IN Rave
NOTEBOOK
OPERATOR'S MANUAL

3/12/99

P/N: 799001120006   R00

Class B Regulations
Federal Communications Commission Radio Frequency Interference Statement

NOTE:

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

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Please note:

1. The use of a non-shielded interface cable with this equipment is prohibited.

2. A shielded AC power cord must be used with this equipment.

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

- EN55022 (CISR 22)-Radio Frequency Interference

- EN50082-1 (IEC801-2, IEC801-3, IEC801-4)-Electromagnetic immunity

- EN60555-2 (IEC555-2)-Power Line Harmonics

- EN61000-3-3 (IEC1000-3-3)-Voltage Fluctuations and Flicker

IN Rave Notebook Operator's Manual

Record of Changes

CHANGE NO.	DATE	TITLE OR BRIEF DESCRIPTION	ENTERED BY
00	29, Jan, 1999	Initial Release	

Preface

This is the IR Rave Notebook Operation Guide.

Contents
This manual contains information for personnel using the IR Rave notebook computer. Readers should have a basic understanding of MS-DOS or any other operating system installed on the computer when reading this document. With the exception of the SETUP configuration program, which is part of the system firmware, this manual does not explain any of the software or devices used with the system. Supplemental manuals or text-based documents on the hard disk supply information about any software included with the system.

Audience
All operators using the notebook in or out of the field should read and become familiar with this manual.

Organization
This manual has five chapters.

Chapter 1 introduces the notebook pointing out its major features.

Chapter 2 explains daily operation.

Chapter 3 gives detailed information about configuring the notebook.

Supplemental Reading
For further information about this computer and computing in general, use these references:

- Microsoft MS-DOS 6.0+ or upper version Manual for general information about the standard operating system for the notebook

- Various software manuals offer detailed instructions about individual programs run on the notebook.

Specifications (reference only)

	Standard	Optional
CPU	Intel Pentium 233 MHz	Intel Pentium MMX 233MHz or more
RAM	32MB	64, 128 MB
Display	1. 11.3-inch color LCD, 64K color TFT,super VGA 2. 13.3-inch color LCD, SVGA TFT/DSTN	
Input Devices	• 87-key shower proof and dust-proof rubber keyboard • Embedded two-button Track Pad	Backlight option
		Expansion Unit • optional easy installed expansion unit (max. 20watts) for two 3/4 size ISA bus cards; or 3/4 size ISA bus card & one CD-ROM (same module as the one in Bay 1)
Communication ports	• two RS-232C serial port • One Centronics parallel port, support EPP/ECP • One external monitor port • One external PS/2 keyboard port • One PS/2 mouse port • One external power supply port • One infrared port, IrDA compliance • One 200-Pin docking port	
Battery pack	• removable & rechargeable main Ni-MH battery pack with the functions of on-line charge and hot swap (while Bay 1 or Bay 2 battery coexists), total 64 watts	• removable & rechargeable Bay 1 Ni-MH battery pack in Bay 1, total 41watts • removable & rechargeable Bay 2 Ni-MH battery pack in Bay 2, total 41 watts
Power adapter	• AC: 100-240 V, 50-60 Hz , 54 watts • Vout 22.5V, -2%~+3%, 2.4A, CV mode • Vout 23.5V~10V, 2.1A~3.5A, , CP mode	• 12-20 VDC direct input without charging function • 20-32 VDC external car adaptor/charger
Operating system		• Windows 95 • Windows NT
Temperature	• Operating: 0°C to +45°C	• Option: -20°C to +50°C (tested)
Storage devices	• removable shock proof damaped 2.5" IDE HDD, capacity > 2.1GB • optional removable 3.5" 1.44MB FDD, to install in Bay 1 internally	• removable shock proof damaped 2.5" IDE HDD, capacity > 4.0, 6.4GB • (swap with either CD-ROM module or Bay 1 battery pack); or connected to parallel port with optional cable externally • Optional CD-ROM module to be installed in Bay 1

Open Size: (With Rubber Bumper)	310mm (31 cm) W 68mm (6.8 cm) H 255mm (25.5 cm) D	
Weight	11.24 lbs (5.1kg)	

Safety Summary

1. Read these instructions before using or working on this computer.

2. Follow all warnings and instructions in this manual or marks on the computer and its components.

3. Avoid submerging the system unit in liquids.

4. avoid stacking papers or other flammable objects on top of, underneath, or next to the system unit.

5. Use only batteries supplied with the system.

6. Make sure any external power source connected to the adapter or system conforms with adaptor or system ratings.

7. The external power adapter has a three-pronged grounding plug. If an adapter is needed to plug the system into a power source, make sure the system is properly grounded.

8. Arrange all cables so that they are out of traffic and unobstructed by personnel or equipment.

9. Avoid using extension cords with this product. If an extension cord is needed, make sure it is rated for at least 10 amperes.

10. Make sure amperage drawn by all items plugged into an outlet with this system does not exceed 15 amperes.

11. Do not put any objects except those designed for use with this system inside the computer.

12. Observe proper electrical safety precautions when performing system maintenance.

13. Replace any cables with identically rated cables as those included with the original equipment.

14. Improper handling of the battery can cause personal injury or fires. Do not attempt to disassemble or replace individual cells in the battery pack. Do not expose the battery to open flames. Do not short the positive and negative ends together even if the battery is fully discharged. Keep the battery away from children.

`Table of Contents

Preface

Specifications

Safety Summary

Chapter 1   System Overview

Chapter 2   Operation

Chapter 3   The SETUP Program

List of Figures

List of Tables

Chapter 1
System Overview

1-1 Introduction

IN RAVE notebook computer is a new generation notebook computer. It is a high-end rugged notebook computer which is an industrial notebook with some rugged features such as vibration, shock, drop and drip-proof. It is designed for using in vehicle or in the harsh environment.

The IN RAVE notebook computer implements the new technologies in the industrial market. Large display panel, high capacity hard disk drive, PCI bus and CD-ROM, etc. An Intel Pentium CPU with MMX is the heart of this notebook computer.

This chapter introduces and explains the IN RAVE Series notebook and its computer parts.

1-2 System Description

The IN RAVE computer is a compact fully portable notebook computer. It operates as a stand alone system for most applications.

It offers superior performance under harsh environmental and operating conditions. It is fully compatible with the IBM PC/AT standard.

1-3 System Configuration

This section presents and explains possible notebook hardware configurations. Refer to the nameplate on the notebook bottom for that system's configuration.

1-3.1 Standard Configuration

Table 1-1 lists the major common features of the standard IN RAVE systems.
The specifications in this table may be different from yours due to the optional items. Please refer to the detailed specifications I ncluding the standard and optional configuratons on page d.

Table 1-1 Standard IN RAVE Notebook Computer

Feature	Description
CPU	Intel Pentium 233 MHz or more
Storage device	Removable 2.5-inch 4.1 GB hard disk drive (or more) Removable 3.5-inch 1.44 MB Floppy disk drive
Display	1. 11.3-inch color LCD, 64K color TFT, super VGA 2. 13.3-inch color LCD, SVGA TFT/DSTN 800x600 resoulation, integrated power conserve mode
Power source	Rechargeable removable Ni-MH battery (or other type)
Keyboard	87key shower proof rubber keyboard, Embedded two button track pad
Expansion	Two PCMCIA sockets (type II or one type III compatible)

I/O Devices	One Parallel port, D-type 25-pin
	One VGA External port, D-type 15 pin
	Two Serial port , D-type 9 pin (COM1 & COM2)
	One PS/2 Keyboard and One PS/2 mouse
	One IrDA Port

1-3.2 Options and Accessories

● Expansion Unit

——ISA 3/4 card x 2

——CD ROM & ISA 3/4 card

——PCI 3/4 card x 2

——CD ROM & PCI 3/4 card

● External FDD

● EL-Backlight Keyboard
The EL-Backlight keyboard function keys is Fn+F8.

● RS-232/RS422/RS-485 Board (BaY 2)

● SCSI Board (BaY 2)

● GPS Board (Bay 2)

● FDD Board (Fix,Bay 2)

● COMBO Board

1-3.2.1 Carrying Bag

The carrying bag makes carrying the notebook and its peripherals easier. It has compartments for up to four diskettes, this manual, the power supply, and all notebook cables.

1-3.3 System Identification

The nameplate listing system information is at the bottom of the notebook. It contains:
• Factory configuration
• Model number
• Serial number

1-3.4   CPU Jumper Setting

The following are the selections of IN RAVE CPU DIP Switches (S501):
CPU CLOCK SELECTION Table:

	P54C	P55C	TILLAMOOK
S501	4321	4321	4321
100MHz	0100	N/A	N/A
133MHz	0101	0101	0101
166MHz	0111	0111	0111
200MHz	0110	0110	0110
233MHz	N/A	0100	0100
266MHz	N/A	N/A	0000

Note: "0"means switch off, "1"means switch on.

VCC3 VOLTAGE ADJUSTMENT BASE ON SW1 IN D/D BOARD

	SW1 (1,2,3,4)		
SW1	0100	1000	1101
VCC3	2.4V	2.8V	3.3V

	SW1 (5,6,7,8)		
SW1	0100	1000	1101
VCC29	2.4V	2.8V	3.3V

VCC29 VOLTAGE ADJUSTMENT BASE ON SW1 IN D/D BOARD

NOTE: "0" MEANS SWITCH OFF, "1" MEANS SWITCH ON

1-4 Unpacking

Use this checklist to make sure all items included with the notebook are present in good condition.
- Notebook computer
- Rechargeable battery pack
- AC adapter
- Power cord
- Operation Manual
- PCMCIA diskette
- TRACKPAD diskette
- VGA Driver diskette

If any items are missing or damaged, please contact the supplier.

1-5 Notebook Features

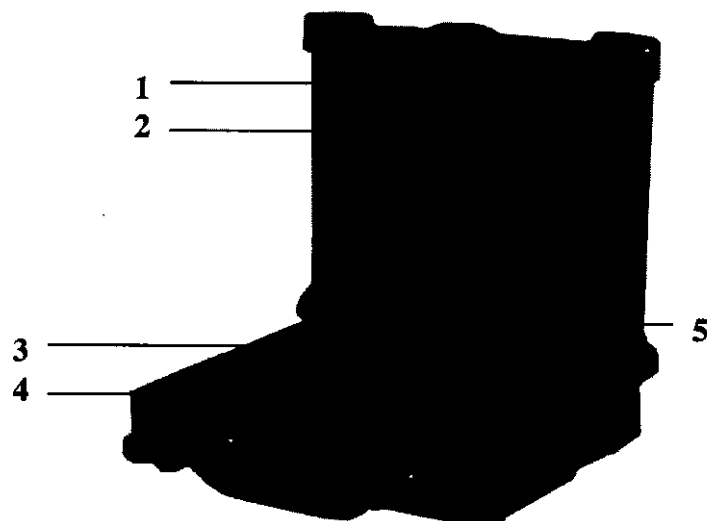Figures from 1-1 through 1-11 identify the major notebook parts, indicators, and controls.

Figure 1-1   IN RAVE Notebook, Front View

1-5.1 Cover

The notebook cover (Item 1, Figure 1-1) houses the display unit and its control devices.

1-5.2 Display

The display have three types, one is 11.3" TFT 64K color LCD display (Item 2, Figure 1-1) is selected in A-Series notebook computer. The resolution of this LCD display is 800 X 600 pixels (SVGA standard). But the connection mechanism from LCD display to motherboard is designed flexibly for different venders of LCD displays and different types. The other is 9.4" DSTN 64 Gray scale sunlight readable monochrome LCD display, the resolution is 640 X 480 and 13.3" TFT 24 bit color LCD display , the resolution is 1024 X 768.

1-5.3 Power Switch

The power switch (Item 5, Figure 1-1) turns the notebook power on and off.

1-5.4 Keyboard

The keyboard (Item 3, Figure 1-1), is the primary tool for typing data and commands into the notebook.
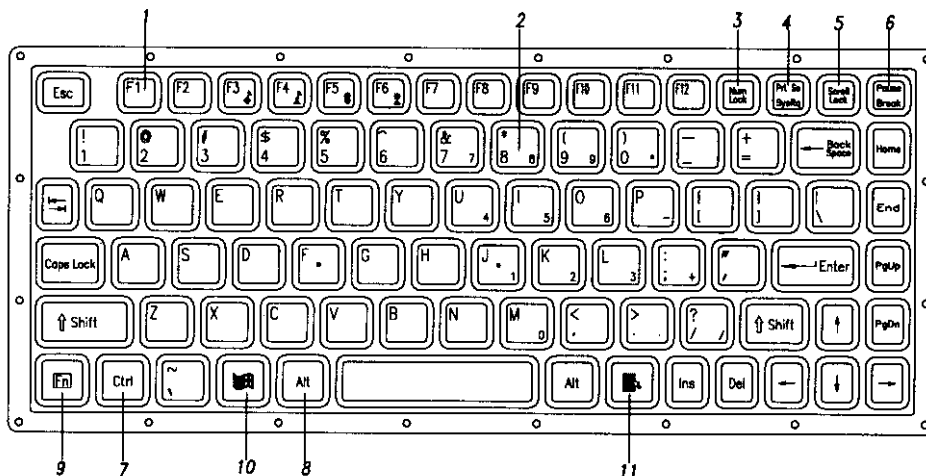

Figure 1-2   Rubber Keyboard

* About others language keyboard refer to the Appendix A.

1-5.4.1 Function Keys

The function keys give special commands defined by software. The notebook BIOS also uses function keys to set some configuration parameters.

The rubber keyboard has twelve function keys numbered from F1 through F12 (Item 1, Figure 1-2) and Fn (Item 9, Figure 1-2).

1-5.4.2 Embedded Numeric Keypad

(Item 2, Figure 1-2) These keys act like calculator keys when the NUM LOCK light is on. When the numeric keypad is active, the notebook disables the alphabet keys doubling as numeric keypad keys.

1-5.4.3 Num Lock

The Num Lock key (Item 3, Figure 1-2) activates and deactivates the embedded numeric keypad. When the numeric keypad is active, the NUM LOCK indicator comes on and the alphabetic abilities of the embedded numeric keyboard are disabled.

1-5.4.4 Prt Sc/Sys Rq

The Prt Sc/Sys Rq key (Item 4, Figure 1-2) sends a print message to an attached printer to create a hard copy of data shown on the screen or makes other system requests depending on the running software.

1-5.4.5 Scroll Lock

The scroll lock key (Item 5, Figure 1-2) works with some software to freeze the display.

1-5.4.6 Pause/Break

The Pause/Break key (Item 6, Figure 1-2) temporarily or permanently stops a program .

1-5.4.7 Ctrl and Alt Keys

 (Item 7, Item 8, Figure 1-2) Some software programs use these keys in conjunction with other typewriter keys to perform special functions. See the associated software manual for details.

1-5.4.8 Cursor Control Keys

(Figure 1-3) Ten keys around the keyboard right edge work with many programs to enhance editing and cursor placement. See the software manuals for their proper operation. The cursor control keys are:

● Insert (Item 1, Figure 1-3)
● Delete (Item 2, Figure 1-3)
● Home (Item 3, Figure 1-3)
● PgUp (Item 4, Figure 1-3)
● PgDn (Item 5, Figure 1-3)
● End (Item 6, Figure 1-3)
● → (Item 7, Figure 1-3)
● ↓ (Item 8, Figure 1-3)
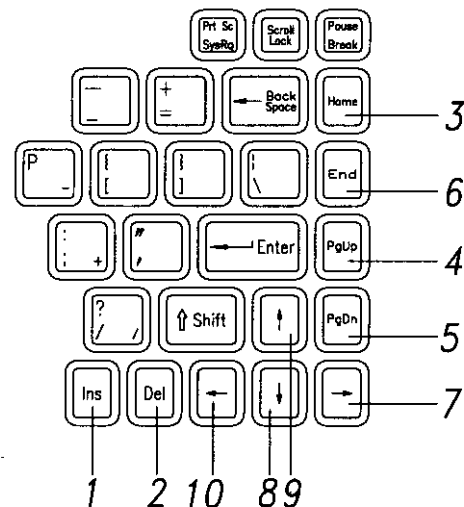● ↑ (Item 9, Figure 1-3)
● ← (Item 10, Figure 1-3)

Figure 1-3   Cursor Control Keys

1-5.4.9 Windows 95 Keys

On the IR Rave keyboard, you can find one Windows Logo key (⊞, Item 10, Figure 1-2) and one Application key (Item 11, Figure 1-2). The two keys are used with other keys to perform software specific functions.

1-5.5 Pointing Device

Track pad is used as the pointing device of the IR Rave notebook computer. Using finger to control the movement of cursor. The advantages of track pad are easily to clean and control the direction. The pointing device (Item 4, Figure 1-1) moves the cursor about the screen to help work with data.

The track pad consists of three major components:

- Track pad (Item 1, Figure 1-4)
- Right input button (Item 2, Figure 1-4)
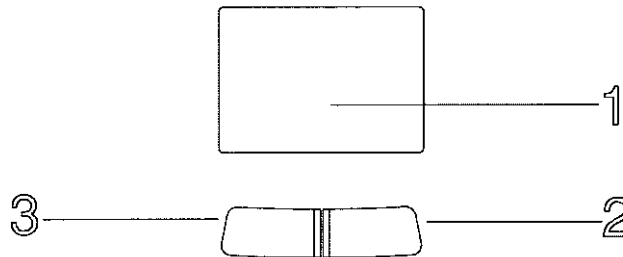- Left input button (Item 3, Figure 1-4)

Figure 1-4   Track Pad Pointing Device

1-5.6 Brightness Control

The brightness control is adjusted from the combination of function keys Fn+F5 (Dimmer) and Fn+F6 (Brighter).

1-5.7 Keyboard Backlight (Option for Sound Card)

The Backlight of the Keyboard is toggle from combination of function keys Fn+F8.

1-5.8 CRT/LCD/Simulscan Toggle

The CRT/LCD/Simulscan toggle is changed from the combination of fucntion keys Fn+F9.

1-5.9 Panel On/Off

The Panel on/off is toggle from the combination of function keys Fn+F10.

1-5.10 Standby Mode

The system enter standby mode press the function keys Fn+F11.

1-5.11 Suspend Mode

The system enter suspend mode press the function keys Fn+F12.

1-5.12 Status Row

The status row (Figure 1-5) shows the current operating condition of several key notebook components. Figure 1-5 shows a close-up view.
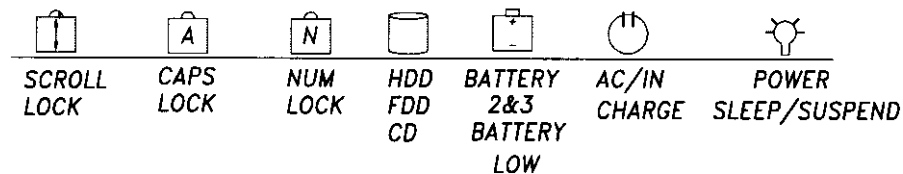
| SCROLL LOCK | CAPS LOCK | NUM LOCK | HDD FDD CD | BATTERY 2&3 BATTERY LOW | AC/IN CHARGE | POWER SLEEP/SUSPEND |

Figure 1-5 IN RAVE Status Row

1. A. When the power is on, then Power LED (Green) is on.
   B. When the system enters Sleep or Suspend mode, then the Sleep/Suspend LED (Orange) is on.

2. A. When the AC power adaptor is connected, then the AC IN LED (Green) is on.
   B. When charging is in progress, then the CHARGE LED (Orange) is on.

3. A. When any battery pack is present, then the BATTERY LED (Green) is on.
   B. When any of the batteries (Bay 1 or Bay 2) enters battery low status, then the BATTERY LOW LED (Orange) is on. When if only the primary battery and battery low status then speaker will beep.

4. A. When the HDD, FDD or CD-ROM drive is active, then the HDD/FDD/CD LED (Orange) is on.

5. The "Num Lock" key activates and deactivates the embedded numeric keypad. When the numeric keypad is active, the "Num Lock" indicator come on and the alphabetic of the embedded numeric keypad are disabled.

6. Press "Caps Lock" key will Charge the state of "Caps Lock" indicator between on and off, if the Caps Lock indicator goes on, represents the all English alphabet keys work in Upper Case state, otherwise the keys work in Lower Case state.

7. The "Scroll Lock" key works with some software to freeze the display. Then the cursor can move about the screen without the top bottom or any lines in between moving.

1-5.13 Battery Pack

Battery Pack is an assembly of the batteries, a battery pack connector board in an enclosed plastic case.

The battery is Ni-MH type. The capacity of each is 3800mAH or more. 1.2V, 14 cells are used in one pack. The output voltage of battery pack is 16.8VDC, so the battery pack provides 63.16 watts or more to notebook computer.

Battery pack connector board provides interface between battery cellls and DC/DC board. When the inside temperature of battery pack exceeds 55°C, the DC/DC converter board detects it via thermal sensor and shut down the charging current.

1-5.14 Low Battery Indication

When all the batteries voltages are under the low battery status, the speaker will beep and the Battery LED is on (Orange).

1-5.15 Battery Charger

The A-Series battery can be charged during power on and power off. The A-Series has three types of battery packs: the first is primary 14 pcs/pack battery, the secondary is 9 pcs/pack battery and the third is 9 pcs/pack battery. The battery charge status is as follows:

1. When the 1st and Bay 1(Bay 2) battery packs are installed simultaneously before charging, the 1st battery pack has priority over the Bay 1 (Bay 2) one in charging order.

2. If you turn off the computer while charging, the charger timer will be reset, so that the CHARGE LED will flash 3 seconds then light statically.

3. The charge time is set to six hours for power on and power off charge.

4. Battery charge time period is as follow:

   4.1 Primary batteries in power on, 30W consumption full charge time are about 4.5 hours. The primary batteries full charge voltages are about 21V (MIN).

   4.2 The primary batteries in D/D power off, the charge time period are about 2 hours.

   4.3 The Bay 1 batteries full charge time period in power on, 30W consumption are about 3 hours. The Bay 1 batteries full charge voltage is about 13.4V (min).

   4.4 The primary, Bay 1 and Bay 2 batteries charge time period are about 3 hours in power off.

   4.5 The primary battery discharge time period is 1 hour and 36 minutes in power on 30W, but the Bay 1 discharge time period is 1 hour in power on 30W consumption.

1-5.16 CHARGE LED Indicator Status

1. When you insert the battery pack into the system and the AC power adapter is already connected, the CHARGE LED (Orange) flashes three seconds or more and then stays on all the time.

2. When you connect the AC power adapter to the system, and the battery pack is already inserted, the CHARGE LED (Orange) flashes three seconds or more and then stays on all the time.

3. When you turn off the system during charging, the charge timer is reset, and the CHARGE LED (Orange) flashes three seconds or more and then stays on all the time.

4. When the battery is fully charged, the CHARGED LED (Orange) goes out.

5. When no battery pack is installed or the AC power adapter is not connected, the CHARGE LED (Orange) is off.

1-5.17 Diskette Drive and CD-ROM

(Item 2, Figure 1-6) The notebook has space for a 1.44 MB, 3.5-inch diskette drive and CD-ROM drive. The space can put removable FDD drive or CD-ROM drives.

The diskette drive allows permanent data storage in a compact, transferable media. Data stored on diskettes can be easily passed from one machine to another.

The IR Rave diskette drive accepts 3.5-inch double-density (720 KB) and high density (1.44 MB) diskettes.
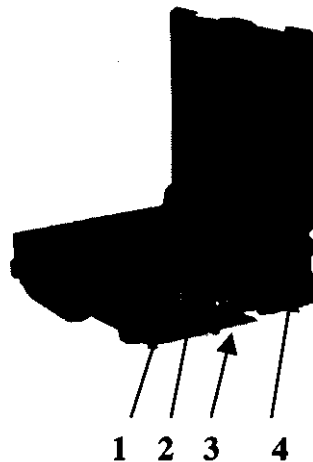

Figure 1-6 Diskette Drive and CD-ROM

1-5.18 PCMCIA Slot and Diskette Drive and CD-ROM Door

The PCMCIA slot and diskette drive and CD-ROM door (Item 3, Figure 1-6) protects the PCMCIA interfaces and diskette drive from damage in harsh environments.

1-5.19 PCMCIA Slots

The notebook has two PCMCIA slots, (Item 1, Figure 1-6). Each supports a Type-II PCMCIA card. Together, they support one Type-III PCMCIA card.

1-5.20 External Power Source Port

If the notebook will be in use for a long continuous period, connect an external power source to the notebook here (Item 8, Figure 1-7).
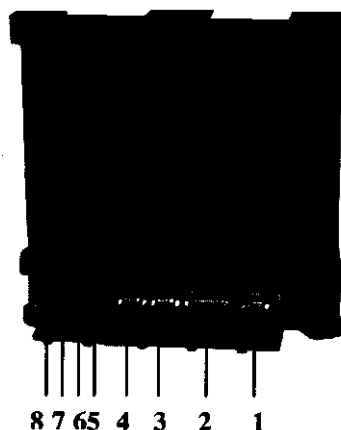

Figure 1-7 Rear Side View

1-5.21 Serial Port

Two serial ports (Item 3, Item 4, Figure 1-7) are 9-pin D-type connectors for the IR Rave notebook. They are RS-232C interface set to the COM1 and COM2 addresses.

1-5.22 Printer Port

The printer port (Item 2, Figure 1-7) is a 25-pin D-type interface. Usually this interface supports a parallel printing device.

1-5.23 VGA Port

This 15-pin (Item 1, Figure 1-7) analog port is for connecting in external monitor.

1-5.24 IrDA Port

This infrared port (Item 5, Figure 1-7) complies IrDA, and ASK Standards, which allow you to connect your notebook to an IR device wirelessly.

1-5.25 Keyboard Port

The Keyboard port (Item 6, Figure 1-7) for IBM PS/2 keyboard.

1-5.26 Mouse Port

The mouse port (Item 7, Figure 1-7) for IBM PS/2 mouse.

1-5.27 Hard Disk

The hard disk (Item 4 Figure 1-6) is the primary storage device for the notebook. It stores major programs, old and new data files for later use.

1-5.28 External Power Adaptert

The IN Rave external power adapter converts 100-240V, 50-60 Hz to 22.5VDC, 2.4A, 54 watts for the notebook & expansion unit.

Chapter 2
Operation

2-1 Introduction

This chapter tells how to use the notebook.

2-2 Opening and Closing the Notebook

This section tells how to open the notebook cover and access doors. See Figure 2-1.

2-2.1 Opening the Cover

To open the notebook, press hook outward and tilt the cover up to a comfortable viewing angle. (Usually about 110°) See Figure 2-1.
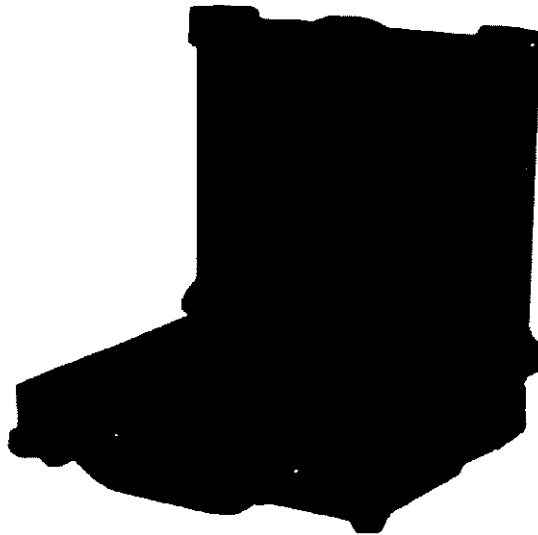
Figure 2-1   Opening the Notebook

2-2.2 Closing the Cover

To close the notebook, tilt the cover down until it clicks shut. The computer stays on if you close the cover while system power is applied.

2-2.3 Opening the PCMCIA/FDD/CD ROM Door

Open doors only when it is required to access components behind them.

To open a door:

1. Insert a small flat edged object (coin edge or screw-driver) in a door or cover securing captive screw.

2. Turn the screw counterclockwise until it comes loose from its socket.

3. Repeat steps 1 and 2 for each securing screw.
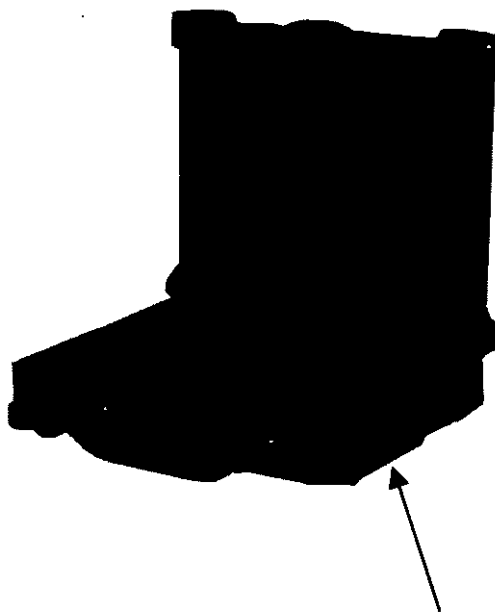
4. Grab a securing screw and open a door.

Figure 2-2   Opening a Door

2-2.4 Shutting the PCMCIA/FDD/CD-ROM Door

1.   Shut the door or put the PCMCIA/FDD/CD-ROM back in place.

2.   Align the door or cover securing screws with their sockets.

3.   Use a flat edged tool (coin or screw driver) to turn the screws clockwise until tight.

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NOTE
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Keep all access doors and covers tightly shut when not in use.

2-3 Connecting and Installing Devices

This section gives instructions for installing, removing, changing, or connecting devices via the notebook external ports or sockets.

2-3.1 Serial and Parallel Port

Item 2, Item1, Figure 2-3 shows how to connect serial and parallel cables. Make sure the mating connector is tightly secured by pushing it to the end and lock the screws.
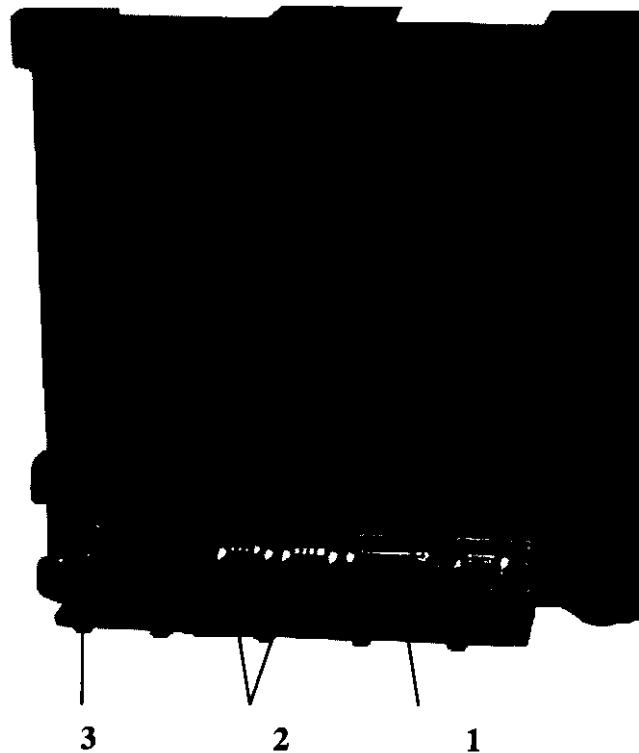
3   2   1

Figure 2-3   Connecting the External Power, Serial , and Parallel ports

2-3.2 External Power Adapter

Item 3, Figure 2-3 shows how to connect the power adapter. Make sure the mating connector is tightly secured by pushing it to the end.

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NOTE
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The notebook can be on or off when connecting or disconnecting the adapter.

2-3.3 Diskettes

To install a diskette,

1.   Open the PCMCIA slot/ diskette drive access door.

2.   Slide the diskette into the drive with the printed label facing up until it clicks in place.

To remove the diskette, press the ejector button on the right side of the drive. See Figure 2-4.

Figure 2-4   Removeing a Diskette

## 2-3.4 Remove the Floppy Diskette Drive / CD-ROM / Bay 1 Battery

1. Open the PCMCIA /FDD/CD-ROM door.

2. Push the ejector handle at the front bottom of the FDD/CD-ROM/Bay 1 battery compartment to let it spring back about 0.4 cm..

3. Pull out the handle outwards about 3 cm and stop pulling to prevent it from being damaged.

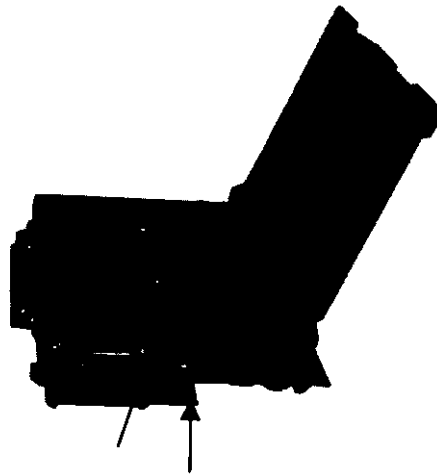4. Hold two sides of the FDD / CD-ROM/Bay 1 battery module and slide it out smoothly.

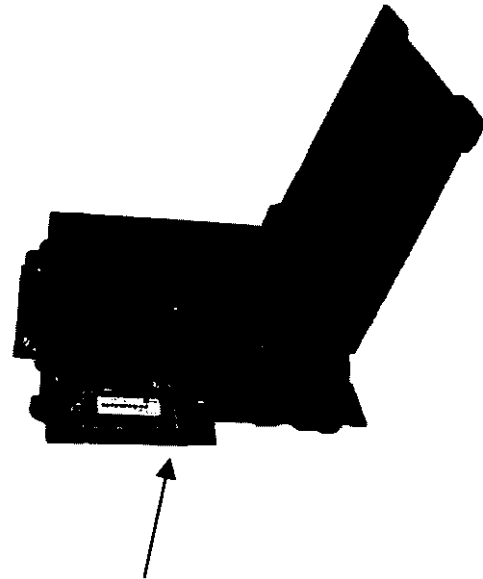1   2
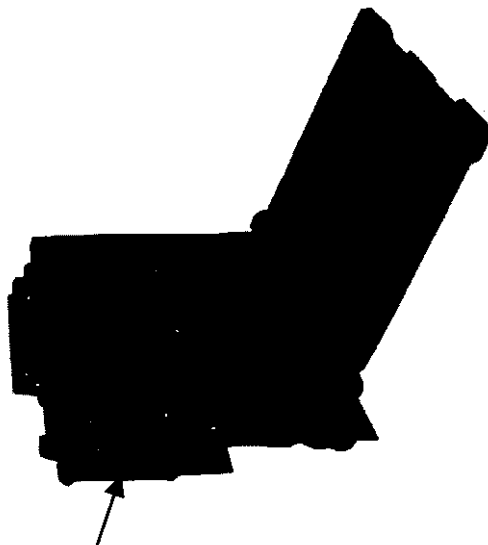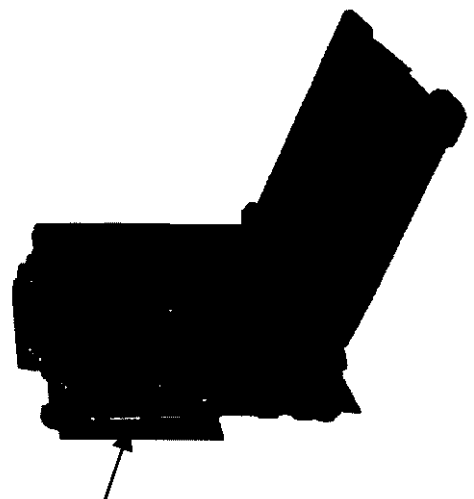
Open Door   Push Eject Handle

3   4

Don't Pull it.

Figure 2-5   Removing a FDD/CD-ROM

2-3.5 PCMCIA Cards

The PCMCIA ports support up to two type-II PCMCIA cards or one type-III PCMCIA card. A type-III PCMCIA card occupies both slots.

1.   Open the PCMCIA slot/diskette drive door.

2.   Slide the card into the slot with the insert marking facing up until it seats.

To remove the upper card, press the eject button on the left. To remove the lower card, press the button on the right. (See Figure 2-6).
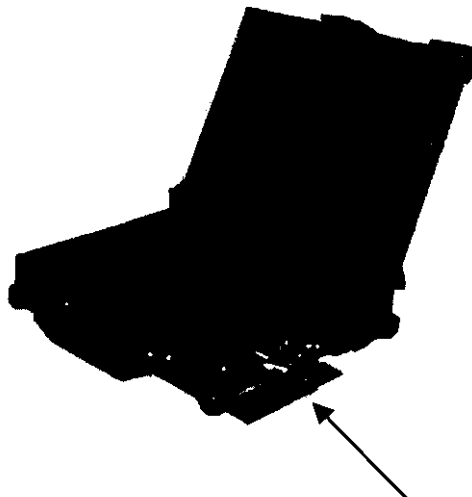
Figure 2-6   Removing a PCMCIA Cards

2-3.6 Hard Disk

┌──┐
│   **CAUTION!**   │
└──┘

Installing or removing a hard disk when the computer is on can destroy
the system board and hard disk.

To remove and change the hard disk:

1. Turn the computer off.

2. Loose the screws from up, down of the Hdd disk.

3. Grab the handle of the hard disk module and pull it out. (See Figure 2-7).

4. Insert the new hard disk module in the slot until it seats firmly.

5. If necessary, run the system configuration program when the system boots next time.
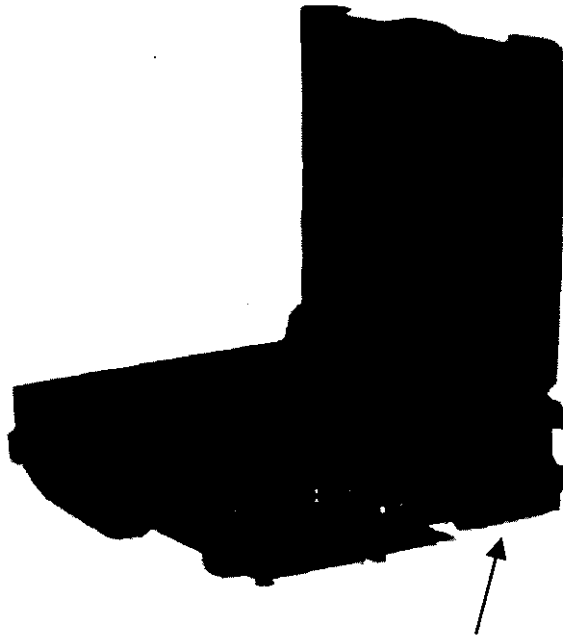   See chapter 3 for details.

Figure 2-7   Removing a Hard Disk

2-4 First Time Use

This section describes activities to complete prior to using the notebook the first time.

1. Put the rechargeable battery pack into the battery compartment.

2. Connect the power adapter to the power port.

3. Connect the power adapter into a properly rated power source.

4. Turn on the computer.

2-4.1 Configuring the System

The notebook is configured in the factory. Run the SETUP program when the computer boots for the first time to record the system settings. For more details about configuring the system and when to do it, see Chapter 3.

2-4.2 Installing Software Driver

Before you install your new software, make a backup copy of the original program disk using the DOS Diskcopy command or the Windows disk copy utility in file manager.

2-4.2.1 Installation Cardworks in Windows 95

At First you install Cardworks for Windows 95 before, you must install Patch Program, otherwise that can't confirm PCMCIA card. (Please user can self catch the W95SU523.exe from http://www.toshiba.ca/my_html/files2.htm).

1. With Windows running, insert Cardworks Software disk into drive A.

2. In the Windows program manager, select Run…… from the File menu and type A:\Setup.exe. Press ENTER, or choose OK.
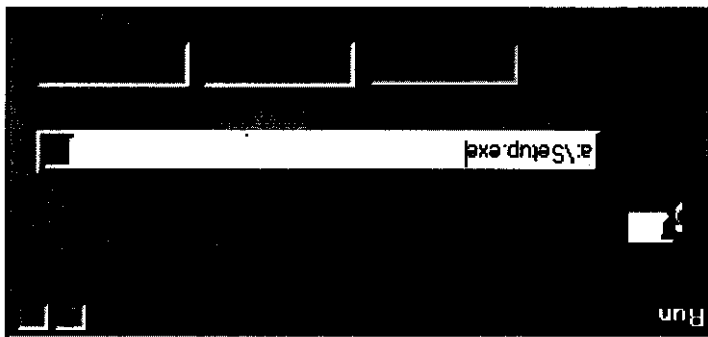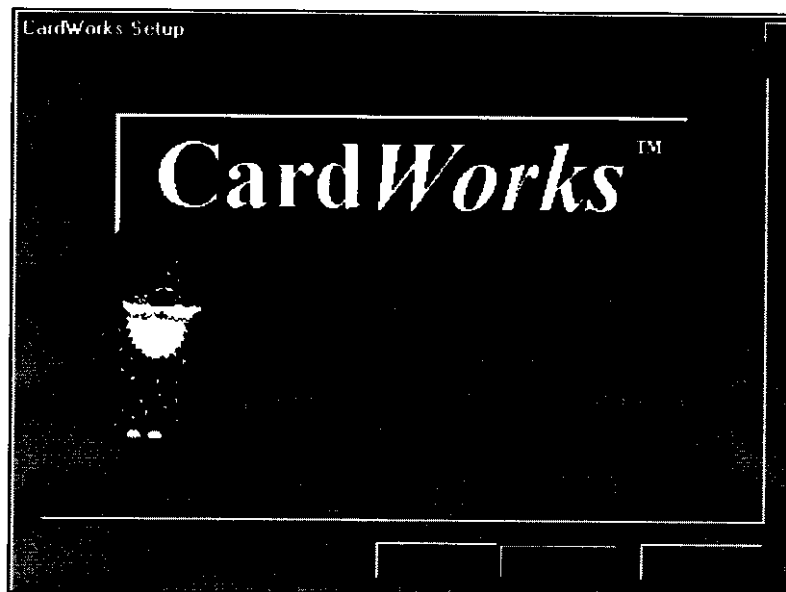
3. Click "OK" button then next screen will be displayed.
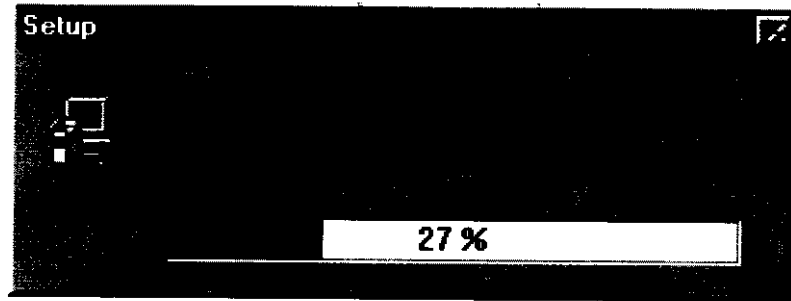
4. The installation program starts and quickly displays the initial setup indicating that Setup is preparing for the installation and that you will be guided through the installation process.

After a brief period the **CardWorks Setup** screen will appear.

5. Selecting the **Next** button displays the *CardWorks* **Welcome** screen. Follow the recommendations to exit all Windows programs before continuing with the installation.
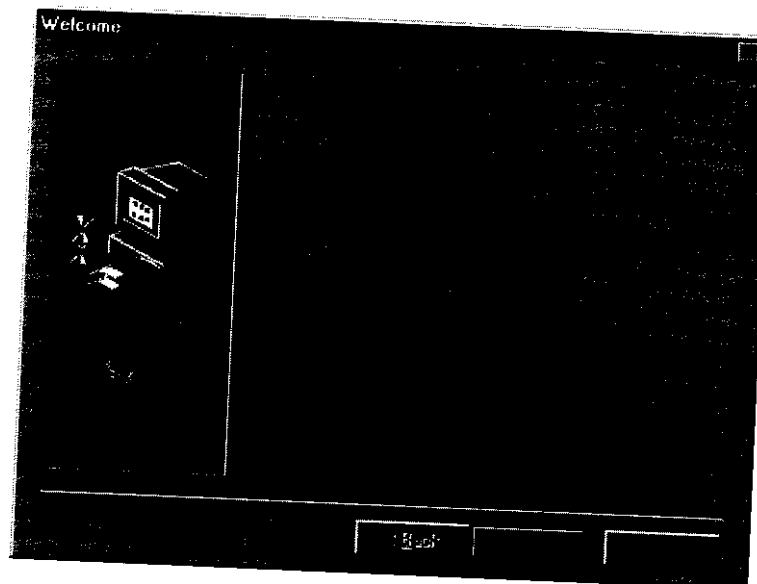
6. Selecting the **Next** button displays the following **Choose Destination Directory** screen. Select **Next** to install software in the default destination directory, C:\CARDWORK. If you want to install the software into another directory, select **Browse** and then select the desired directory.
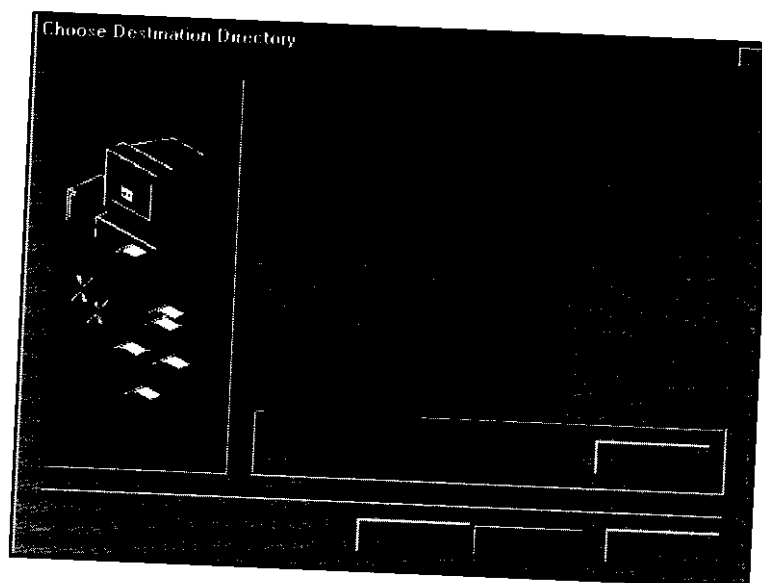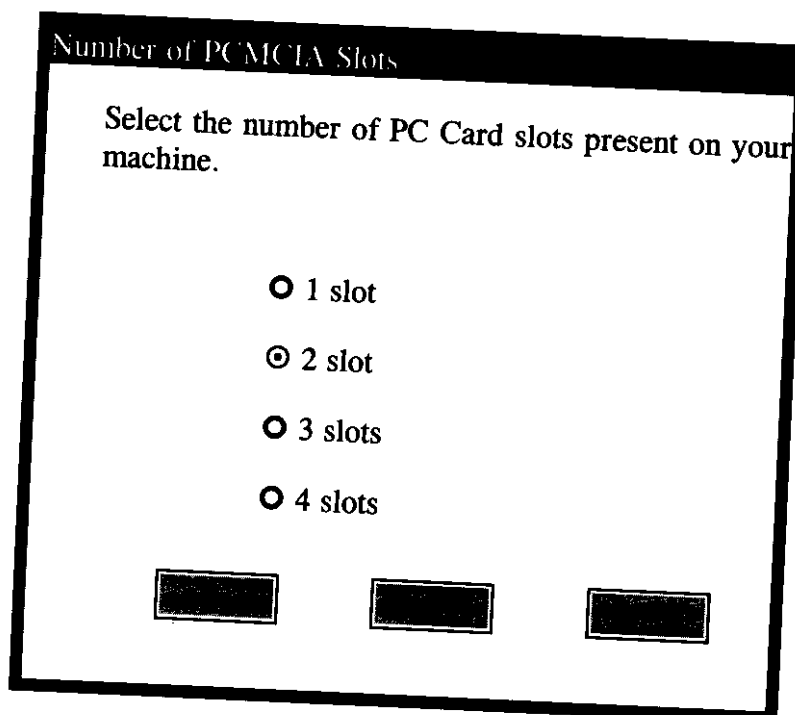
7. Once you have selected the destination directory, select Next to view the **Setup Type** screen.

   Select from **Typical,Compact**, and **Custom** (see descriptions on screen) installations to define your Setup type.
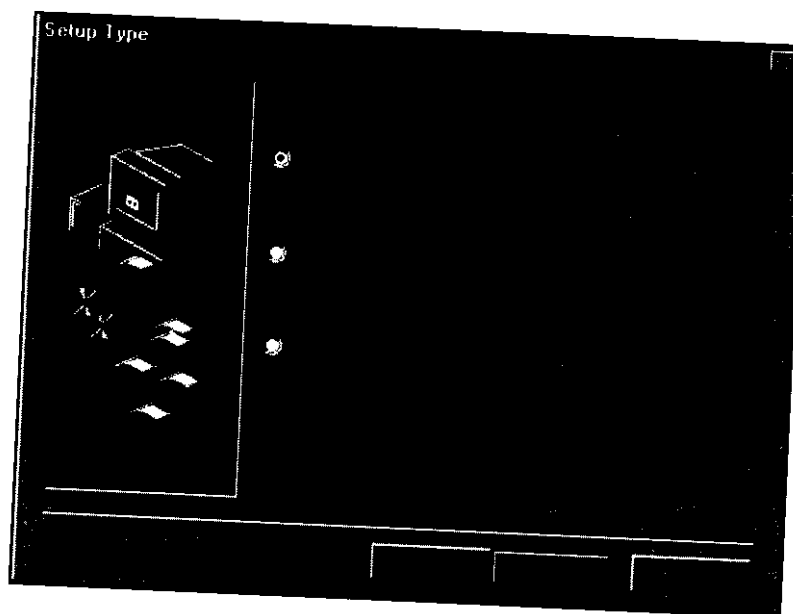
8. Select the number of PC Card slots present on your machine: 1 to 4.

9. Your system will then begin to decompress and copy files.
   The three information gauges (upper section of graphic) provide the user with important feedback during installation:
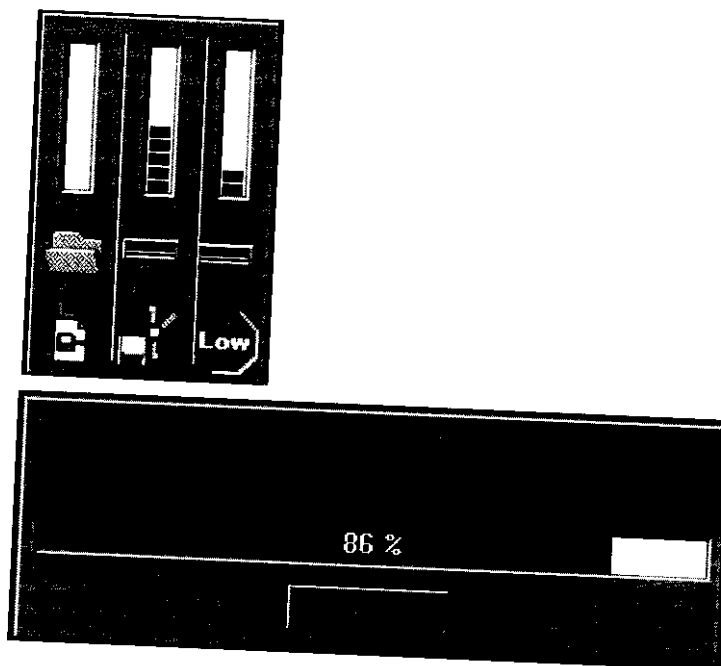

| Location	Description
Left	The left gauge shows what percent of each individual file the installer has copied from the diskette to the hard disk.
Center	The center gauge shows how much of the diskette has been transferred to the hard disk.
Right	The right gauge shows how much space is available on your hard disk. The low sign lights when your hard disk has only 5% or less space available.

The lower section of the graphic is a progress indicator of how much of the currently compressed file has been decompressed and copied to the hard disk.

10. Once all files have been transferred, you will be asked if you want to read the README file now.

   Select either **Yes** or **No** as desired.

Question

Do you want to read the README file now ?
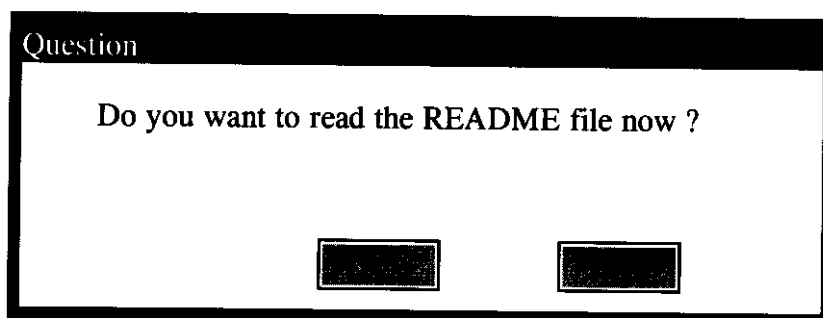
11. Before the application can be run, the computer must be rebooted.

Setup Complete
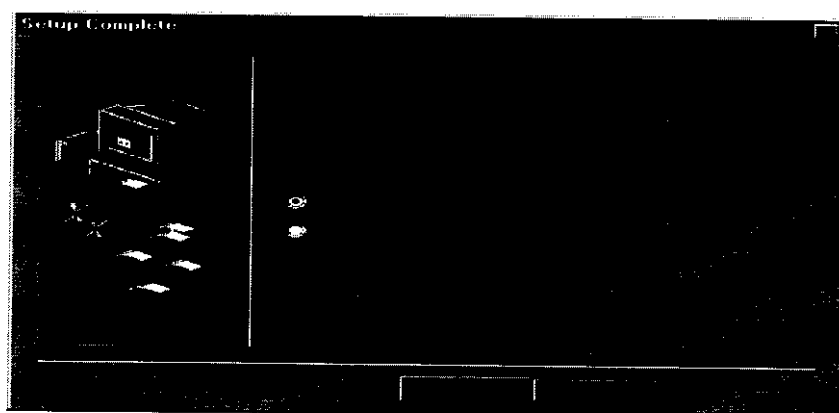
12. Select whether to reboot now or later.

Once the installation has been completed the *CardWorks* group will be created (unless you had previously opted to have *CardWorks* start from the Windows Startup Group).

CardWorks

CardWizard
Read Me

CardWizard
Help
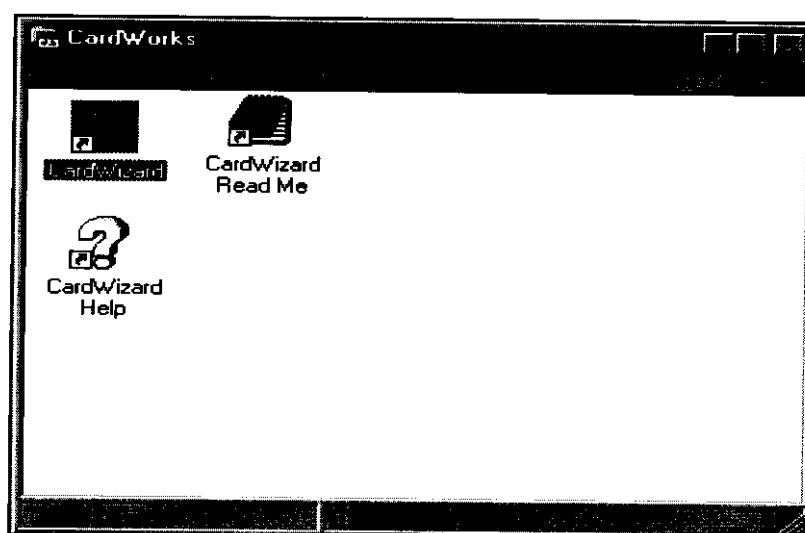
13. If your device is SCSI hard disk, so that sytem will find "Adaptec AHA-150X/1510/152X/AIC-6X60 SCSI Host Adaptec" after install Cardworks completed.
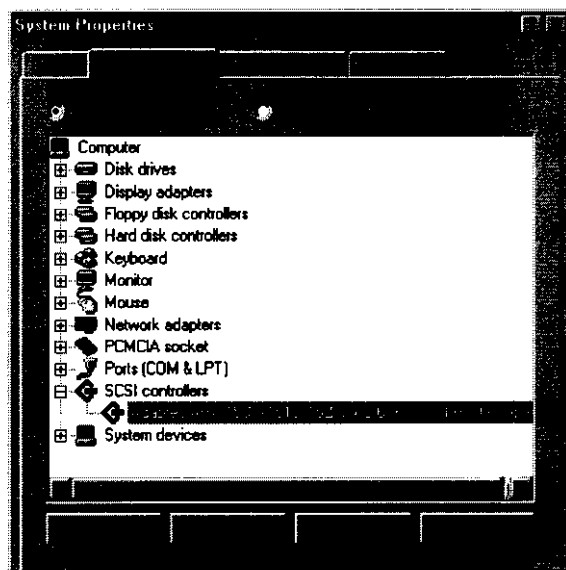
14. Select "Resources" then enter "Adaptec AHA-150X/1510/152X/AIC-6X60 SCSI Host..." screen will be displayed.
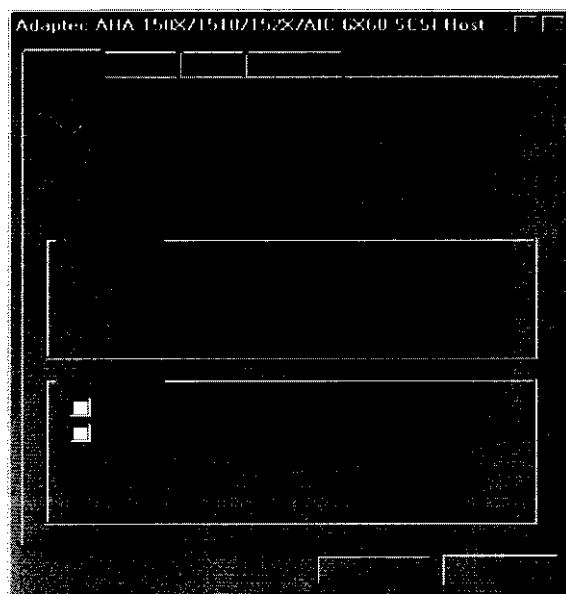
2-4.2.12 Installation Cardwizard Driver in Windows NT4.0

Installing CardWizard fro Windows NT is a simple task. Just insert the diskette into the appropriate drive and follow the prompts on the screen. If you need assistance refer to the instructions below:

1. If you have any PC cards currently installed in PC card slots, remove them.

2. If you system is connected to a network, lof off before starting the installation.

3. Logon as an Administrator.

4. Carefully read the ReadMe file on the installation diskette.

5. Choose Run from the Windows NT Start button.

6. Enter A:\Setup.exe on the Open line in the Run dialog box.

7. Choose OK.

The installation program starts and indicates that Setup is preparing for the installation.

You will then be guided through the installation process.
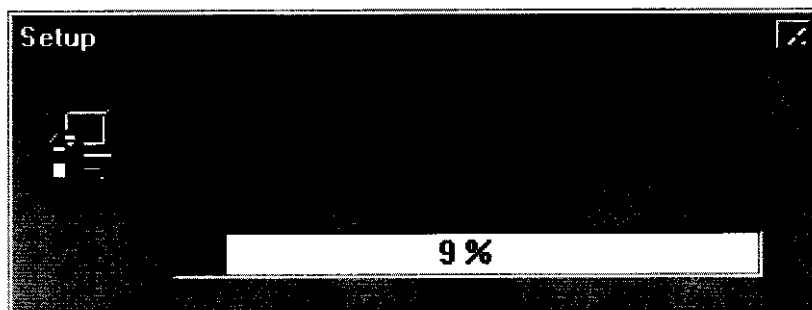
8. Select "Next" button then double click.
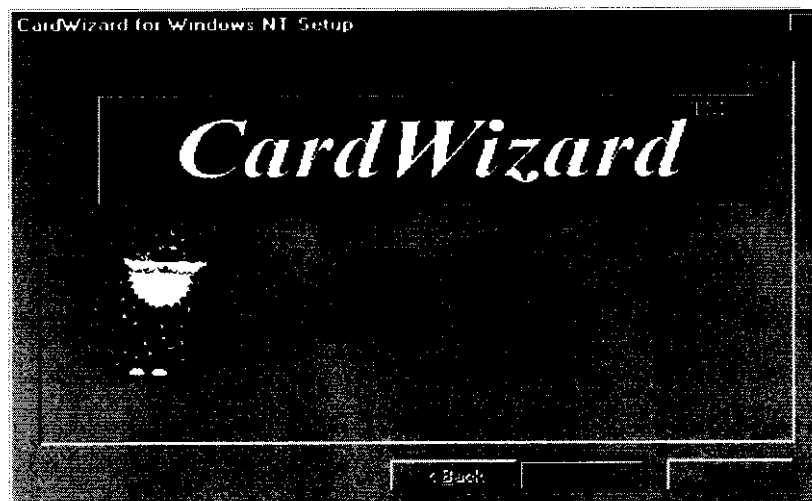
9. Select "Next" button to display the welcome screen.

10. The following warning will appear. Remove any inserted PC Cards.
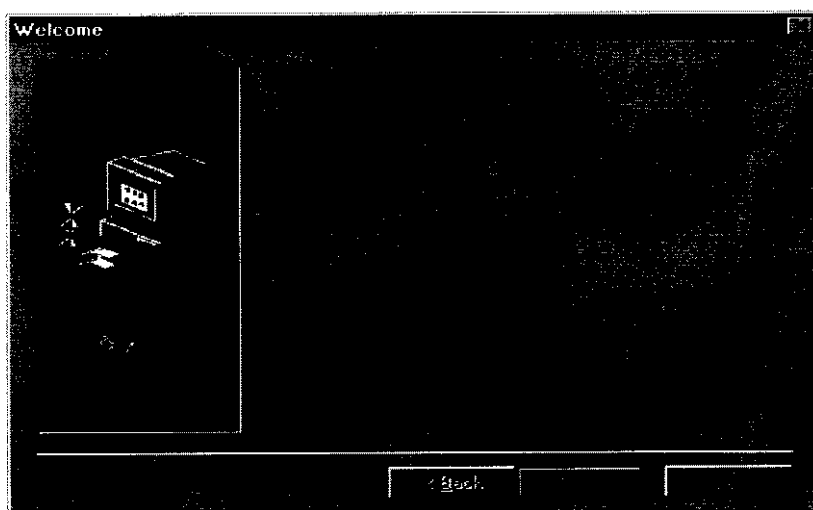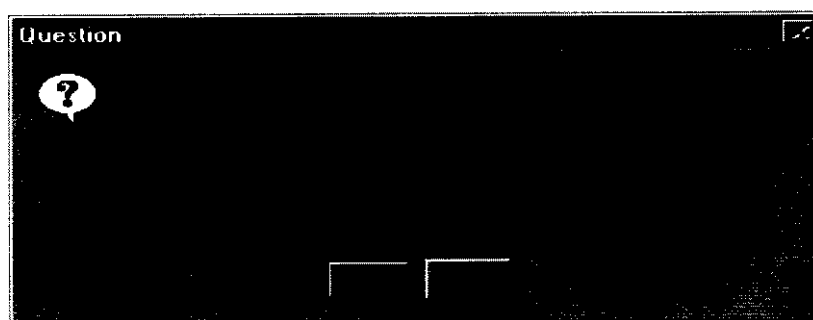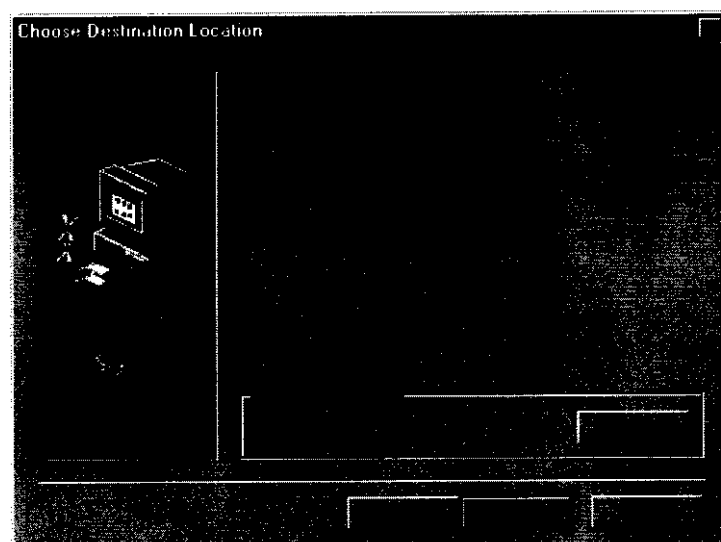

11. You can follow the default directory to install program then double click "Next" button or you can create new directory to install.

12. After all files have been copied, the following screen will be displayed.then you select "Yes, I want to restart my computer now" then double click "Finish" button.
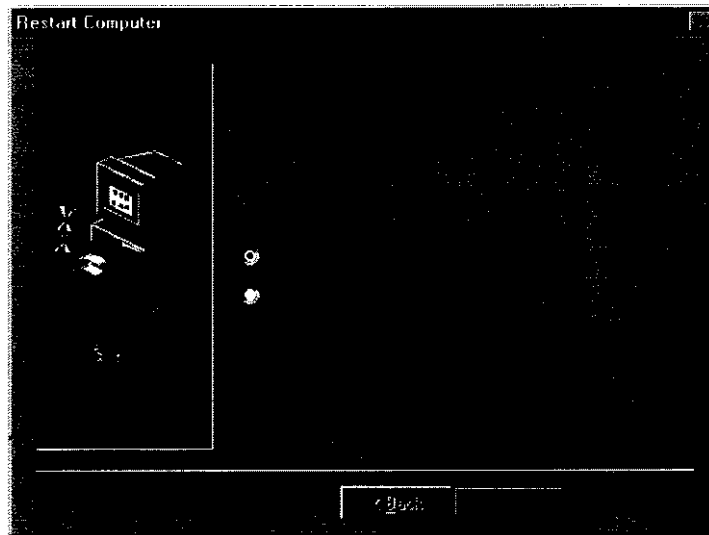
2-5 Daily Operation
This section discusses expected daily notebook activity.

2-5.1 Starting the Computer

To start the computer :

1. Make sure all peripherals are properly connected.

2. If using the AC adapter or external power, make sure it is connected.

3. Open the cover.

4. Press the Power button. The power on indicator lights up. The computer performs a Power On Self Test (POST) and checks configuration settings. Depending on the configuration, items tested include :

● system board
● system DRAM
● video controller
● keyboard controller
● I/O controllers
● hard disk
● diskette drive

5. If the POST finds an inconsistency between expected and actual system con figuration it will display an error message.

6. If the cause is known and will not cause other difficulties, press F1. To correct the discrepancy, press F2 and change configuration settings accordingly. See chapter 3 for details about SETUP.

7. After the POST, the system checks for a system password. If one is present, the computer prompts for its entry before continuing. Carefully type it in.

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NOTE
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The password characters do not appear on the screen.

8. After password confirmation, the system tries to boot from drive A first and then drive C.

9. Adjust brightness, and viewing angle for best appearance and comfort.

2-5.2 Turning Off The Notebook
To turn off the notebook

1. Save all data and close all open programs.

2. Press the Power button to turn off power.

3. Swing the cover closed until it clicks shut.

4. Turn off and disconnect all peripheral devices.

5. Close and tighten all access doors and covers.

2-5.3 Using the Notebook in the Car
When you using the notebook in the car, you must carefully follow as:

1. Start engine wait five to ten minutes and then plug car power cable into car cigarette. (See Figure 2-8).

2. Before have notebook connected with car power cable be sure the notebook is off.

3. Once you have the notebook connected car power cable.

4. Turn on of the notebook.
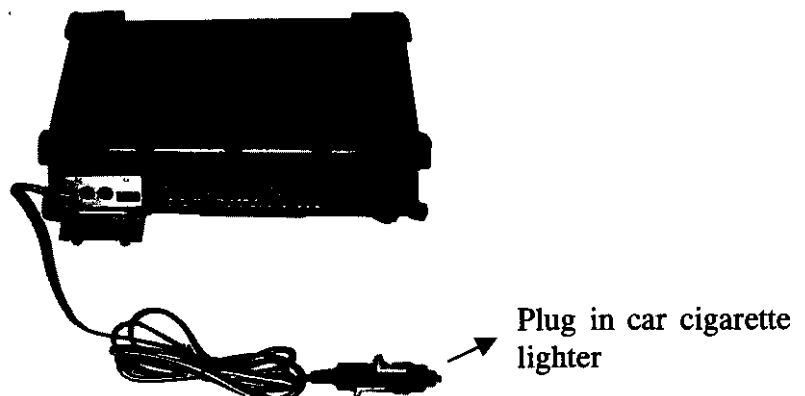

Plug in car cigarette lighter

Figure 2-8   Plug Car Power Cable in Notebook

2-8 Use the External FDD

1. Plug the 36 pin external FDD cable to the external FDD, and the other end (25-pin) to the computer printer port. (See Figure 2-9)

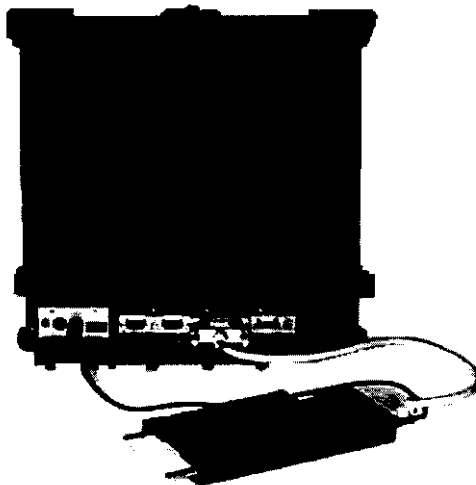2. Plug the DC power cable to the external FDD, and plug the other end to one of two PS/2 ports.

Figure 2-9   Use the External FDD

Chapter 3
Setup Configuration Utility

3-1 Introduction

This chapter tells you how to configure your system using the SCU (Setup Configuration Utility).

The SCU allows you to enter the system configuration information. This information is needed by the system to identify the type of devices installed and to set up special features. Typical configuration information includes the date and time, the type of disk drives, and the amount of memory; special features include Power Saving and Security.

The configuration information is stored in a special kind of memory called CMOS (Complementary Metal Oxide Semiconductor) RAM. A RTC backup battery backs up CMOS RAM data.

You may need to run SCU when:

- You see an error message on the screen requesting you to run SETUP.

- You change factory default settings for some special features.

- You want to modify the configuration information.

3-2 Running SETUP and Moving Around

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NOTE
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1. All the SCU screens shown in this chapter are examples. Your actual settings may vary from those shown here.

2. The SCU program may have been updated after this manual was published.

The SCU program is built into the system board. To run SETUP, press <F2> during POST only.

The SCU screens include five groups of many different functions:

- Main — Contains the system General SETUP parameter.

- Advanced — Contains Integrated peripherals and PCI Device setup parameter.

- Security — Contains the system security functions setup parameter.

- Power — Contains the system power management setup parameter.

- Exit — Contains various ways to exit the SETUP program.

Use the right & left Arrow keys & mouse to change display for each group.

Setup Menu
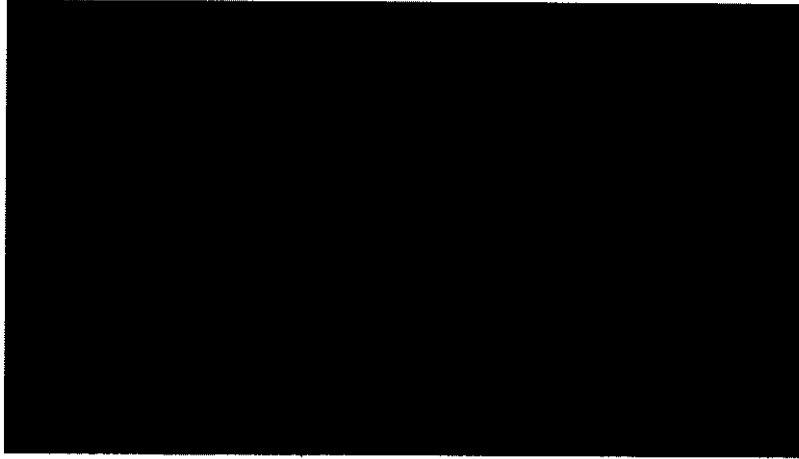
3-2.1 Main
This section describes the main items of the SETUP program.

The SCU screen can be divided into four areas:

- On the top line of the screen is the menu bar, which lists the titles of the available menus. Each menu title contains a pull-down menu, which displays items for setting.

- The left column of the screen displays the current configuration information of the system. If an item in the pull-down menu is selected which contains multiple choices, the left column displays the submenu where you can make your selections.

- The right column of the screen gives help information of the selected item.

- The bottom lines of the screen give keyboard instructions for moving around and making selections.

3-2.2 Moving Around and Making Selections
You must go through two or three levels to complete the setting for an item. In most cases, there are three levels: menu title, pull-down menu, and submenu.

To move around and make selections, you can use both the touchpad/mouse and keyboard.

You're advised to use the touchpad or mouse. It is more straightforward than using the keyboard.

For most items, simply move the pointer with the touchpad/mouse and click on your selection with the left button. To cancel your selection, click the right button. For a few items, you will need to use the keyboard for making selections.

Using the Keyboard
Keyboard information can be found at the bottom of the screen. You can also use shortcut key, which is highlighted by a different color on the screen.

Described below is the general procedure for using the keyboard to complete setting of an item:

1. Select a menu title with the left/right arrow key a press [Enter] to pull down the menu. You can also directly pull down a menu by pressing the shortcut key.

2. Inside the pull-down menu, select an item with the up/down arrow key and press [Enter] to access the submenu. You can also directly access the submenu by pressing The submenu displays the options you can select. If no submenu appears, simply press [Enter] to enable or disable the item.

3. Inside most submenus, press the [Tab] key to go to the entry field. Select your desired option with the up/down arrow key or the shortcut key. To complete the setting and leave the submenu, press [Enter] or select the "OK" button. To cancel your selection, press [Esc] or select the "Cancel" button.

3.2.2.1 Main Menu

The Main pull-down menu, as shown below, contains the basic configuration settings of the system.
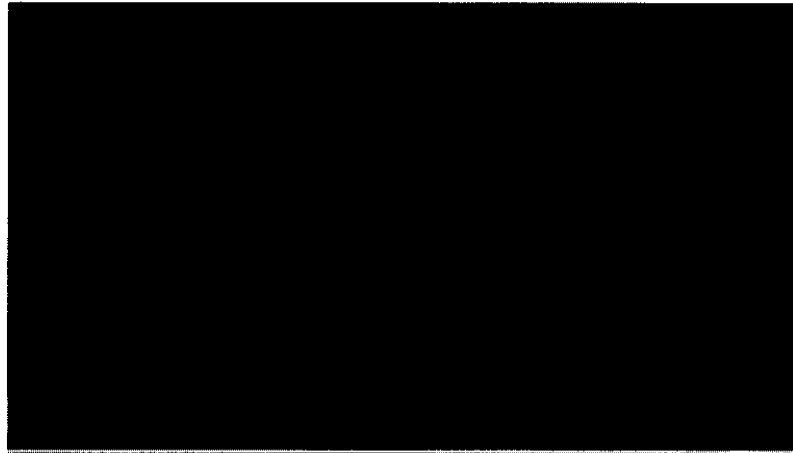
Date and Time

The "Date and Time" item sets the system date and time.
When this item is selected, the submenu will display as shown below.

IDE Settings

The "IDE Settings" item sets the type of the hard disk drive in your system.
When this item is selected, the submenu will display as shown below.

Drive 0 is your primary and Drive 1 your secondary.
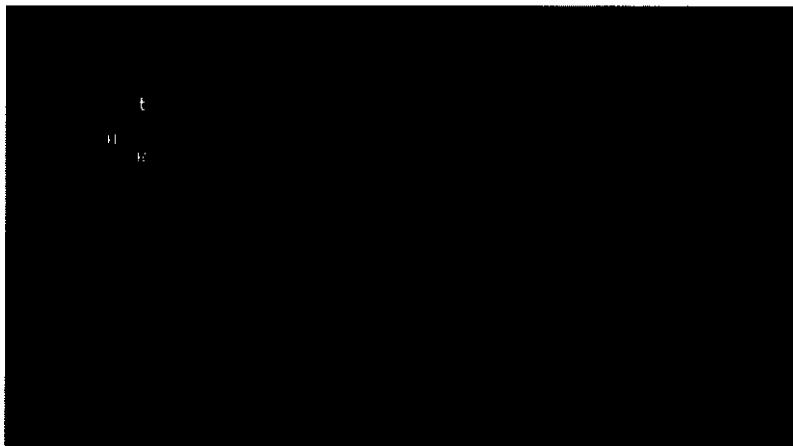
Fast Boot

The "Fast Boot" item, when enabled, speeds up the booting procedure by bypassing the memory test.

When this item is selected, no submenu will display. A check mark ($\sqrt{}$) indicates Enabled, an underline (_) indicates Disabled.

Boot Sequence

The "Boot Sequence" item sets the sequence of booting.
When this item is selected, the submenu will display as shown below.

Descriptions of the available options are:

1. A then C: The system will try to boot from drive A first. If a diskette with operating system does not exist, the system will then try to boot from drive C(hard disk).

2. C: Only: The system will try to boot from drive C (hard disk) only.

3. A: Only: The system will try to boot from drive A (hard disk) only.

4. CD-ROM then C: The system will try to boot from the CD-ROM drive first. If a CD-ROM with operating system does not exist, the system will then try to boot from drive C (hard disk).
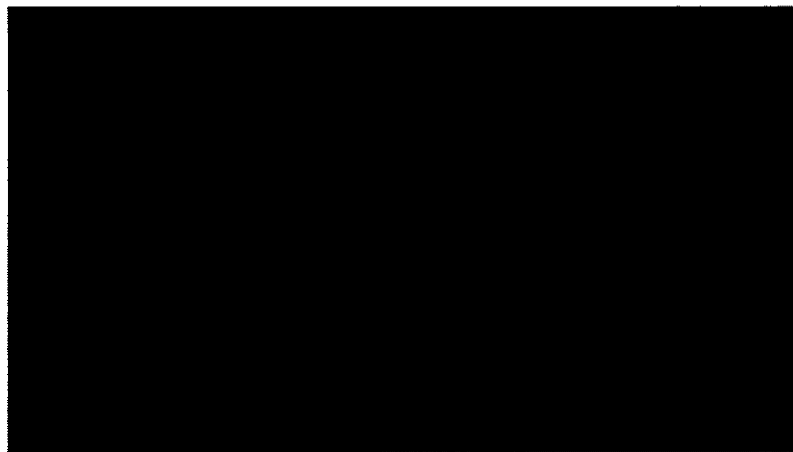
Key Click
The "Key Click" items sets if there will be a click sound whenever a key is pressed.

When this item is selected, no submenu will display. A check mark ($\sqrt{}$) indicates Enabled; an underline (_) indicates Disabled.

Display Mode
The "Display Mode" item sets the display device to respond after system power on. When this item is selected, the submenu will display as shown below.

Descriptions of the available options are:

1. Auto: The external CRT monitors (if connected) will respond after power on. If a monitor is not connected, the LCD will respond.

2. LCD Only: Only the LCD will respond after power on even if an external CRT monitor is connected.

3. Simultaneously: Both the CRT monitor (if connected) and the LCD will respond after power on. If a monitor is not connected, only the LCD will respond.

CAUTION

Be careful with the setting "AUTO". This setting can make the [Fn+F5] hot keys invalid if the CRT monitor connected requires higher vertical scan frequency than the LCD.

3-2.2.2 Advanced Menu
The Advanced pull-down menu, as shown below, contains the I/O configuration settings of the system.
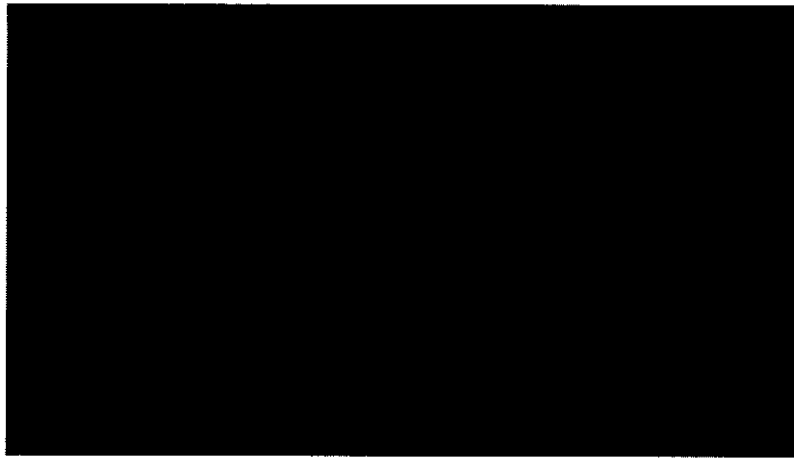
The followings describe in sequence all the items of the Advanced menu.

COM Port

The "COM Port" item allows you to assign COM1 and COM2 to specific functions that you wish to use. In general, COM1 can be assigned to RS-232 (the serial port) ; COM2 can be assigned to IR or RS-232.

When this item is selected, the submenu will display as shown below. Select Disabled if you need the resources (3F8/IRQ4 of COM1 and 2F8/IRQ3 of COM2) for other devices.


IR Mode

The "IR Mode" item sets the communications compatibility mode for the IR port. When this item is selected, the submenu will display as shown below.

Select according to the type of device with which the notebook is to communicate.

LPT Port

The "LPT Port" item sets the address for the LPT port (parallel port).
When this item is selected, the submenu displays as shown below.
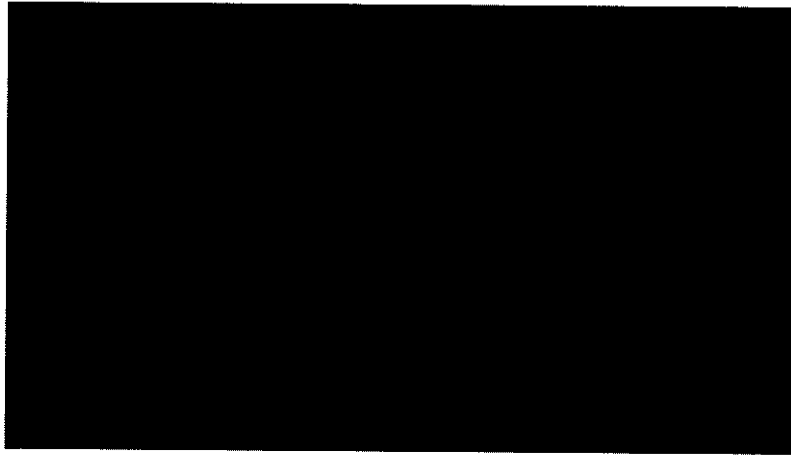
LPT Extended Mode

The "LPT Extended Mode" item sets the LPT (Parallel port) mode. Your system supports EPP (Enhanced Parallel Port) and ECP (Enhanced Capabilities Port) standards, which turn the standard parallel port into a high-speed bi-directional peripheral port.

When this item is selected, the submenu will display as shown below. Select the mode supported by the parallel device you are using.
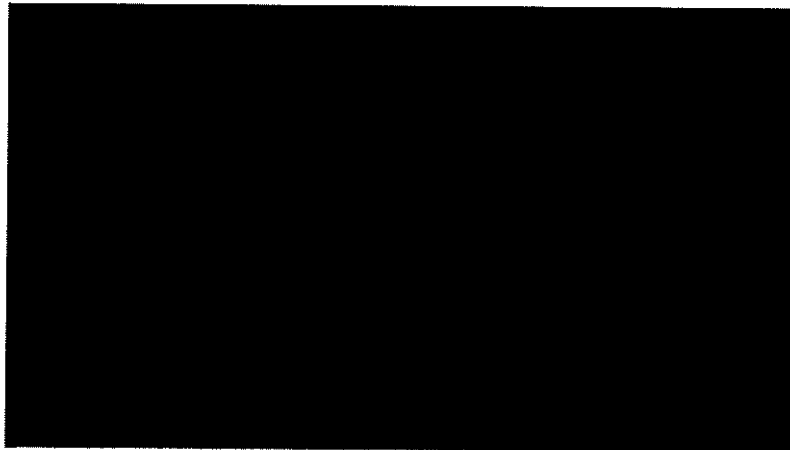
Save To Disk Warning Message

The "Save To Disk Warning Message" item sets if the warning message will appear after system power on when there is no Suspend-to-Disk partition on the hard disk.

When this item is selected, no submenu will display. A check mark (√) indicates Enabled, an underline (_) indicates Disabled.

Keyboard Numlock

The "Keyboard Numlock" item sets if the Num Lock key will be automatically activated after system startup.

When this item is selected, no submenu will display. A check mark (√) indicates Enabled, an underline (_) indicates Disabled.

Pointing Device (PS/2 Mouse)

The "Pointing Device (PS/2 Mouse)" item enables or disables the built-in touchpad or the PS/2 mouse.

When this item is selected, no submenu will display. A check mark (√) indicates Enabled; an underline (_) indicates Disabled. Disable this option if you are using a serial mouse.
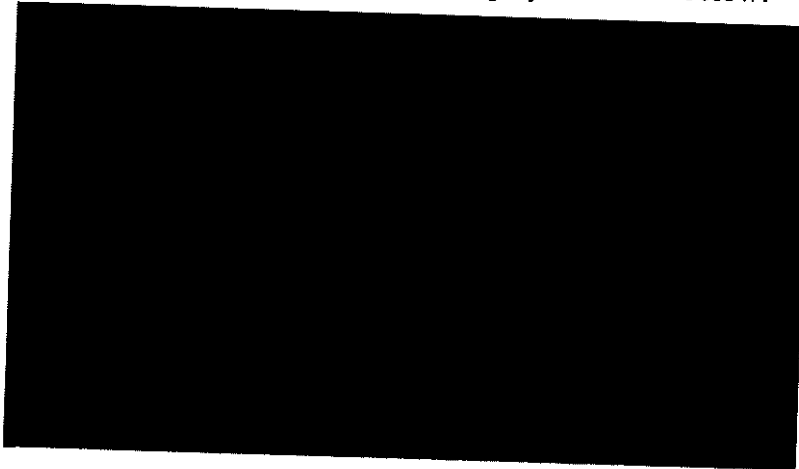
Hot Key Beep

The "Hot Key Beep" item enables or disables the beep sound when hot keys are pressed.

When this item is selected, no submenu will display. A check mark (√) indicates Enabled; an underline (_) indicates Disabled.

Cache Systems

When this item is selected, the submenu will display as shown below.

The "Cache Systems" item Write Back (enables) the cache of your system: L1 cache (internal cache of CPU) and L2 cache (external 256KB or 512KB cache). The cache feature enhances system performance because the most frequently used data is accessed from and written to the high-speed cache memory.

Resolution Expansion

The "Resolution Expansion" item, when enabled, allows the 800 X 600 display resolution to expend and occupy the whole 1024 X 768 LCD panel.

When this item is selected, no submenu will display. A check mark (√) indicates Enabled; an underline (_) indicates Disabled.
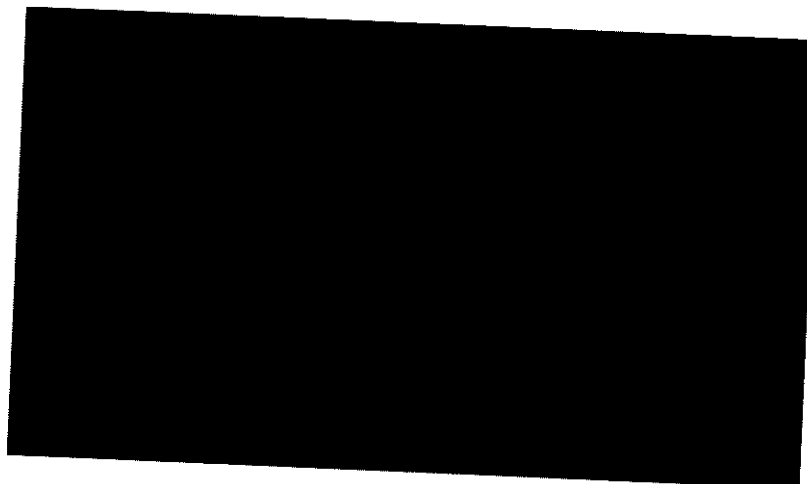
Keyboard Backlight

The "Keyboard Backlight" item, when enabled, keyboard backlight is power on.
When this item is selected, no submenu will display. A check mark (√) indicates Enabled; an underline (_) indicates Disabled.

Security Menu

The Security pull-down menu, as shown below, contains the Security settings that safeguard your system against unauthorized use.

The followings describe in sequence all the items of the Security menu.

System Password

The "System Password" item allows you to set the password for your system. The password is required for starting up the system and running the SCU program.

When the item is selected, the submenu will display as shown below. When setting a password, first make sure that Num Lock is off, then type your password in the entry field and press [Enter]. Confirm your password by typing it again and pressing [Enter].

For the password to take effect, enable the "Enable Password" item.
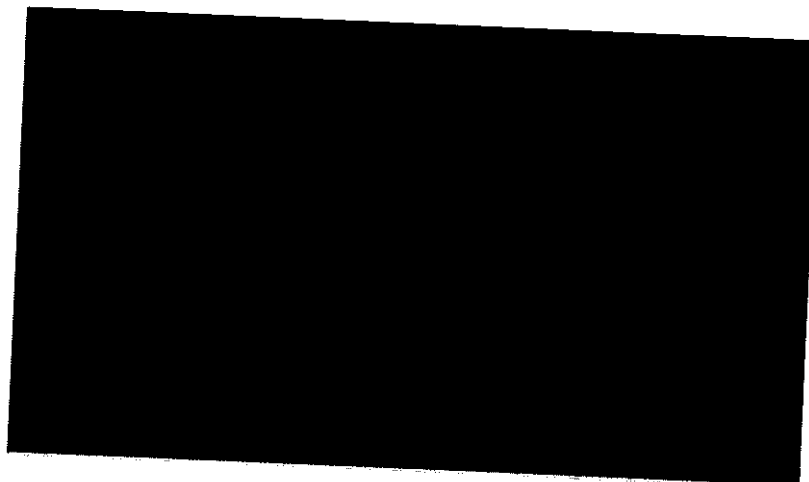
Virus Alert

The "Virus Alert" item, when enabled, gives warning messages if the hard disk boot sector (partition table) has been changed.

When this item is selected, no submenu will display. A check mark (√) indicates Enabled; an underline (_) indicates Disabled.

BootSector Protect

The "BootSector Protect" item helps prevent computer viruses by protecting the hard disk boots sectors (partition table) from any change.
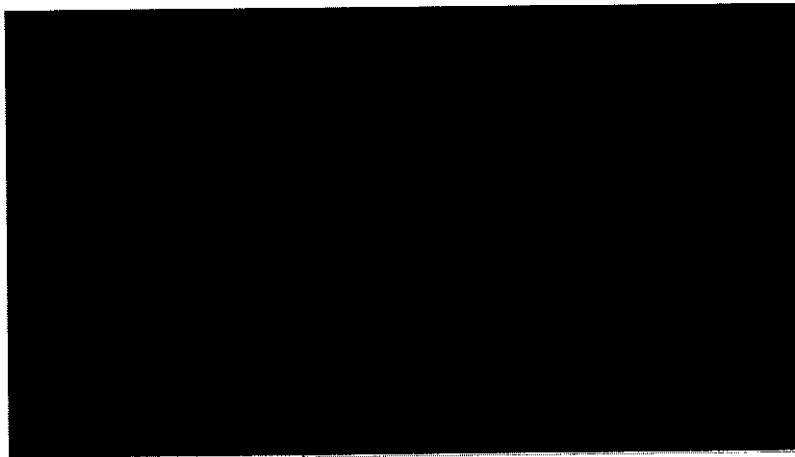
When this item is selected, no submenu will display. A check mark (√) indicates Enabled; an underline (_) indicates Disabled.

> ### CAUTION
>
> Disable this item before you install an operating system,otherwise, the installation will fail.

Power Menu

The Power Menu pull-down menu, as shown below, contains the Power Management settings that help save power.

The followings describe in sequence all the items of the Power menu.

Enable Power Management

The "Enable Power Management" item is the master control for the Power Management features.

When this item is selected, no submenu will display. A check mark (√) indicates Enabled; an underline (_) indicates Disabled.

Max Performance/Balanced Power Saving/Max Power Saving/Customize

These four item are mutually exclusive options. You can select one of them. A check mark (√) indicates Enabled; an underline (_) indicates Disabled.
Descriptions of the four options are:

1. Max Performance: Select this option for the pre-defined settings that allow maximum performance but shortest battery life.

2. Balanced Power Saving: Select this option for the pre-defined settings that allow moderate performance and moderate battery life.

3. Max Power Saving: Select this option for the pre-defined settings that allow longest battery life but minimum performance.

4. Customize: Select this option for setting up your own performances.
    When this option is selected, a submenu will appear. See the following subsection for information.

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NOTE
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To know the pre-defined settings for the above three options, you can select the next option to view the settings in the submenu.

Customizing Power Management Features

To customize Power Management features, select "Customize" from the Power pull-down menu. The submenu will display as shown below.
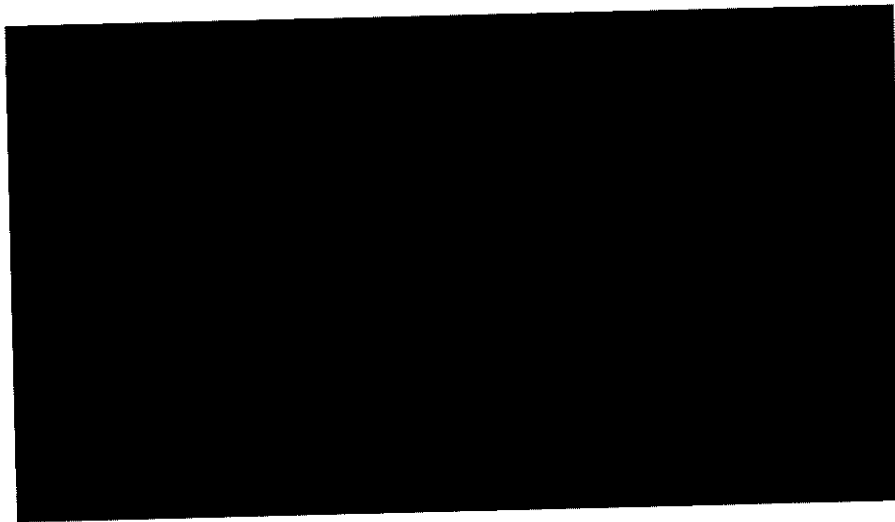
To move and select in this pull-down menu, go to an entry field using the arrow key and select an option using the Space/ + / -key.

The following describe in sequence all the items of this submenu.

Hard Disk Time-Out

The "Hard Disk Time-Out " item sets the time-out period for the hard disk to power down if it is not in use during the set period. The hard disk will power up again when next accessed.

The available options are Disabled, 1 Min, 2 Min, 4 Min, 8 Min, 10 Min, 15 Min and 20 Min.

Standby After

The "Standby After" item sets the time-out period for initiating Standby mode. If the notebook remains idle until the time-out period for Standby mode has been reached, the notebook enters Standby mode.
In Standby mode, several system components go into standby or off mode so that system power will be reduced. The system will wake up from Standby mode when any activity is detected.

The available options are Disabled, 1 Min, 2 Min, 4 Min, 6 Min, 8 Min, 12 Min and 16 Min.

Suspend After

The "Suspend After" item sets the time-out period for initiating Suspend mode. It works in conjunction with the previous item "Standby After". After the notebook enters Standby mode, the Power Saving starts the time-out for the Suspend mode. If the notebook remains in Standby mode until the time-out period for Suspend mode has been reached, the notebook enters Suspend mode.

The Suspend mode is determined by the next item, "Suspend Data to." It can be either Suspend-to-RAM or Suspend-to-Disk.

When Suspend-to-RAM mode is initiated, several system components go into standby or off mode so that system power will be reduced further. The system will wake up from Suspend-to-RAM mode when a key is pressed.

"Resume On Time" and Resume On Modem Ring", if enabled in this submenu, can also wake up the system from Suspend-to-RAM mode.

When Suspend-to-Disk mode is initiated, the system preserves all the running application programs as a file in a "Suspend-to-disk partition" on the hard disk and then turns off automatically.

The available options are Disables, 1 Min, 2 Min, 5 Min, 10 Min and 15 Min.

Suspend Data to

The "Suspend Data to" item defines the Suspend mode of your system. The available options are RAM and Disk.

Battery Low Warning Beep

The "Battery Low Warning Beep" items enables or disables the low battery warning beep.

The available options are Enabled and Disabled.

VGA Activity

The "VGA Activity" items sets if obvious video activities (such as screen savers) will prevent Power Management modes.

Descriptions of the available options are:
1. Enabled: Power Management will not take effect if there are VGA activities.
2. Disabled: Power Management will ignore VGA activities.

Resume On Time

The "Resume On Time" item enables or disables the system waking up from Suspend-to-RAM mode at a time specified by the next three items.

The available options are Enabled and Disabled. If you select Enabled, set the time for the next three items.

Hour/Minute/Second

The "Hour", "Minute" and "Second" items work in conjunction with the previous item "Resume on Time". It sets the alarm time for waking up the system from Suspend-to-RAM mode.

Enter the value in each field by typing the number.

Resume On Modem Ring

The "Resume on Modem Ring" item enables or disable the system waking up from Suspend-to-RAM mode when the modem receives an incoming call.

The available options are Enabled and Disabled.

Exit Menu

The Exit pull-down menu, as shown below, displays ways of exiting SCU. After finished with your settings, you must save and exit SCU so that the settings can take effect.
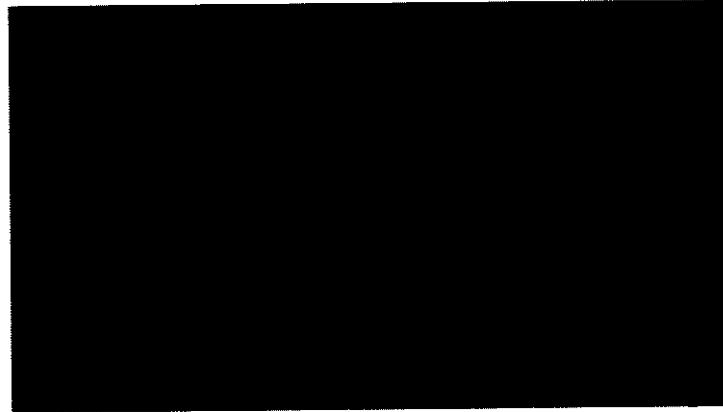
Descriptions of the Exit choices are:
1. Save Change and Exit: Save changes you have made and exit.
2. Discard Changes and Exit: Exit without saving the changes you has made.
3. Get Default Values: Load factory default values for all the items.
4. Load Previous Values: Restore previous values for all the items.