjustable Display

the screen tilts 180 degrees for easy viewing and minimizing glare. The hinge holds the display in any position you choose.

Brightness Control

adjusts characters—brighter or dimmer. To conserve battery power, do not set this control to the brightest setting unless necessary.

Contrast Control

adjusts background—darker or lighter. To conserve battery power, do not set this control to the lightest setting unless necessary.

External VGA

The optional external VGA (800 x 600; 16 color) display is connected to the external VGA port on the rear of the machine.

NOTE: Turn the machine off when connecting the optional external VGA; when the machine is turned back on, the internal LCD display is disabled and the external VGA display is enabled. For complete details, refer to the ALR Ranger Options manual.

Once the external VGA is connected properly, you may switch back and forth between the external display and the internal display by typing the Hot Key combination CTRL-ALT-V.

LCD Video Inactivity Time Out

The LCD Video Inactivity Time Out feature is controlled through the SETUP program on the Power Management Feature Control screen—Page 3 of 3. (Refer to the “Using Power Management” section of Chapter 4 for complete details.)

You can use this feature to conserve battery power by specifying that the LCD display and backlight should be turned off if there has been no system activity for a period of time that you define.

The LCD display and backlight come back on when any key is pressed or the mouse is moved.

When this feature is DISABLED, the LCD display and backlight are always on.

When this feature is ENABLED, the LCD display and backlight are turned off when the system has been inactive for a user-specified period of time.

IMPORTANT: The LCD display and backlight use more energy than any other subsystem. Setting this timer to a lower value saves a great deal of energy.

NOTE: When battery power is critical, the system enters suspend mode before it is forced to completely shut down. When this happens the LCD display and backlight will be turned off and cannot be reactivated. In this event, immediately plug the system in for recharging.

Normal and Reverse Video

The Normal and Reverse Video feature is controlled through the SETUP program on the Hardware Device Configuration screen— Page 2 of 3. (Refer to Chapter 4, “Using the Setup Program,” for complete details.)

You can use this feature to control how text is displayed as well as how graphics are displayed.

Text

When this feature is set to NORMAL the characters are dark and the background is light.

When this feature is set to REVERSE, the characters are light and the background is dark.

Graphics

When this feature is set to NORMAL the graphics are dark and the background is light.

When this feature is set to REVERSE, the graphics are light and the background is dark.

Video Cautions

Do not touch, press, or rub the display panel with a hard, stiff tool or object as the panel is easily scratched.

Never use solvents such as soap or Windex to clean the display panel, as these solvents will adversely affect the display.

To clean the display panel, dampen a soft cloth with water and gently wipe the panel taking care that no water enters the sides of the display panel.

Avoid storing the system under high temperatures and high humidity conditions, as this will adversely affect the display panel.

Do not place external devices or other objects on top of the notebook computer when it is closed as this can adversely affect the display panel.

Chapter 4, Using the SETUP Program

Overview

Your system has already been set up or configured at the factory.

Additionally, MS-DOS 5.0 has been installed and preconfigured on your system.

When you power-up your system, it is ready for you to install your favorite application software and begin work. (Refer to the DOS documentation that came with your system for detailed information on MS-DOS 5.0).

The SETUP program has been provided to allow you to reconfigure your system when you install additional options.

The SETUP program also provides many special features such as power management and password support options.

Additionally, online field-level help is available and can be accessed by simply placing the cursor in the field in question and pressing the F1 key.

Powering Up the System

Power up the system by pressing the power ON/OFF switch. The green LED (power status indicator) will light when power is on.

On power-up the system checks its memory. The system memory check takes from 3 to 15 seconds to complete, depending on the amount of system memory. The monitor displays a power-up message, similar to the one shown in the figure below.



Figure 4-1: Power-Up Message Screen

Since MS-DOS 5.0 was installed and preconfigured at the factory, the DOS C:> prompt will be displayed at the end of the system memory check.

Activating the SETUP Program

To activate the SETUP program, press **CTRL-ALT-ESC** at the DOS prompt.

Use the following keys to control the SETUP program:

- Up (↑), and down (↓) arrow keys to move the shaded cursor to the appropriate field on the screen.
- Space bar, plus key (+), and minus key (-) to scroll through and select the appropriate value for the field (e.g., Installed, Not Installed).
- PgUp/PgDn keys to toggle between the main, second, and third SETUP screens.
- Esc key to access the ****Exiting SETUP**** screen. You are then given four choices:
 - Esc key to continue with the SETUP program. This key cancels your request for the ****Exiting SETUP**** screen and takes you back to the SETUP program. Any configuration changes you have made remain intact.
 - F4 key to save the configuration values you have just entered. This key exits the SETUP program and reboots the machine in order to have your configuration values take effect.
 - F5 key to load default values for all pages. This key sets all configuration values for all three SETUP screens back to the default factory settings.
 - F6 key to abort SETUP without saving values. This key allows you to undo any changes you have made to configuration values during the current session; in other words, your most recent changes are abandoned.

The SETUP program is displayed on three screens:

- Standard System Parameters

- Hardware Device Configuration
- Power Management Feature Control

Each of these three screens is discussed in the sections that follow. The valid value selections for each field are listed.

When you initially activate the SETUP program, the system responds with the Standard System Parameters screen (Page 1 of 3) as shown in the Figure on the following page.

Standard System Parameters Screen

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** Standard System Parameters **

System Time: 14:38:44

System Date Mar 24, 1992

Diskette A: 3.5-Inch, 1.44 MB

Diskette B: Not Installed

Hard Disk 1: Type 1

Hard Disk 2: Not Installed

Base Memory: 640 KB

Extended Memory: 3328 KB

CPU Speed: Fast

Cyl Hd Pre LZ Sec Size

Automatically detects internal drive characteristics (user may not modify)

Esc Menu

F1 Help

F2 Sys Info

↑ ↓ Field

+/- Value

PgUp/Dn Page

The selections available for each option are:

System Time:	Hour/Minute/Second (HH :MM : SS)
System Date:	Month/Day/Year (MMM/DD/YYYY)
Diskette A:	3.5 Inch, 1.44 MB (internal floppy is automatically configured) This field does not accept direct input
Diskette B:	Not Installed 5.25 Inch, 360 KB 5.25 Inch, 1.2 MB 3.5 Inch, 720 KB 3.5 Inch, 1.44 MB
Hard Disk 1: ¹	Type 1 (internal hard drive is automatically configured) This field does not accept direct input
Hard Disk 2: ¹	Not Installed (also used for SCSI drive) Type 2 (docking station IDE drive is automatically configured) This field will accept direct input
Base Memory:	Automatically configured This field will accept direct input
Extended Memory:	Automatically configured This field will accept direct input
CPU Speed:	Fast Medium Slow
Internal Drive	¹ Hard Disk 1: the system automatically detects the characteristics of the Ranger's internal IDE drive and lists them under Type 1. The user may not modify this field.
External IDE Drive	¹ Hard Disk 2: the system automatically detects the characteristics of an optional external IDE drive and lists them under Type 2. This field may be modified by the user. Note: the Docking Station does not support MFM, ESDI, or RLL drives.

If there is an error in the CMOS, or if the system cannot properly detect the characteristics of your hard drive, the default settings for Drive Type 2 will be displayed (Cylinders = 615, Heads = 4, Precomp = 300, Landing Zone = 615, Sectors = 17, Size (megs) = 20). In this event, you can either:

- Reinitialize your CMOS (resets all fields to default settings) and try again.
- Press F1 twice to display a table listing 49 IDE hard disk drive characteristics supported by the system and select the Drive Type that displays the proper hard drive characteristics for your hard drive.
- Use drive types 48 and 49, which are user-definable. That is, you can set the parameters according to your drive specification. For example, if your second hard drive's parameters are not available from the table listed when you pressed F1, you can custom tailor them. To do so, perform the following:
 1. Use the down arrow (↓) key to move the cursor to Hard Disk 2:.
 2. Press the right arrow (→) key to move the cursor to drive type and set it to Type 48.
 3. Press the down arrow (↓) key to move the cursor to Cyl, Hd, Pre, LZ, Sec, and Size
 4. Select the appropriate parameters according to your hard drive specification.

External SCSI Drive

The system can accept an optional SCSI controller card which supports an optional external SCSI hard disk drive (Hard Disk 2). Since SCSI hard disk drives do not have drive types, you must set the Hard Disk 2 field to "Not Installed" in order for your SCSI controller and drive to function properly.

²Whichever speed is selected—Fast, Medium, or Slow—is the maximum speed at which the CPU processor will ever run.

If your system seems sluggish, you may want to change to a faster CPU speed.

Hardware Device Configuration Screen

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Page 2 of 3	
** Hardware Device Configuration **	
Internal Hard Disk:	Enabled
Internal Floppy Disk	Enabled
Serial Port:	COM1
Parallel Port:	LPT1
Modem:	Disabled
Video Mode (Text):	Reverse
Video Mode (Graphics):	Normal
Supervisor Password:	Password Disabled
Password Options:	Disable Password
User Password:	Password Disabled
Esc Menu	F1 Help
F2 Sys Info	↑↓ Field
	+/- Value
	PgUp/Dn Page

The selections available for each option are:

Internal Hard Disk: ¹	Enabled Disabled
Internal Floppy Disk:	Enabled Disabled
Serial Port: ²	COM1 COM2 Disabled
Parallel Port:	LPT1 LPT2 Disabled
Fax/Modem Port: ²	Disabled COM1 COM2
Video Mode (Text):	Reverse (light characters/dark background) Normal (dark characters/light background)
Video Mode (Graphics):	Normal (dark graphics/light background) Reverse (light graphics/dark background)
Supervisor Password: ³	Password Disabled Enter Supervisor Password
Password Options: ³	Change User Password Enable Password Disable Password Change Supervisor Password
User Password: ³	Password Disabled Enter Old User Password Enter New User Password

¹ Disabling your internal IDE hard disk drive is never recommended.

² Although it is possible to select the same I/O port address (for example, COM 2) for the serial port and the fax/modem port, selecting the same address for both ports results in an unpredictable response and should not be done.

If the fax/modem port field is set to Disabled when not in use, it will save battery power.

³ For detailed information on password support, refer to the “Password Support” section later in this chapter.

Power Management Feature Control Screen

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Page 3 of 3

** Power Management Feature Control **

Power Management Mode:High

Power Management with AC:Disabled

Beep when Battery Low:Enabled

Settings

*The fields below affect battery life. The **High**, **Medium**, and **Off** Power Management modes each display different preset values in these fields.*

Processor Sleep Mode:Enabled

Processor Auto Fast Mode:Enabled

Inactivity Time Outs

Auto Suspend:Enabled00:05:00

Hard Drive:Enabled01:00

LCD Video:Enabled02:00

EscMenu

F1Help

F2Sys Info

↑↓Field

+/-Value

PgUp/DnPage

The selections available for each option are:

Power Management Mode: **High**
 Medium
 Off
 User-Defined

Power Management with AC: Disabled
 Enabled

Beep when Battery Low: Enabled
 Disabled

Settings

The fields below affect battery life. The **High**, **Medium**, and **Off** Power Management modes each display different preset values in these fields.

Processor Sleep Mode: Disabled
 Enabled

Processor Auto Fast Mode: Disabled
 Enabled

Inactivity Time Outs

Auto Suspend: Disabled
 Enabled HH:MM:SS

Hard Drive: Disabled
 Enabled MM:SS

LCD Video: Disabled
 Enabled MM:SS

A complete explanation of power management options follows.

Using Power Management

This section describes how the Power Management Feature Control screen can be used to extend the operating time of the battery. Each field on the screen, and the valid values for that field, are explained in detail.

Power Management Mode

There are four power management modes:

- **High**

- **Medium**
- **Off**
- **User-Defined**

The **High**, **Medium**, and **Off** modes each display different preset values in those fields that affect battery life. **High** mode maximizes battery life; **Off** mode minimizes battery life. The **User-Defined** mode allows you to custom tailor the values in all fields to suit your own unique needs.

The chart on the following page lists each Power Management mode and its preset values for those fields that affect battery life. This chart is followed by a discussion of each of the Power Management modes.

Fields that Affect Battery Life	Power Management Modes			
	High	Medium	Off	User-Defined
Processor Sleep Mode	Enabled	Enabled	Disabled	Set by user
Processor Auto Fast Mode	Enabled	Enabled	Disabled	Set by user
Auto Suspend	Enabled 00:05:00	Enabled 00:15:00	Disabled	Set by user
Hard Drive	Enabled 01:00	Enabled 04:00	Disabled	Set by user
LCD Video	Enabled 02:00	Enabled 05:00	Disabled	Set by user

HIGH: This mode's preset values, for those fields that affect battery life, conserve the most battery energy and thus maximize battery power conservation. This is the default setting.

The hot key **CTRL-ALT-H** allows you to invoke this mode from the keyboard. Hot Key settings are temporary and the change is in effect only until the system is reset, turned off, or another Power Management hot key is pressed.

MEDIUM: This mode's preset values, for those fields that affect battery life, conserve a moderate amount of

battery energy; this allows a marginal improvement in system performance.

The hot key **CTRL-ALT-M** allows you to invoke this mode from the keyboard. Hot Key settings are temporary and the change is in effect only until the system is reset, turned off or another Power Management hot key is pressed.

OFF: This mode's preset values, for those fields that affect battery life, conserve the least amount of battery energy and thus minimize battery power conservation and maximize system speed and performance.

The hot key **CTRL-ALT-O** allows you to invoke this mode from the keyboard. Hot Key settings are temporary and the change is in effect only until the system is reset, turned off, or another Power Management hot key is pressed.

If your operating system has problems with all forms of power management you should use this mode.

USER-DEFINED: This mode allows you to custom tailor the values in all fields to suit your own unique needs.

The hot key **CTRL-ALT-U** allows you to invoke this mode from the keyboard. Hot Key settings are temporary and the change is in effect only until the system is reset, turned off, or another Power Management hot key is pressed.

The following fields do not affect battery life and are not affected by the Power Management modes. These fields accept user input.

Power Management with AC

DISABLED: Power Management is only in effect when the computer is operating under battery power. Power Management is turned off when the power source is switched from battery to AC power. This is the default setting.

ENABLED: Power Management is in effect whether the computer is operating under AC power or battery power.

Beep when Battery Low **DISABLED:** “battery low” warning signal beeps are not audible.

ENABLED: “battery low” warning signal beeps are audible. This is the default setting.

Settings

The following fields affect battery life.

The User-Defined Power Management mode allows you to custom tailor the values in these fields to suit your own unique needs. The **High**, **Medium**, and **Off** Power Management modes each display their own preset values and do not accept user input.

Processor Sleep Mode **DISABLED:** the CPU operates normally and is always on.

ENABLED: CPU activity is monitored. During periods of inactivity, the CPU is momentarily turned off. Operation is resumed on the next interrupt (clock tick) or I/O activity (key pressed or mouse used).

Processor Auto Fast Mode **DISABLED:** the CPU operates normally in low power mode in order to conserve battery power. For example, the 486SX/20 would operate at approximately 5.0 to 2.5-MHz and the 486DX/25 would operate at approximately 12.5 or 6.25-MHz.

ENABLED: CPU activity is monitored. During periods of intense or peak activity, the CPU operates at full speed. The CPU switches to low power mode again when the level of activity decreases in order to conserve battery power.

If your system seems sluggish, you may want to **ENABLE** this option.

Inactivity Time Outs

Inactivity time outs increase battery life by turning off or pausing inactive subsystems until they are needed, thus increasing battery life.

The **User-Defined Power Management** mode allows you to custom tailor the values and times in these fields to suit your own unique needs.

The **High**, **Medium**, and **Off** Power Management modes each display their own preset values and times (as listed in the table on page 4-15). These fields do not accept user input.

Auto Suspend

DISABLED: the entire system is not suspended, even in periods of complete inactivity.

ENABLED: the entire system is monitored and when it has been inactive for the user-specified period of time (up to 44:59:55), a system-initiated suspend is performed to conserve battery power. All subsystems are turned off except the memory and the keyboard controller. Current operations are suspended and data is not lost.

The ON/OFF button does not function; when pressed, it acts as a resume button.

The system-initiated suspend is discontinued when the Suspend/Resume button is pressed. Operations resume at the point where they were interrupted.

Hard Drive

DISABLED: hard disk drive is always on.

ENABLED: hard disk drive idle or sleep mode is initiated when the hard disk drive has been inactive for the user-specified period of time (up to 20:55). The hard disk drive remains idle (spins down) until it is accessed again.

IMPORTANT: The hard disk drive uses a substantial amount of energy. Setting this timer to a lower value saves energy.

LCD Video

DISABLED: the LCD display and backlight are always on.

ENABLED: the LCD display and backlight are turned off when the system has been inactive for the user-specified period of time (up to 20:55).

The LCD display and backlight come back on when any key is pressed (ALT key is recommended since this has no effect on current data) or the mouse is moved.

IMPORTANT: The LCD display and backlight use more energy than any other subsystem. Setting this timer to a lower value saves a great deal of energy.

NOTE: When battery voltage is critically low, the system will enter low battery suspend mode to prevent loss of data; the LCD display and backlight are turned off before the system is forced to completely shut down. When this happens, operation will not be restored when any key is pressed. In this event, immediately plug the system in for recharging. The low battery suspend mode is more fully explained in Chapter 5 of this manual.

Power Management Cautions

When your computer was configured at the factory, the Power Management drivers were placed in the CONFIG.SYS file. These driver files are named LAP.SYS and POWER.EXE.

DO NOT delete these files. If you do, Power Management will not work.

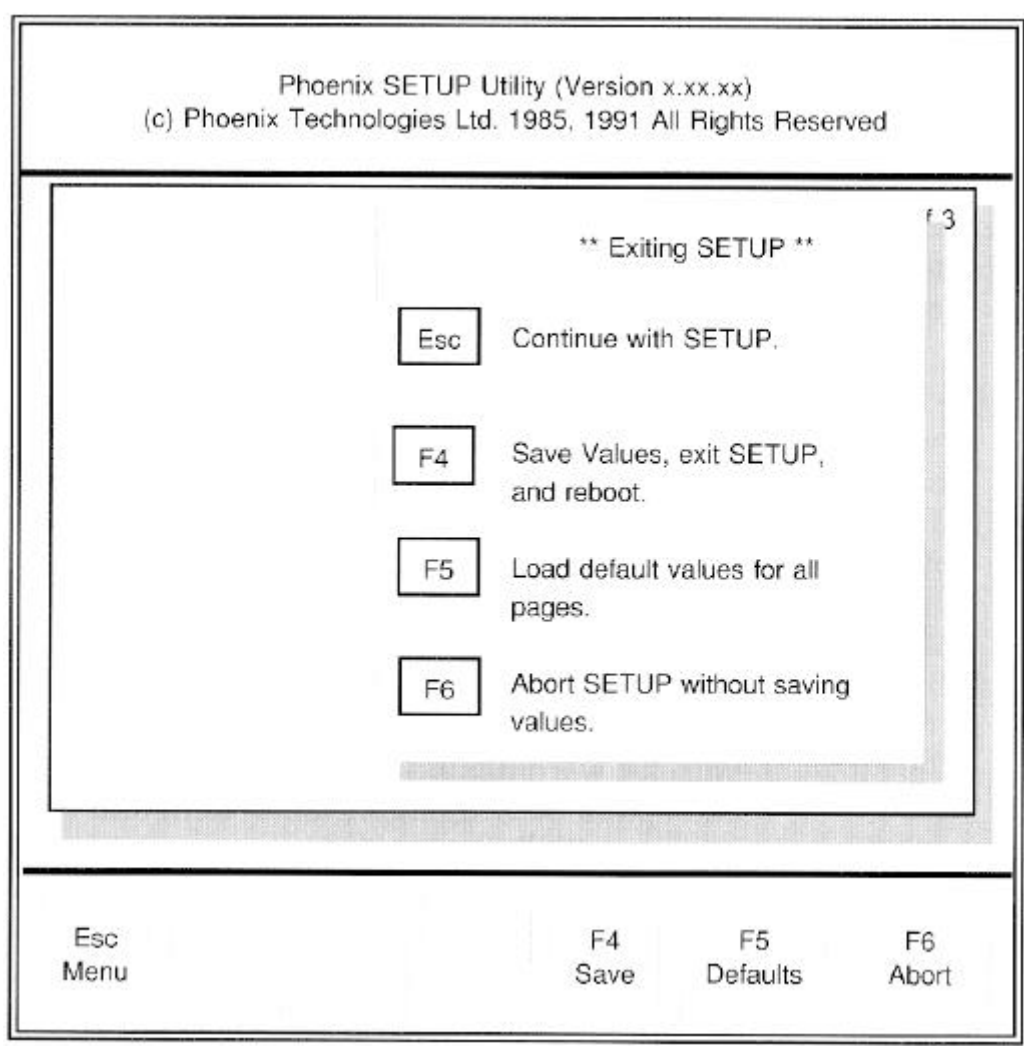
If you boot your system off of a floppy disk and it does not load these drivers, Power Management will not work.

Additionally, if the Power Management drivers are not present, the system does not have the capability to initiate a suspend mode.

Because the system cannot go into suspend mode when the battery power becomes critically low, the system will simply shut down without warning and you will not be given the option of plugging in the system and recharging the battery.

Exiting the SETUP Program

To exit the SETUP program, press the **Esc** key; a screen similar to the one below will be displayed.



After pressing the **Esc** key to access the **** Exiting SETUP **** screen you are presented with the following choices:

- Press the **Esc** key again to continue with the SETUP program. This key cancels your request for the **** Exiting SETUP **** screen and takes you back to the SETUP program. Any configuration changes you have made remain intact.

- Press the **F4** key to save the configuration values you have just entered. This key exits the SETUP program and re-boots the machine in order to have your configuration values take effect.
- Press the **F5** key to load default values for all pages. This key sets all configuration values for all three SETUP screens back to the default factory settings.
- Press the **F6** key to abort SETUP without saving values. This key allows you to undo any changes you have made to configuration values during the current session; in other words, your most recent changes are abandoned.

System Information Screen (F2)

Phoenix SETUP Utility (Version x.xx.xx) (c) Phoenix Technologies Ltd. 1985, 1991 All Rights Reserved																																							
<p align="center">** System Information **</p> <p>ALR Ranger M</p> <table><tr><td>Processor Type:</td><td>80486</td><td>Option ROMs Found:</td><td colspan="2"></td></tr><tr><td>Coprocessor Type:</td><td>None</td><td></td><td colspan="2">No Option ROMs found</td></tr><tr><td>Reserved Memory:</td><td>384 KB</td><td></td><td colspan="2"></td></tr><tr><td>BIOS Version #:</td><td>1.01.02</td><td></td><td colspan="2"></td></tr><tr><td>Video Mode:</td><td>03h</td><td></td><td colspan="2"></td></tr><tr><td>Serial Ports:</td><td>03F8h</td><td></td><td colspan="2"></td></tr><tr><td>Printer Ports:</td><td>0378h</td><td></td><td colspan="2"></td></tr></table> <p align="center"><Press any Key></p>					Processor Type:	80486	Option ROMs Found:			Coprocessor Type:	None		No Option ROMs found		Reserved Memory:	384 KB				BIOS Version #:	1.01.02				Video Mode:	03h				Serial Ports:	03F8h				Printer Ports:	0378h			
Processor Type:	80486	Option ROMs Found:																																					
Coprocessor Type:	None		No Option ROMs found																																				
Reserved Memory:	384 KB																																						
BIOS Version #:	1.01.02																																						
Video Mode:	03h																																						
Serial Ports:	03F8h																																						
Printer Ports:	0378h																																						
Esc Menu	F2 Sys Info	↑↓ Field	+/- Value	PgUp/Dn Page																																			

These fields are all automatically generated by the system and do not accept direct input.

This screen is meant to give you information about your system and how it is configured.

Press any key to exit this screen and return to the previous screen.

Password Support

The SETUP program provides several password support options. Passwords are an effective security measure used to restrict access to computer systems and sensitive files by requiring the user to enter a password.

A password is a unique string of characters that a user types in as an identification code. The system compares the code against a stored list of authorized passwords and users. If the code is legitimate, the system allows the user access.

The program supports a supervisor password and user passwords with BIOS version 1.02.00 or later.

Be sure to keep a record of the password. Many users have lost work permanently because they forgot their password.

This section describes the features that are supported and explains how to set up and use this new password support.

Features

Supports User Password of up to 7 alphanumeric characters (defaults to no password)

- Supports Supervisor Password of up to 7 alphanumeric characters (defaults to the string "Power")
- Supports Supervisor Options which include:
 - Enable password
 - Disable password
 - Change user password
 - Change supervisor password

All password support options are located on the second setup screen "Hardware Device Configuration."

How to Access and Use Password Support

All password support options are accessed through the SETUP program, which is activated by pressing the **CTRL-ALT-ESC** keys.

There are three password support options on the SETUP screen:

- Supervisor Password
- Password Options
- User Password

Each option has several different selections that you may scroll by using the Space bar.

The chart on the following page lists each password support option on the SETUP screen and the different selections within that option.

Table 4-1: SETUP Screen Password Support Options

Supervisor Password	User Password	Password Options
Password Disabled*	Change User Password*	Password Disabled*
Enter Supervisor Password	Enable Password	Enter Old User Password
	Disable Password	Enter New User Password
	Change Supervisor Password	
* This is the default selection on a new machine.		

Your system is shipped in “unprotected” mode (that is, no password is required to access the system). The following sections describe how to access and use password support in order to place your machine in a “protected” mode (that is, a user/supervisor password is required to access the system).

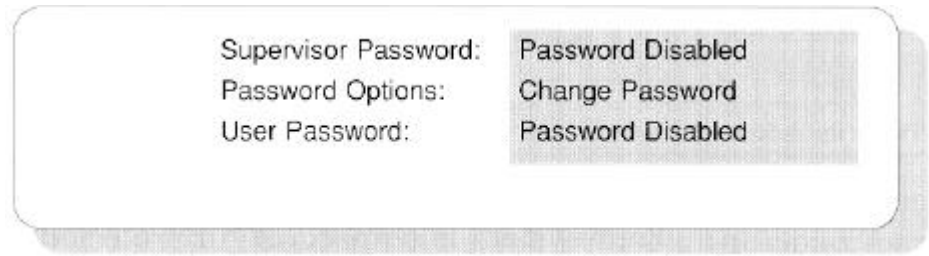
NOTE: When Password Options: Disable Password is selected, all password security is disabled until Enable Password is selected.

Establishing a User Password

When your system arrives, there will be no user password (the default is no password). You can establish the initial password through the SETUP program as follows:

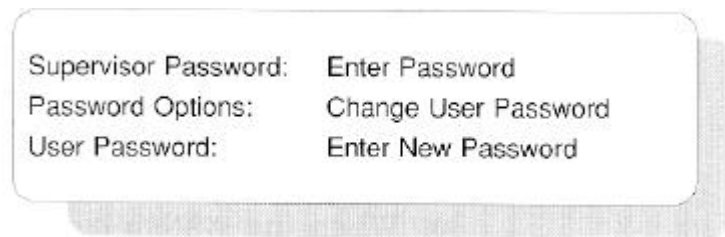
1. Activate the SETUP program by pressing **CTRL-ALT-ESC**. The first or main SETUP screen will be displayed.
2. Press the **PgUp** key to advance to the second SETUP screen.

The password options on the second screen will be displayed, similar to the illustration below.



3. Use the up (↑) or down (↓) arrow keys to move the cursor to the **Password Options:** option.
4. Use the Space bar, plus (+) or minus (-) keys to scroll to the **Enable Password** selection and press **<Enter>**.

The SETUP screen password support options will now display the following selections:



5. Use the up (↑) or down (↓) arrow keys to move the cursor to the **Change User Password:** option.
6. Type the password you want to use and press **<Enter>**. The screen displays asterisks (*) for each character that you type

NOTE: The password may have from 4-7 alphanumeric characters (spaces are not allowed) and is not case-sensitive. For example, if you type the password as “UNICORN” now, and later you type the password as “unicorn” or “Unicorn,” the system will still recognize the password.

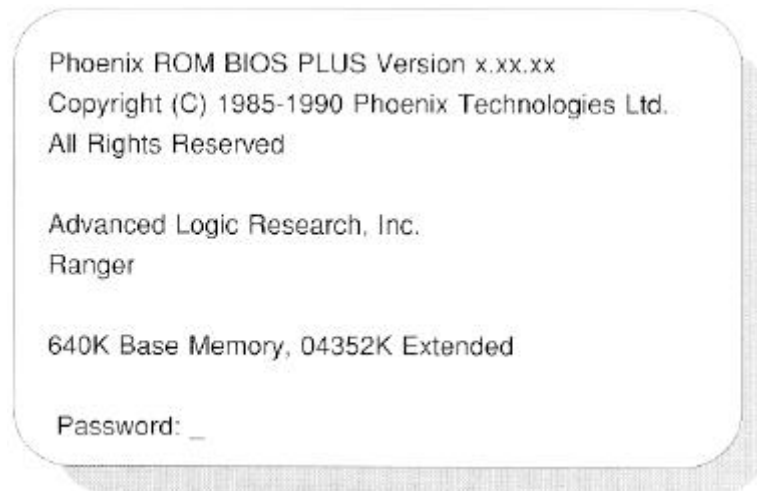
If the password that you typed is invalid (for example, more than 7 characters), the system responds with:

INVALID Password

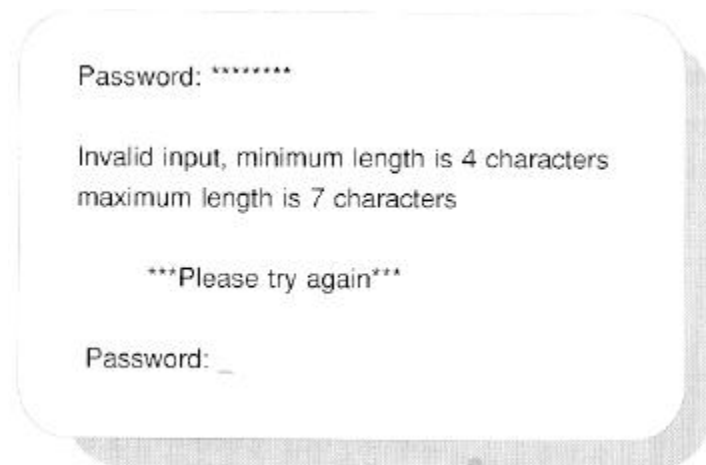
If the password that you typed is valid, the system responds with:

Password Accepted

7. Press the **Esc** key to automatically re-boot the system. (There is no need to enter the old password when you are establishing the initial password.)
8. When the system has rebooted the following screen will be displayed:

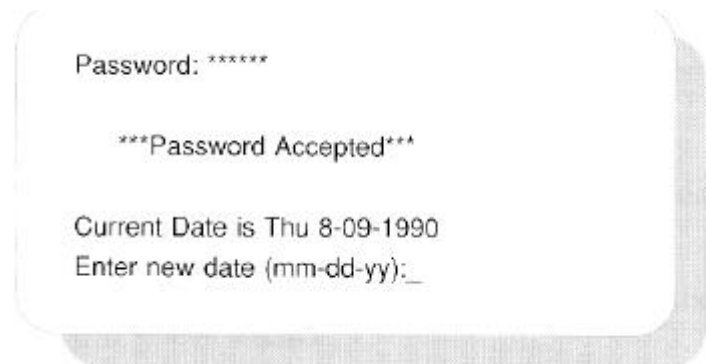


9. Type in the password you created in step 6. If you type in an invalid password, the following screen appears:



NOTE: The system allows you to make mistakes seven (7) times before locking up. If the system locks up, you will have to turn the system OFF and then turn it ON again.

Once you do type in the correct password and it is accepted, the following screen is displayed:



10. Type the new date and press the <Enter>. The DOS prompt will appear and you can continue as usual.

Changing a User Password

The SETUP program provides two options for changing a user password.

- User Password: Enter Old User Password
- Password Options: Change User Password

A typical user (that is, a person not signed on as a supervisor) must use the **User Password:** option. This option requires that the user's "old" password be entered first. This procedure is explained below.

A supervisor (that is, a person signed on with the supervisor password) can change a user password without knowing the "old" password through the **Password Options: Change User Password** option (refer to "Using Password Options" for detailed information on this procedure).

As a typical user, you can change a user password through the SETUP program as follows:

1. Activate the SETUP program by pressing **CTRL-ALT-ESC**. The first SETUP screen is displayed.
2. Press the **PgUp** key to advance to the second SETUP screen.

The password options on the second screen will be displayed, similar to the illustration below.



3. Use the up (↑) or down (↓) arrow key to move the cursor to the **User Password:** option.
4. Use the Space bar, plus (+) key or minus (-) keys to scroll to the **Enter Old User Password** selection.
5. Enter your “old” password, as requested and press **<Enter>**.

The system will then display the **Enter New User Password** selection.

6. Enter your “new” password, as requested and press **<Enter>**.

If either the “old” or “new” password that you typed is invalid (for example, more than 7 characters), the system responds with:

INVALID Password

If the system accepts the password that you typed, the system responds with:

Password Accepted

7. When the system accepts your new password, press the **Esc** key to exit the SETUP screen and then the **F4** key to save the changes and reboot the system.

Establishing a Supervisor Password

When your system arrives, the supervisor password default will be “Power.”

You can accept the default password or establish a different supervisor password through the SETUP program.

NOTE: Once user and supervisor passwords have been established, your system is in “protected mode” and either the user password or supervisor password must be entered to gain access to the system.

If, in the unlikely event that the user and the supervisor both forget their passwords, call your authorized ALR dealer for information.

To establish a different supervisor password, follow the procedure below:

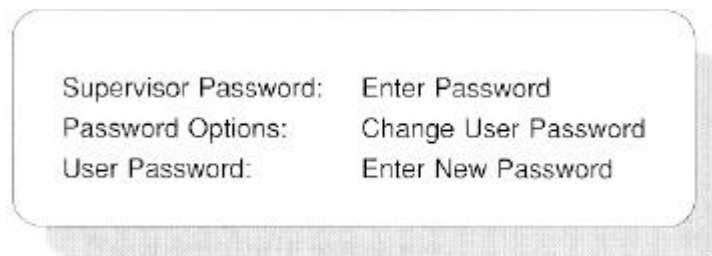
1. Activate the SETUP program by pressing the **CTRL-ALT-ESC** keys. The first SETUP screen will be displayed.
2. Press the **PgUp** key to advance to the second SETUP screen.

The password options on the second screen will be displayed, similar to the illustration below.



3. Use the up (↑) or down (↓) arrow keys to move the cursor to the **Password Options:** option.
4. Use the Space bar, plus (+) or minus (-) keys to scroll to the Enable Password selection and press <Enter>.

The SETUP screen will now display the following selections:



5. Use the up (↑) or down (↓) arrow keys to move the cursor to the **Supervisor Password:** option.
6. Type the password “Power” and press <Enter>. The screen displays asterisks (*) for each character that you type in and then displays the message:

Password Accepted

7. Use the up (↑) or down (↓) arrow keys to move the cursor to the **Password Options:** option.
8. Use Space bar, plus (+) or minus (-) keys to scroll to the **Change Supervisor Password** selection and press <Enter>. The system responds:

Enter New Password

9. Type the password you want to use and press <Enter>. The screen displays asterisks (*) for each character that you type in.

NOTE: A password may have from 4-7 alphanumeric characters (spaces are not allowed) and is not case-sensitive. For example, if you type the password as “UNICORN” now, and later you type the password as “unicorn” or “Unicorn,” the system will still recognize the password.

If the password that you typed is invalid (for example, more than 7 characters), the system responds with:

INVALID Password

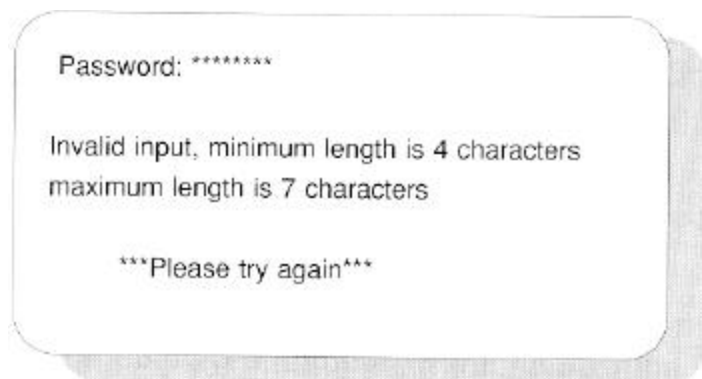
If the password that you typed is valid, the system responds with:

Password Accepted

10. Press the **Esc** key to exit the setup program and then the **F4** key to save the changes and reboot the system.
11. When the system has rebooted the following screen illustrated on the next page will be displayed:

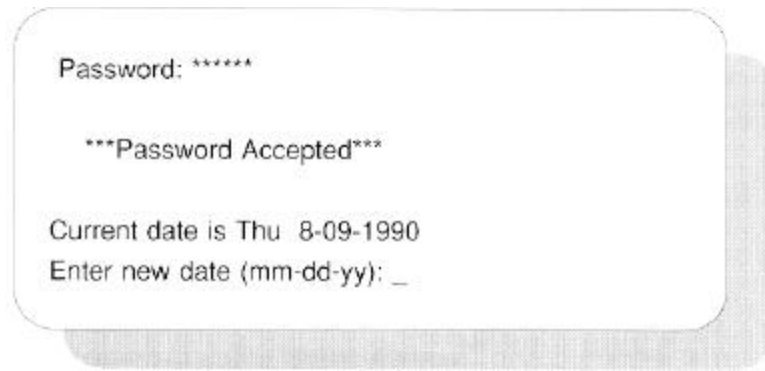


12. Type in the password you created in step 9. If you type in an invalid password, the following screen appears:



NOTE: The system allows you to make mistakes seven (7) times before locking up. If the system locks up, you will have to turn the system OFF and then turn it ON again.

Once you do type in the correct password and it is accepted, the following screen is displayed:



13. Type the new date and press the <ENTER> key. The DOS prompt will appear and you can continue as usual.

NOTE: When you have signed on as a supervisor, the **Password Options:** option will be available to you. This option is not accessible if you are not signed on as a supervisor. The next section “Using Password Options” describes all supervisor options and how they are performed.

Using Password Options

When a supervisor logs onto the system using their supervisor password, the following Supervisor Options: become available:

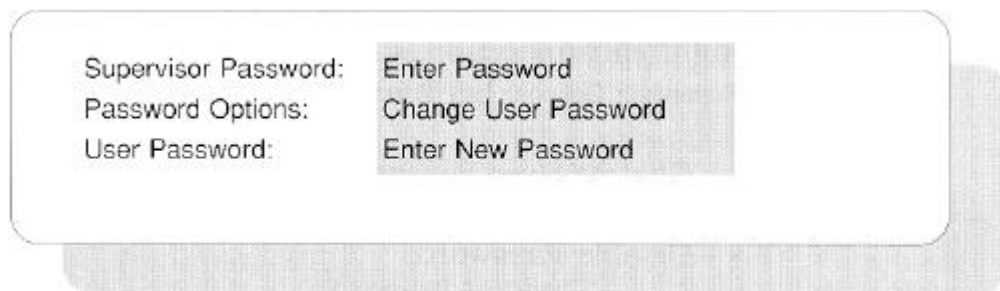
- Change User Password
- Disable Password
- Enable Password
- Change Supervisor Password

The following sections describe how to access and use password support as a supervisor.

All supervisor options are performed through the SETUP program:

1. Activate the SETUP program by pressing **CTRL-ALT-ESC**. The first SETUP screen is displayed.
2. Press the **PgUp** key to advance to the second SETUP screen.

The password options on the second screen will be displayed, similar to the illustration on the following page.



3. Use the up (↑) or down (↓) arrow keys to move the cursor to the **Password Options:** option.
4. Follow the procedures in the next sections to perform all supervisor functions.

Change User Password To change a user's password follow the procedure below:

1. Use the up (↑) or down (↓) arrow keys to move the cursor to the **Password Options:** option.
2. Use the Space bar, plus (+) or minus (-) keys to scroll to the **Change User Password** selection.
3. Press <**Enter**>. The system responds with the following:

Enter New User Password

4. Type in the new password. The system responds with the following:

Password Accepted

5. Press **Esc** to reboot the system.

NOTE: Notice that the system does not require the entry of the user's "old" password as it does in the **User Password:** option. This is done so that the supervisor can change a user's password without knowing their "old" password; for example, in the case of an employee who has forgotten their password, or for an employee who has left the company.

Disable Password To disable a user's password, follow the procedure below:

1. Use the up (↑) or down (↓) arrow keys to move the cursor to the **Password Options:** option.
2. Use the Space bar, plus (+) or minus (-) keys to scroll to the **Disable Password** selection.
3. Press <**Enter**>. The system responds with the following:

User Password Disabled

The password support section of the SETUP screen changes to:



4. Press **Esc** and **F4** to reboot the system.

NOTE: When Disable Password is selected, all password security (user and supervisor) is disabled. When you reboot the system, it is in an unprotected mode, and all password support is suspended and remains so until **Enable Password** is selected.

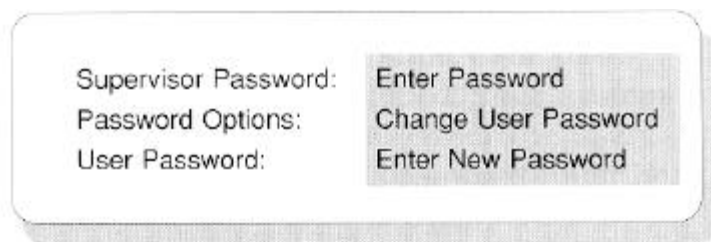
Enable Password

When Disable Password has been selected, all password security (user and supervisor) is Disabled. This means that the system is in an unprotected mode, and all password support is suspended and remains so until **Enable Password** is selected. Any user (not just a supervisor) can enable the password by following the procedure below:

1. Use the up (↑) or down (↓) arrow keys to move the cursor to the **Password Options:** option.
2. Use the Space bar, plus (+) or minus (-) keys to scroll to the **Enable Password** selection.
3. Press **<Enter>**. The system responds with the following:

Password Enabled

The password support section of the SETUP screen changes to:



4. Use the up (↑) or down (↓) arrow keys to move the cursor to the **User Password:** option.
5. Type in the new password.
6. Press **Esc** to exit the setup program and then **F4** to save the changes and reboot the system.

Change Supervisor Password

To change the supervisor password, follow the procedure below.

1. Use the up (↑) or down (↓) arrow keys to move the cursor to the **Password Options:** option.
2. Use the Space bar, plus (+) or minus (-) keys to scroll to the **Change Supervisor Password** selection.
3. Press **<Enter>**. The system responds with the following:

Enter New Password

4. Type in the new supervisor password. The system responds with the following:

Password Accepted

5. Press **Esc** to exit the setup program and then **F4** to save the changes and reboot the system.

NOTE: When changing a supervisor password, be sure to make a mental note of the change. Once user and supervisor passwords have been established, your system is in protected mode and either the user password or supervisor password must be entered to gain access to the system. In the unlikely event that both the user and the supervisor forget their passwords, call your authorized ALR dealer for information.

Chapter 5, Using the Battery Pack and Adapter

CAUTION: Use only the ALR Power Plus Battery Pack and the ALR AC Power Adapter, which are designed for use with the ALR Ranger notebook computer.

When external power is unavailable, your computer can generally run off of a fully-charged computerized Power Plus battery pack for up to approximately five hours. However, the life of the battery depends on the options and applications being used. For full details on power management features that can be employed to prolong battery life, refer to the “Using Power Management” section in Chapter 4.

The following sections provide information on:

- battery charge modes
- battery degradation sequence
- removing and installing the battery pack
- using the AC adapter
- international wall connectors and voltages

Battery Charge Modes

The AC adapter charges the battery pack automatically when it is connected to the system and plugged into a properly grounded wall outlet. Three charge modes are used: fast charge mode, medium charge mode, and trickle charge mode.

Fast Charge Mode

Fast Charge mode sends a rapid flow of current into the battery pack. The Battery Charge LED on the indicator panel goes on when the charge begins.

The battery pack will be charged in approximately two (2) hours whether or not the system is turned on or off.

NOTE: If you operate your Ranger in elevated ambient temperatures—greater than a typical office environment—the system will react by slowing the charge rate in order to keep internal temperatures down. When the charge rate is slowed, this increases the time that it takes to charge the battery. If temperatures are too high, charging may not occur at all.

After the battery has been charged, the Medium Charge mode is initiated.

Medium Charge Mode

Medium Charge mode is a much slower flow of current into the battery pack and is used to top the battery off.

The Battery Charge LED on the indicator panel flashes on and off at approximately one second intervals.

After the battery has been topped off, the Trickle Charge mode is initiated.

Trickle Charge Mode

Trickle Charge is a gentle flow of current that maintains the battery charge, allowing it to remain fully charged without overcharging.

The Battery Charge LED on the indicator panel is off.

Battery Degradation Sequence

The system performs a predictable sequence of actions when low battery conditions are detected. These actions are explained in the sections below.

To prevent loss of data, it is important to save your data and recharge your battery pack as soon as the system indicates the initial low battery warning.

Low Battery Warning

When the battery pack charge is low, the Low Battery LED on the indicator panel comes on and an audible beep is emitted at set intervals. When this happens, save any open files immediately, return to the DOS prompt and immediately plug the AC adapter in to charge the battery pack. Otherwise, you may lose all data that has not been copied to a disk.

Alternately, if you carry an extra charged battery pack and the Low Battery LED comes on, you can save your data, exit your application, turn off the system and replace the low battery pack. Directions on how to remove the existing battery pack and replace it with the fully charged battery pack are provided in the sections that follow.

Low Battery Suspend Mode

When the battery power becomes critical (approximately 15 minutes after the Low Battery LED on the indicator panel comes on) the system will enter Low Battery Suspend mode in order to conserve the remaining battery power before it is forced to completely shut down. When this happens, current operations will be suspended and the LCD backlight and display will be shut off. The Suspend/Resume button, when pressed, will not restore operation. In this event, immediately plug the AC Adapter in and charge the battery.

DO NOT attempt to replace the battery pack when the system has entered the Low Battery Suspend mode. Removal of the battery pack will cause system shutdown, resulting in the loss of data.

System Shutdown

Sometime after the system enters the Low Battery Suspend mode, it will be forced to completely shut down. In this event, immediately plug the AC Adapter in and charge the battery.

Removing the Battery Pack

1. Slide the battery handle recess sideways to release the battery as shown in the figure below.
2. Grasp the battery handle recess and pull the battery out.

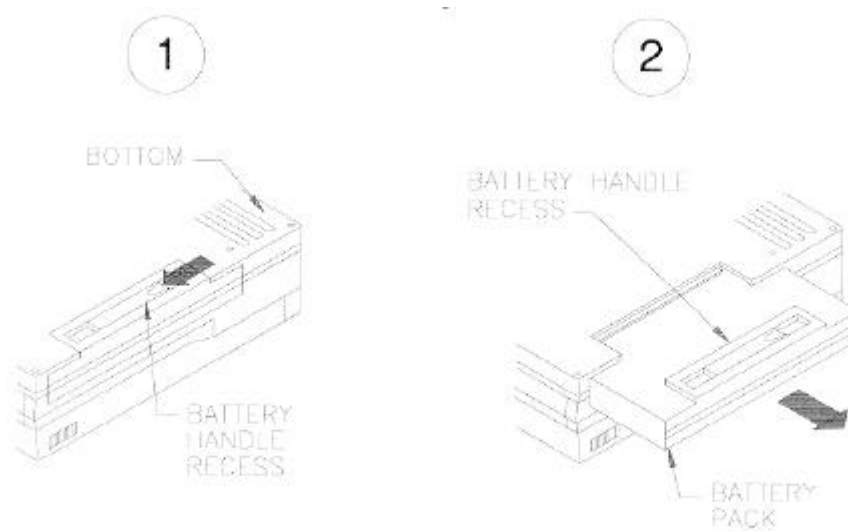


Figure 5-1: Battery Pack Removal

WARNING! DO NOT put battery pack in fire or mutilate; may burst or release toxic materials. DO NOT short circuit; may cause burns. DO NOT attempt to open or service the battery pack. Disposal of the battery pack should be done in accordance with local regulations.

Installing the Battery Pack

To install the battery pack, follow the instructions below:

1. Grasp the battery handle recess and push the battery pack into the chassis as shown in the figure below.
2. Push inwards gently until the battery pack clicks into place.

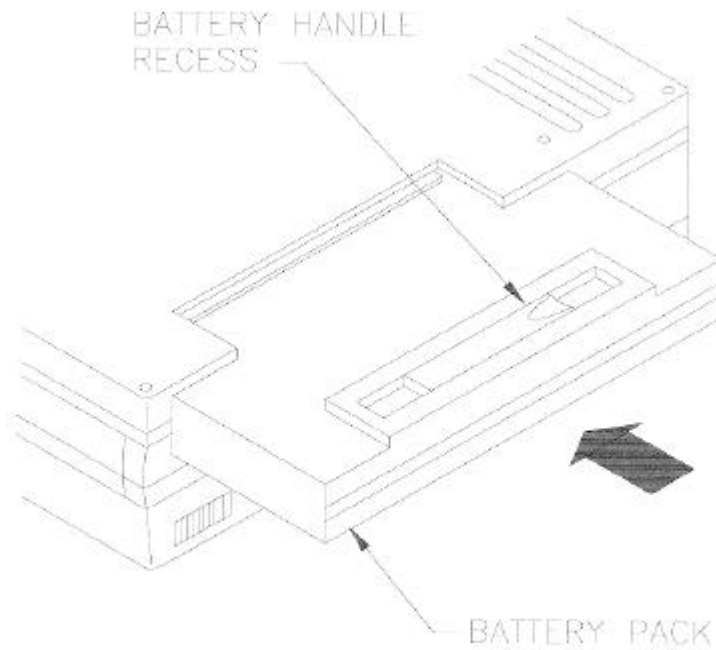


Figure 5-2: Installing the Battery Pack

Using the AC Adapter

The AC Power Adapter is illustrated below.

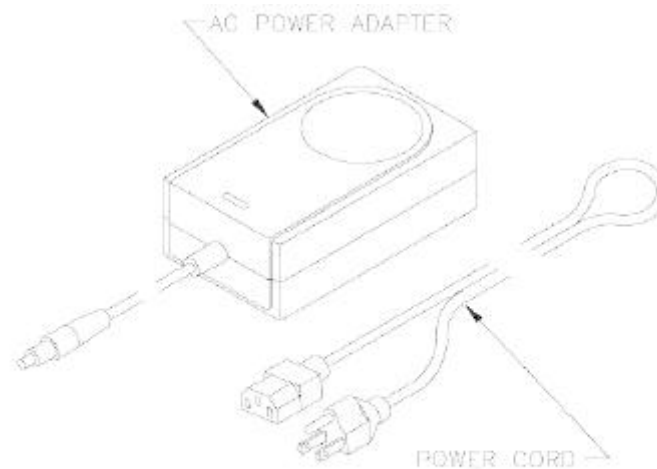


Figure 5-3: AC Power Adapter

The following are rules and cautions you should be aware of when using the AC adapter:

- Use only the power cord designed for the Ranger. You may severely damage the computer if you try to use any other cord.
- AC power cable should be a three-prong plug with a grounding terminal.
- Disconnect the AC plug when not using the equipment.

Connecting the Power Adapter

To connect the AC adapter to the DC power input socket, refer to the figure below and follow the instructions provided.

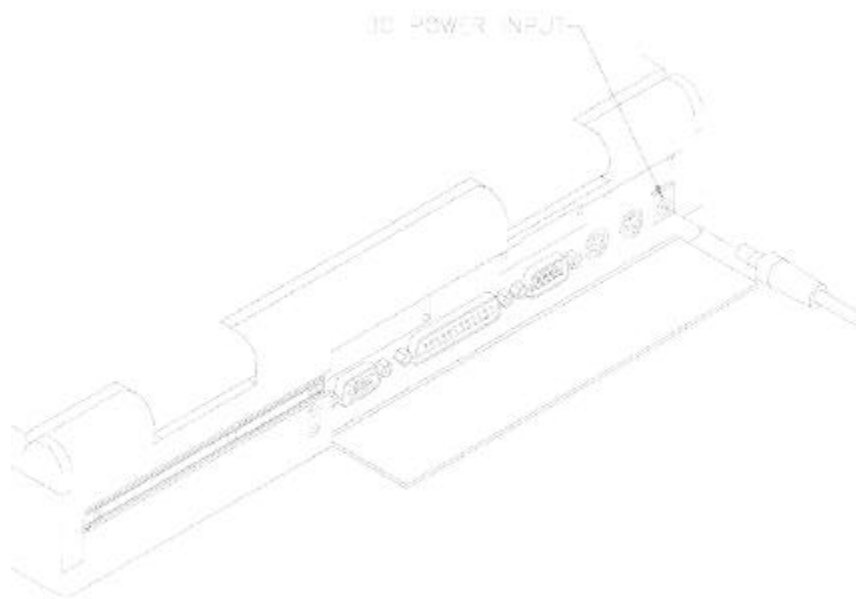


Figure 5-4: Connecting the Power Adapter

1. Make sure the power switch is OFF (the green LED on the power switch should be off).
2. Plug the AC Power Adapter cord firmly into a properly grounded AC power wall socket.
3. Connect the AC Power Adapter to the DC power input socket on the rear of the Ranger.

International Wall Connectors

When traveling internationally, purchase an AC power cord from an authorized ALR reseller in the country where you will be using the computer. These power cords are designed to meet the voltage and frequency requirements of each country. **DO NOT** use converter kits sold for appliances to power the computer. The figure below represents the wall connector end of the power cord.

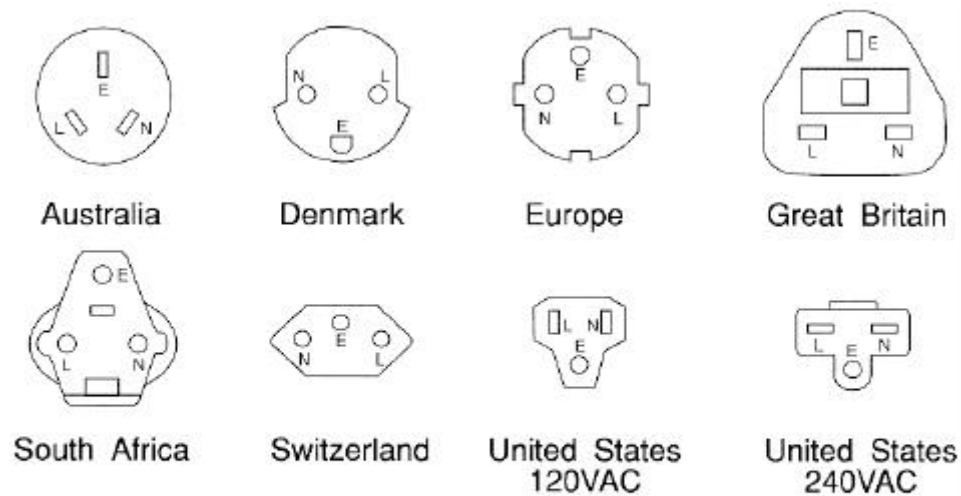


Figure 5-5: International Wall Connectors

Legend:

L = line of active conductor (also called “live” or “hot”)

N = neutral

E = earth or safety ground

Voltages by Country

The following table lists the voltage for various countries:

Country	Voltage	
Australia	250VAC	6A
Denmark	250VAC	6A
Europe	250VAC	6A
Great Britain	250VAC	6A
South Africa	250VAC	10A
Switzerland	250VAC	6A
United States	120VAC	10A
United States	240 VAC	10A

Additionally, the notebook computer has the capability to automatically sense the line voltage (110/220VAC) and sets itself appropriately. This makes it possible for you to use your notebook computer anywhere in the world as long as you have the proper plug adapter.

Traveling with the Computer

- Back up data on the hard disk drive onto floppy diskettes or tape.
- Do not travel with the computer turned on with pause mode in effect, or with a diskette in the computer.
- Leave the battery pack in the computer.
- Take either the AC adapter or a spare charged battery pack.

Battery and Adapter Cautions

- DO NOT put battery pack in fire or mutilate; may burst or release toxic materials. DO NOT short circuit; may cause burns. Disposal of the battery pack should be done in accordance with local regulations.
- Do not block the vents or use in a poorly ventilated location. Do not use or keep the adapter in a location where it reaches extremely high or low temperatures, or where there is high humidity.
- Do not use in a location near heat or chemicals, or in a place subject to direct sunlight, excessive dust, moisture, or mechanical shock.
- Make sure no liquid or objects fall into the battery pack or adapter.
- Do not use or place heavy objects on the battery pack or adapter.
- Do not remove the cover or operate the adapter without the cover to protect against electric shock.
- Keep device away from flammable liquids and gasses, and so forth.

Appendix A, System Specifications

<i>CPU</i>	Refer to the System Configuration manual
<i>System Memory</i>	4-MB standard (1-MB x 4), expandable to 16-MB on the system board
<i>Display</i>	<p>VGA Systems: 9-inch diagonal backlit paper-white Liquid Crystal Display (LCD) display with a resolution of 640 x 480. Automatic mapping of 16 or 256 colors into 16 or 32 shades of gray, respectively, with no additional software required. The LCD incorporates a VGA mode only.</p> <p>Color VGA Systems: (available Q3, 1992) 8.75-inch diagonal backlit Liquid Crystal Display (LCD) display with a resolution of 640 x 480. Automatic mapping of 64 colors with no additional software required. The LCD incorporates a VGA mode only.</p>
<i>Floppy Disk Drive</i>	1.44-MB double-sided/high-density, 3.5-inch. Will support 720-KB media
<i>Hard Disk Drive</i>	60-, 80-, or 120-MB 2.5-inch IDE
<i>I/O Ports</i>	One serial, one parallel, one mouse, one keyboard, one VGA monitor, ALR Docking Station, Quick Snap pointing device receptacle, one optional SCSI, one optional Scanner, one optional Fax/Modem
<i>Keyboard</i>	82-keys with external mini-DIN plug for connecting to an 84-key or 101-key keyboard (PS/2-compatible pin assignments)
<i>Battery</i>	Internal NiMH removable/rechargeable computerized battery pack
<i>Environmental Requirements</i>	
<i>Operating Temperature:</i>5 to 35 degrees Centigrade	
<i>Operating Relative Humidity:</i>10 to 80% non-condensing	
<i>Electrical Requirements</i>	
<i>Voltage:</i>30V DC	
<i>Power Consumption:</i>1.3 AMPS	

Physical Dimensions

Height:11.75" W x 8.5" D x 2.3"H
Weight:7.6 lbs.

Appendix B, System Exploded

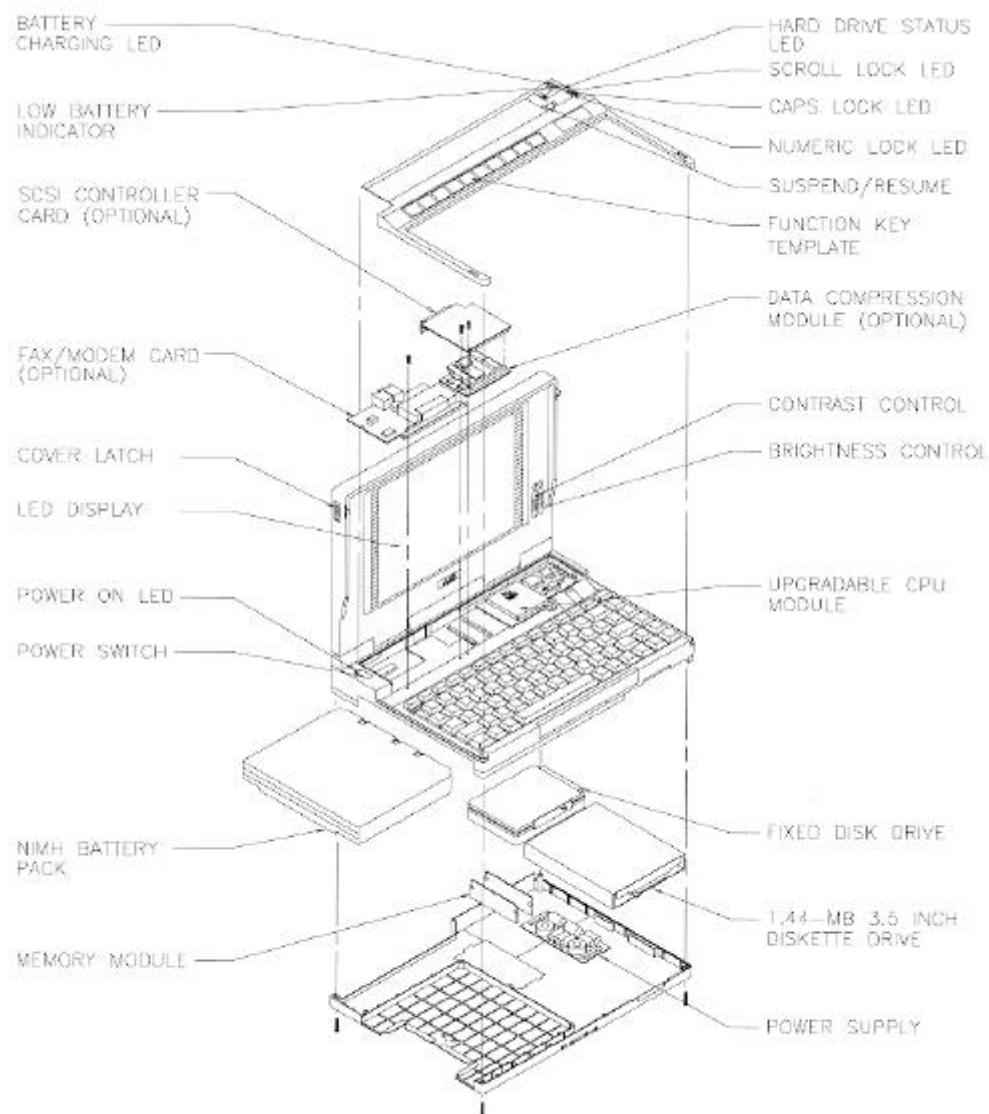


Figure B-1: System Exploded

Appendix D, Hard Disk Drive Characteristics

Drive Type	Cylinders	Heads	Precomp	Landing Zone	Sectors	Size (megs)
1	Automatically configured as Drive C: (user may not modify)					
2	Automatically configured as Drive D: (user may modify)					
3	615	6	300	615	17	30
4	940	8	512	940	17	62
5	1630	15	-1	1630	52	620
6	117	16	0	0	63	57
7	1630	8	-1	1630	52	331
8	733	5	-1	733	17	30
9	900	15	-1	901	17	112
10	615	8	128	664	17	40
11	776	8	-1	776	33	100
12	535	10	-1	535	29	75
13	953	7	-1	953	34	110
14	733	7	-1	733	17	42
16	953	5	-1	953	34	79
17	977	5	300	977	17	40
18	816	15	-1	816	32	191
19	1024	7	512	1023	17	59
20	823	10	-1	823	34	136
21	733	7	300	732	17	42
22	971	5	-1	971	26	61
23	820	6	-1	820	17	40
24	1024	7	-1	1024	34	119
25	1022	7	-1	1022	34	118
26	1024	4	-1	1023	17	34
27	1024	5	-1	1023	17	42
28	1024	8	-1	1023	17	68
29	615	4	612	615	26	31
30	845	7	-1	845	35	101
31	989	5	128	989	17	41
32	1020	15	-1	1024	17	127
33	1024	9	-1	1024	17	76
34	966	9	-1	966	34	144
35	1024	16	-1	1630	63	504
36	1024	5	512	1024	17	42

Drive Type	Cylinders	Heads	Precomp	Landing Zone	Sectors	Size (megs)
37	1024	5	-1	1024	26	65
38	611	16	-1	612	63	300
39	654	16	-1	1630	63	321
40	642	16	-1	1778	63	315
41	917	15	-1	918	17	114
42	1023	15	-1	1024	17	127
43	497	10	-1	497	33	80
44	820	6	-1	820	17	40
45	1024	8	-1	1024	17	68
46	1024	7	-1	1024	26	91
47	288	16	-1	1224	63	141
48	0	0	0	0	0	0
49	0	0	0	0	0	0

- Hard Drive 1 (the internal hard drive) is automatically configured as Drive Type 1, the drives characteristics are automatically detected by the system. The user may not modify this setting.
- If there is an error in the CMOS, Hard Drive 1 will display the default settings for Drive Type 1 (Cylinders = 306, Heads = 4, Precomp = 128, Landing Zone = 305, Sectors = 17, Size (megs) = 10). In this event, you should reinitialize your CMOS.
- Hard Drive 2 (an external hard drive that is housed in the Docking Station) is automatically configured as Drive Type 2, the drives characteristics are automatically detected by the system. The user may modify this setting. The Ranger BIOS does not support
- If there is an error in the BIOS, Hard Drive 2 will display the default settings for Drive Type 2 (Cylinders = 615, Heads = 4, Precomp = 300, Landing Zone = 615, Sectors = 17, Size (megs) = 20). In this event, you should reinitialize your CMOS.
- Drive types 48 and 49 are user-definable. That is, you can change the parameters according to your drive specification.
- Drive types change from time to time, so it is a good idea to verify any number in this table with the information contained online before completing your setup. To do this, run the SETUP program (refer to Chapter 4 of this manual), place the cursor on the hard drive number, and press F1 twice. A list of hard disk drive characteristics will be displayed.
- Drive type numbers not assigned are reserved for future use.