V35N System

User's Guide

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Disclaimer

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions carefully. Save these instructions for future reference.

2. Follow all warnings and instructions marked on the product.

3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

4. Do not use this product near water.

5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.

6. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.

7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.

8. This product is equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.

9. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.

10. If an extension cord is used with this product, make sure that the total ampere rating of the equipment plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total rating of all products plugged into the wall outlet does not exceed 15 amperes.

11. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

12. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to qualified service personnel.

13. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

   a. When the power cord or plug is damaged or frayed

   b. If liquid has been spilled into the product

   c. If the product has been exposed to rain or water

   d. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal condition.

   e. If the product has been dropped or the cabinet has been damaged

   f. If the product exhibits a distinct change in performance, indicating a need for service

14. Replace battery with the same type as the product's battery we recommend. Use of another battery may present a risk of fire or explosion. Refer battery replacement to a qualified serviceman.

15. Warning! Battery may explode if not handled properly. Do not recharge, disassemble or dispose of in fire. Keep away from children and dispose of used battery promptly.

16. Use only the proper type of power supply cord set (provided in your keyboard/manual accessories box) for this unit. It should be a detachable type: UL listed/CSA certified, type SVT/SJT, rated 6A 125V minimum, VDE approved or its equivalent. Maximum length is 15 feet (4.6 meters).

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

1. Reorient or relocate the receiving antenna.

2. Increase the separation between the equipment and receiver.

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

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

Notice 1:

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Notice 2:

Shielded interface cables, if any, must be used in order to comply with the emission limits.

About this Manual

Purpose

This user's guide gives you all the information you need to operate the system properly.

Manual Structure

This user's guide consists of two chapters as follows:

Chapter 1   System Board

This chapter describes the system board and all its major components. It contains the system board layout, jumper settings, cache and memory configurations, and other internal devices.

Chapter 2   BIOS Utility

This chapter explains the system BIOS and tells how to configure the system by setting the BIOS parameters.

Conventions

The following conventions are used in this manual:

`Text entered by user`	Represents text input by the user.
`Screen messages`	Denotes actual messages that appear onscreen.
`ALT`, `CTRL`, `F10`, etc.	Represent the actual keys that you have to press on the keyboard.

NOTE
Gives bits and pieces of additional information related to the current topic.

WARNING
Alerts you to any damage that might result from doing or not doing specific actions.

CAUTION
Suggests precautionary measures to avoid potential hardware or software problems.

IMPORTANT
Reminds you to take specific action relevant to the accomplishment of the procedure at hand.

TIP
Tells how to accomplish a procedure with minimum steps

through little shortcuts.

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System Board

This high-performance system board utilizes a 64-bit, 3.3V Intel Pentium$^{®}$ CPU running at 75/50, 90/60, 100/66, 120/60, 133/66, 150/60, 166/66, or 200/66 MHz. It has three ISA and four PCI slots (with one PCI- and ISA-shared slot) for future expansion. The onboard six 72-pin SIMM sockets allow memory upgrade to a maximum of 192 MB. To further enhance system performance, you may also upgrade the integrated 256-KB pipelined-burst cache to 512 KB.

Standard features such as two serial ports, one parallel port, a diskette drive interface, and an embedded hard disk interface are also incorporated in the system board. A Universal Serial Bus (USB) interface is added to the design to enable the system to support additional peripherals.

The system supports the power-management function that conforms to the power-saving standards of the U.S. Environmental Protection Agency (EPA) Energy Star program.. It also offers the Plug-and-Play feature. This feature saves the user from configuration troubles, thus making the system more user-friendly.

The system is fully compatible with MS-DOS V6.X, OS/2, UNIX, Windows NT and Windows 95 operating systems.

1.1 System Board Layout

The system board has the following features and components:

- Supports 3.3V Intel Pentium CPU (75/50, 90/60, 100/66, 120/60, 133/66, 150/60, 166/66, 200/66 MHz)

- 192-MB maximum system memory

- Six 72-pin SIMM sockets that accept 4-, 8-, 16-, and 32-MB SIMMs, with or without Extended Data Output (EDO) and Error Checking and Correction (ECC) functions

- 256-KB/512-KB pipelined-burst second-level cache

- Integrates an enhanced PCI local bus IDE controller

- 128-KB Flash ROM for system BIOS

- Three ISA- and four PCI-expansion slots (one PCI- and ISA-shared slot)

- Dual 16C550 buffered serial ports and one ECP/EPP parallel port

- Optional USB interface that enables the system to support more peripherals

- PS/2 mouse and keyboard interface

- Plug-and-Play function

- Power-management function

Figure 1-1 shows the board layout and the locations of the important components.
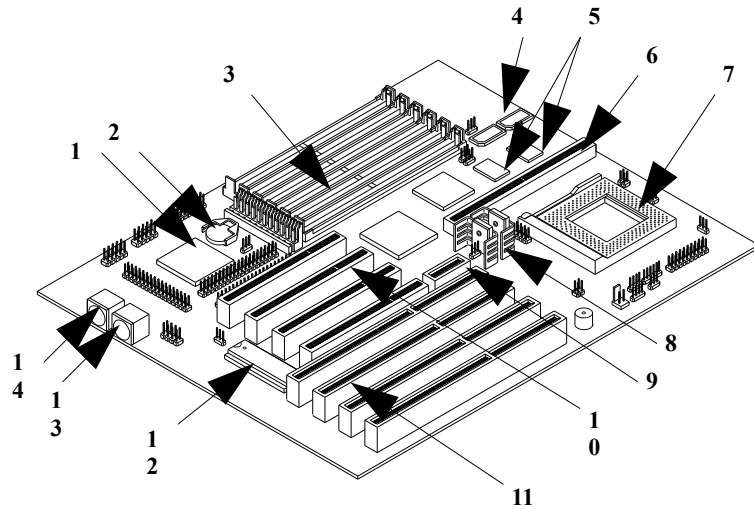
1   Super I/O controller   *9   Ether-SCSI card slot*
2   RTC battery   *10   PCI slots*
3   SIMM sockets   *11   ISA slots*
4   Tag RAM   *12   BIOS chip*
5   256-KB pipelined-burst cache   *13   PS/2 mouse connector*
6   Cache module socket   *14   PS/2 keyboard connector*
7   CPU socket
8   Voltage regulators with heatsink
Figure 1-1   System Board Layout

> *The heatsink becomes very hot when the system is on. NEVER touch the heatsink with any metal or with your hands.*

1.2　ESD Precautions

Electrostatic discharge (ESD) can damage your processor, disk drives, expansion boards, and other components. Always observe the following precautions before you install a system component.

1. Do not remove a component from its protective packaging until you are ready to install it.

2. Wear a wrist grounding strap and attach it to a metal part of the system unit before handling components. If a wrist strap is not available, maintain contact with the system unit throughout any procedure requiring ESD protection.

1.3　Pre-installation Instructions

Always observe the following before you install a system component:

1. Turn off the system power and all the peripherals connected to the unit before opening it.

2. Open the system according to the instructions in the housing installation manual.

3. Follow the ESD precautions in section 1.2 before handling a system component.

4. Remove any expansion boards or peripherals that block access to the SIMM sockets or CPU socket.

5. See the following sections for specific instructions on the component you wish to install.

> *Do not attempt the procedures described in the following sections unless you are a qualified service technician.*

1.4 Installing a CPU

1.4.1 Installation Procedures

⚠️ *Observe the ESD precautions when installing components. See section 1.2.*

The system board features a zero-insertion force (ZIF) socket for easy CPU installation.
Follow these steps to install a CPU:

1. Pull up the socket lever.

2. Insert the CPU, making sure that pin 1 (indicated by a notched corner) of the CPU connects to hole 1 of the socket.

3. Pull down the socket lever to lock the CPU into the socket.

Step 1

Hole for Pin 1

Step 2

Notched corner

Step 3
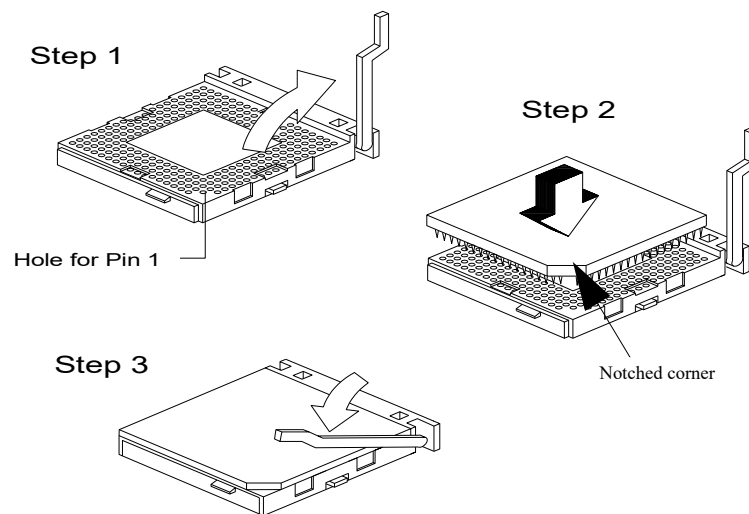
Figure 1-2   Installing a CPU

1.4.2 Installing an OverDrive™ CPU

The OverDrive CPU comes with a heatsink already mounted. To maintain proper airflow around the CPU and heatsink, follow the required clearances in Table 1-1.

Table 1-1   Clearances for OverDrive CPU and Heatsink

Location	Minimum Clearance
Above the heatsink	0.4 inches
Sides of the CPU (at least 3 of 4)	0.2 inches

Follow these steps to install an OverDrive CPU:

1.   Locate the CPU socket and pull up the socket lever.

2.   Remove the old CPU carefully from the socket and place it in an antistatic package.

3.   Take the upgrade CPU out of its antistatic package.

4.   Carefully insert the CPU into the socket such that pin 1 (indicated by a notched corner) of the CPU connects to hole 1 of the socket.

Notched Corner
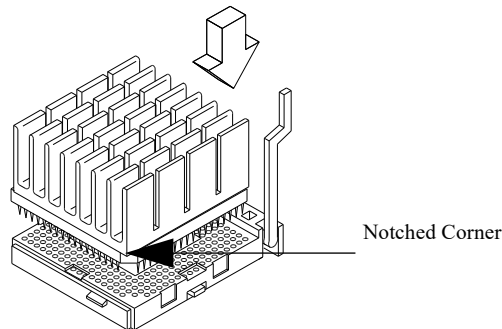
Figure 1-3   Installing an OverDrive CPU

5.   Push down the socket lever to lock the CPU into the socket.

1.5   Jumpers and Connectors

Figure 1-4 shows the jumper and connector locations.
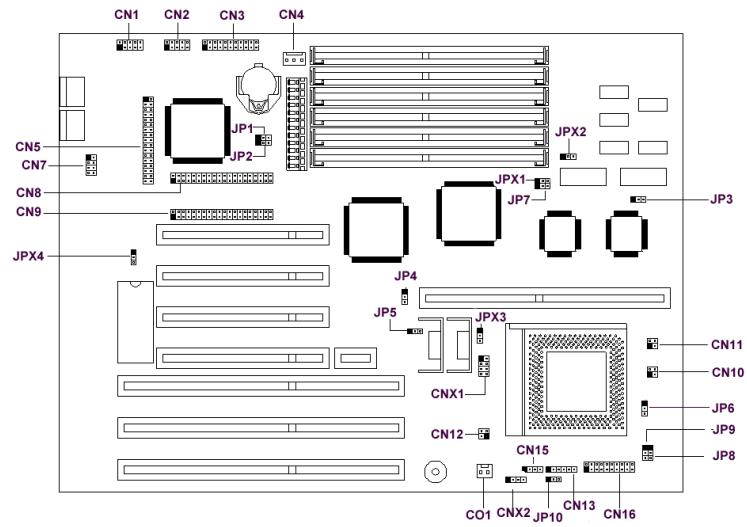
Figure 1-4   Jumper and Connector Locations

The shaded pin indicates pin 1.

The following tables list the jumper settings and their corresponding functions:

Table 1-2   System Board Jumper Settings

Jumper	Setting	Function
JP1	1-2 2-3 *	Check password Bypass password
JP3	1-2 2-3 *	64-MB cacheable memory 512-MB cacheable memory
JP5	1-2 2-3 *	3.3V operating voltage 3.6V operating voltage
JP6	1-2 2-3 *	60 MHz DRAM refresh rate 66 MHz DRAM refresh rate
JP10	1-2 2-3 *	Enable SMI switch Enable Reset switch
JPX2	1-2 * 2-3	Select 256-KB cache Select 512-KB cache
JPX3	1-2 2-3	Support 2.5V CPU voltage Support 2.8V CPU voltage

Table 1-3   CPU Type Select

CN10	CN11	CNX1	CPU Type
1-3 2-4	1-3 2-4	Open	P54C
Open	Open	1-5, 2-6 3-7, 4-8	P55C

---

* Default setting

Table 1-4   *CPU Frequency Select*

JP4	JP6	JP8	JP9	CN12	CPU Freq.
1-2	1-2	1-2	1-2	1-3, 2-4	75 MHz
2-3	1-2	1-2	1-2	2-4	90 MHz
2-3	2-3	1-2	1-2	1-3	100 MHz
2-3	1-2	2-3	1-2	2-4	120 MHz
2-3	2-3	2-3	1-2	1-3	133 MHz
2-3	1-2	2-3	2-3	2-4	150 MHz
2-3	2-3	2-3	2-3	1-3	166 MHz
2-3	2-3	1-2	2-3	1-3	200 MHz

Table 1-5   *Second-level Cache Size Select*

JP7	JPX1	Cache Size
1-2	1-2	Disable cache
2-3 *	1-2 *	256 KB
1-2	2-3	512 KB
2-3	2-3	Reserved

Table 1-6 lists the onboard connectors.

Table 1-6   Onboard Connectors

Connector	Function
CN1	COM1 connector
CN2	COM2 connector
CN3	Parallel connector
CN5	FDD connector
CN6	Power connector
CN7	USB connector
CN8	HDD1 connector
CN9	HDD2 connector
CN13	Infrared (IR) function connector
CN15	IDE LED connector
CN16	Multifunction connector
CO1	Two-pin fan connector

The multifunction connector CN16 accommodates the front panel connectors for speaker, LEDs, keylock, reset, and turbo. Figure 1-5 shows the CN16 pin assignments.
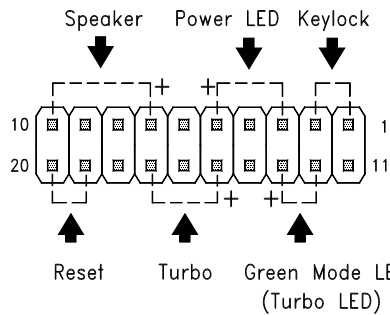
Figure 1-5   20-Pin Multifunction Connector (CN16)

1.6 Installing Memory

The system memory is expandable to 192 MB by adding single in-line memory modules (SIMMs). See Figure 1-1 for the location of the SIMM sockets. Section 1.6.1 tells how to install SIMMs.

The six 72-pin SIMM sockets on the system board accept single- (4- and 8-MB) and double-density (16- and 32-MB) SIMMs, with 60 ns or less DRAM speed. Table 1-7 lists the possible memory configurations.

Table 1-7   Memory Configurations

Bank 0		Bank 1		Bank 2		Total
Slot 1	Slot 2	Slot 3	Slot 4	Slot 5	Slot 6	Memory
4 MB	4 MB					8 MB
4 MB	4 MB	4 MB	4 MB			16 MB
4 MB	4 MB	4 MB	4 MB	4 MB	4 MB	24 MB
8 MB	8 MB					16 MB
8 MB	8 MB	4 MB	4 MB			24 MB
8 MB	8 MB	4 MB	4 MB	4 MB	4 MB	32 MB
8 MB	8 MB	8 MB	8 MB			32 MB
8 MB	8 MB	8 MB	8 MB	4 MB	4 MB	40 MB
8 MB	8 MB	8 MB	8 MB	8 MB	8 MB	48 MB
16 MB	16 MB					32 MB
16 MB	16 MB	4 MB	4 MB			40 MB
16 MB	16 MB	4 MB	4 MB	4 MB	4 MB	48 MB
16 MB	16 MB	8 MB	8 MB			48 MB
16 MB	16 MB	8 MB	8 MB	4 MB	4 MB	56 MB
16 MB	16 MB	8 MB	8 MB	8 MB	8 MB	64 MB
16 MB	16 MB	16 MB	16 MB			64 MB
16 MB	16 MB	16 MB	16 MB	4 MB	4 MB	72 MB

Table 1-7   Memory Configurations (continued)

Bank 0	Bank 1	Bank 2	Total

Slot 1	Slot 2	Slot 3	Slot 4	Slot 5	Slot 6	Memory
16 MB	16 MB	16 MB	16 MB	8 MB	8 MB	80 MB
16 MB	16 MB	16 MB	16 MB	16 MB	16 MB	96 MB
32 MB	32 MB					64 MB
32 MB	32 MB	4 MB	4 MB			72 MB
32 MB	32 MB	4 MB	4 MB	4 MB	4 MB	80 MB
32 MB	32 MB	8 MB	8 MB			80 MB
32 MB	32 MB	8 MB	8 MB	4 MB	4 MB	88 MB
32 MB	32 MB	8 MB	8 MB	8 MB	8 MB	96 MB
32 MB	32 MB	16 MB	16 MB			96 MB
32 MB	32 MB	16 MB	16 MB	4 MB	4 MB	104 MB
32 MB	32 MB	16 MB	16 MB	8 MB	8 MB	112 MB
32 MB	32 MB	16 MB	16 MB	16 MB	16 MB	128 MB
32 MB	32 MB	32 MB	32 MB			128 MB
32 MB	32 MB	32 MB	32 MB	4 MB	4 MB	136 MB
32 MB	32 MB	32 MB	32 MB	8 MB	8 MB	144 MB
32 MB	32 MB	32 MB	32 MB	16 MB	16 MB	160 MB
32 MB	32 MB	32 MB	32 MB	32 MB	32 MB	192 MB

1.6.1   Installing a SIMM

Observe the ESD precautions when installing components. See section 1.2.

Follow these steps to install a SIMM:

1.   Carefully slip a SIMM at a 45° angle into a socket making sure that the curved edge indicating the pin 1 of the SIMM matches pin 1 of the socket.

A SIMM fits only in one direction. If you slip in a SIMM but would not completely fit, you may have inserted it the wrong way. Reverse the orientation of the SIMM.

2.   Gently push the SIMM to a vertical position until the pegs of the socket slip into the holes on the SIMM, and the holding clips lock the SIMM into position. The SIMM should be at a 90° angle when installed.
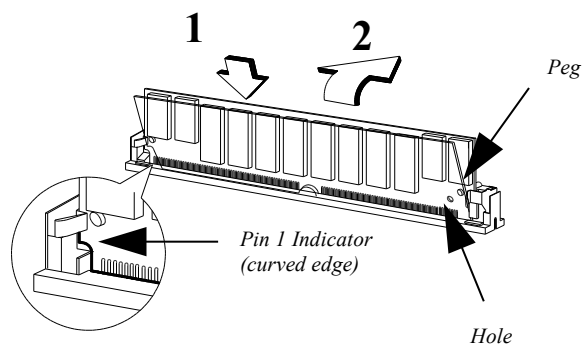
Figure 1-6   Installing a SIMM

See section 1.9 for the post-installation instructions.

1.6.2 Removing a SIMM

Follow these steps to remove a SIMM:

1. Press the holding clips on both sides of the SIMM outward to release it.

2. Move the SIMM to a 45° angle.

3. Pull the SIMM out of the socket.
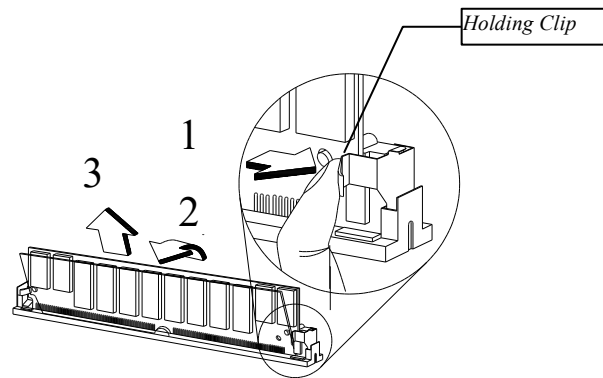
Figure 1-7   Removing a SIMM

1.6.3 Reconfiguring the System

The system automatically detects the amount of memory installed. Run Setup to view the new value for total system memory and make a note of it.

1.7   Upgrading the Second-level Cache

⚠️ *Observe ESD precautions when installing components. See section 1.2.*

The system board comes with 256-KB second-level pipelined-burst cache and a cache module socket. The cache socket allows you to upgrade the second-level cache to 512-KB. See Figure 1-1 for the location of the 256-KB pipelined-burst cache and the cache module socket.

Upgrading the cache memory improves system performance. To upgrade, simply insert the memory board into the cache socket.
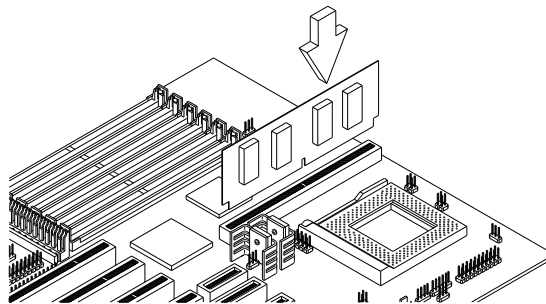
Figure 1-8   Installing the Cache Module

📝 *See section 1.9 for the post-installation instructions.*

1.8 Installing ISA Cards

Both PnP and non-PnP ISA cards require specific IRQs. When installing ISA cards, make sure that the IRQs required by these cards are not previously assigned to PCI devices to avoid resource conflicts.

Follow these steps when installing ISA cards:

1. Remove all PnP cards installed in the system, if any.

2. Enter BIOS utility and set the Reset Resources Assignment parameter to Yes to clear the resource data assigned to the PnP devices. Refer to section 2.4.5.

3. Install non-PnP ISA cards.

4. Turn on the system.

5. Use Windows 95 or ICU to manually assign the appropriate IRQs to the cards. This ensures that BIOS will not use the resources assigned to the non-PnP ISA cards.

> *BIOS detects and configures only PnP cards.*

6. Turn off the system.

7. Install PnP ISA and PCI cards.

8. Turn on the system. This time PnP BIOS automatically configures the PnP ISA and PCI cards with the remaining free IRQs.

1.9　Post-installation Instructions

Observe the following after installing a system component:

1.　See to it that the components are installed according to the step-by-step instructions in their respective sections.

2.　Make sure you have set all the required jumpers. See section 1.5 for the correct jumper settings.

3.　Replace any expansion boards or peripherals that you removed earlier.

4.　Replace the system cover.

5.　Connect the necessary cables and turn on the system.

1.10　Error Messages

In the event that you receive an error message, do not continue using the computer. Note the message and take corrective action immediately. This section describes the different types of error messages and suggests corrective measures.

There are two general types of error messages:

- Software

- System

1.10.1　Software Error Messages

Software error messages are returned by your operating system or application. These messages typically appear after you boot the operating system or when you run your applications. If you receive this type of message, consult your application or operating system manual for help.

1.10.2　System Error Messages

A system error message indicates a problem with the computer itself. These messages normally appear during the power-on self-test, before the operating

system prompt appears. Table 1-8 lists the system error messages in alphabetical order.

Table 1-8   System Error Messages

Error Message	Corrective Action
Bad CMOS Battery	Replace battery. Contact your dealer.
CMOS Checksum Error	Run Setup.
Diskette Drive Controller Error	Check and connect the cable to the diskette drive or controller.
Diskette Drive Error	Diskette may be bad. If not, check the diskette drive and replace if necessary.
DRAM Configuration Error	Check and modify DRAM configuration to agree with Table 1-7.
Equipment Configuration Error	Run Setup.
Hard Disk Controller Error	Check and connect the cable to the hard disk drive or controller.
Hard Disk 0 Error	Check all cable connections. Check the hard disk and replace if necessary.
Hard Disk 1 Error	Check all cable connections. Check the hard disk and replace if necessary.
Hard Disk 0 Extended Type Error	Run Setup.
Hard Disk 1 Extended Type Error	Run Setup.
I/O Parity Error	Contact your dealer.
Keyboard Error or No Keyboard Connected	Check and connect the keyboard to the system unit.
Keyboard Interface Error	Contact your dealer.

Table 1-8   System Error Messages (continued)

Error Message	Corrective Action
Keyboard Locked	Unlock the keyboard.
Memory Error	Check SIMMs on the system board. Contact your dealer.
Memory Size Mismatch	Run Setup.
Serial 1 Conflict	Run Setup. Disable Onboard Serial 1.
Serial 2 Conflict	Run Setup. Disable Onboard Serial 2.
Parallel Port Conflict	Run Setup. Disable Onboard Parallel Port.
Pointing Device Error	Check or connect the pointing device. Contact your dealer.
Pointing Device Interface Error	Contact your dealer.
Press F1 key to continue or Ctrl-Alt-Esc for Setup	Press F1 or CTRL ALT ESC.
Press Esc to turn off NMI, any key to reboot	Press ESC to disregard NMI error. Press any key to reboot the system.
Protected Mode Test Fail	Contact your dealer.
RAM BIOS Error	Contact your dealer.
Real Time Clock Error	Run Setup.
Shadow RAM Fail	Contact your dealer.
System Memory Address Error	Check SIMMs on system board or contact your dealer.

1.10.3   Correcting Error Conditions

As a general rule, the "Press F1 to continue" error message is caused by a configuration problem which can be easily corrected. An equipment malfunction is more likely to cause a fatal error, i.e., an error that causes complete system failure.

Here are some corrective measures for error conditions:

1. Run Setup. You must know the correct configuration values for your system before you enter Setup, which is why you should write these values down when the system is correctly configured. An incorrect Setup configuration is a major cause of power-on error messages, especially for a new system.

2. Remove the system cover according to the directions in the system housing installation guide. Check that the system board and any expansion boards are set correctly.

3. If you cannot access a new disk, it may be because your disk is not physically formatted. Physically format the disk using the FDISK and FORMAT commands.

4. Check that all connectors and boards are secure. Consult the system housing installation guide for assistance.

If you follow the corrective steps above and still receive an error message, the cause may be an equipment malfunction.

If you are sure that your configuration values are correct and your battery is in good condition, the problem may lie in a damaged or defective chip. Contact an authorized service center for assistance.

BIOS Utility

Most systems are already configured by the manufacturer or the dealer. There is no need to run Setup when starting the computer unless you get a Run Setup message.

The Setup program loads configuration values into the battery-backed nonvolatile memory called CMOS RAM. This memory area is not part of the system RAM.

> *If you repeatedly receive Run Setup messages, the battery may be bad. In this case, the system cannot retain configuration values in CMOS. Ask a qualified technician for assistance.*

Before running Setup, have the following information ready:

* **Diskette drive type**   The standard type is either a 5.25-inch 1.2-MB or a 3.5-inch 1.44-MB diskette drive.

* **IDE hard disk drive type**   The drive information is on a label pasted on your IDE drive or in the documentation supplied by the vendor.

2.1 Entering Setup

To enter Setup, press the key combination `CTRL`+`ALT`+`ESC`.

> *You must press `CTRL`+`ALT`+`ESC` while the system is booting. This key combination does not work during any other time.*

The BIOS Utility main menu then appears:

```
┌─────────────────────────────────────────────────────────┐
│                    BIOS Utility                         │
├─────────────────────────────────────────────────────────┤
│                                                         │
│            Basic System Configuration                   │
│          Advanced System Configuration                  │
│           PnP/PCI System Configuration                  │
│            Power Saving Configuration                   │
│                 System Security                         │
│            Load Setup Default Settings                  │
│                                                         │
│                                                         │
│                                                         │
│                                                         │
│                                                         │
├─────────────────────────────────────────────────────────┤
│ ↓←→ = Move Highlight Bar,  ↵  = Select,  Esc = Exit and │
│ Reboot                                                  │
└─────────────────────────────────────────────────────────┘
```
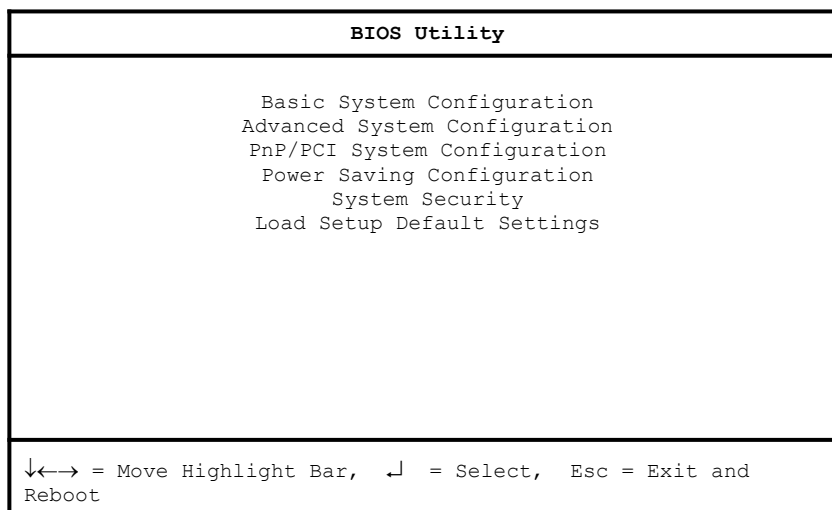
> *The parameters on the screens show default values. These values may not be the same as those in your system.*
>
> *The grayed items (denoted with asterisks) on the screens have fixed settings and are not*

user-configurable.

2.2 Basic System Configuration

Select Basic System Configuration to input configuration values such as date, time, and disk types.

The following screen shows the Basic System Configuration menu.

```
                 Basic System Configuration        Page 1/2

  Date .....................[MM/DD/YY]
  Time .....................[HH:MM:SS]
  Diskette Drive A ..........[xx-MB    xx-inch]
  Diskette Drive B ..........[xx-MB    xx-inch]

                                   Cylinder   Head    Sector

  IDE Drive 0  (xxx MB)......[Auto]    xx      xx      xx
  IDE Drive 1  (xxx MB)......[Auto]    xx      xx      xx
  IDE Drive 2 ..............[Auto]    xx      xx      xx
  IDE Drive 3 ..............[Auto]    xx      xx      xx

  Total Memory..............[ 8] MB


  ↓ = Move Highlight Bar,   → ← = Change Setting
  PgDn/PgUp = Move Screen,   F1 = Help,   Esc  =  Exit
```

The command line at the bottom of the menu tells you how to highlight items, change settings, and move from one screen to another.

Press ⬆ or ⬇ on the cursor-edit keypad to highlight the desired parameter.

Press ➡ or ⬅ to select the desired option for a parameter.

Press PGDN to move to the next page or PGUP to return to the previous page.

Press ESC to exit the configuration menu.

The following screen shows page 2 of the Basic System Configuration menu.

```
┌──────────────────────────────────────────────────────────────┐
│          Basic System Configuration        Page 2/2          │
├──────────────────────────────────────────────────────────────┤
│                                                              │
│                                                              │
│   Enhanced IDE Features                                      │
│      Hard Disk Block Mode ...........[Enabled ]              │
│      Advanced PIO Mode ..............[Enabled ]              │
│      Hard Disk Size > 504MB .........[Enabled ]              │
│      Hard Disk 32-Bit Access ........[Enabled ]              │
│                                                              │
│   Large Memory Support Mode .........[Normal  ]              │
│   Num Lock After Boot ...............[Enabled ]              │
│   Memory Test .......................[Disabled]              │
│   Quiet Boot ........................[Disabled]              │
│   Configuration Table ...............[Enabled ]              │
│                                                              │
│                                                              │
│                                                              │
├──────────────────────────────────────────────────────────────┤
│  ↓ = Move Highlight Bar,   → ← = Change Setting              │
│  PgDn/PgUp = Move Screen,   F1 = Help,   Esc  =  Exit         │
└──────────────────────────────────────────────────────────────┘
```

The following sections explain the different parameters and their settings.

2.2.1   Date and Time

The real-time clock keeps the system date and time. After setting the date and time, you need not enter them every time you turn on the system. As long as the internal battery remains good (approximately seven years) and connected, the clock continues to keep the date and time accurately even when the power is off.

Date

Highlight the items on the date parameter and press ▶ or ◀ to set the date following the month-day-year format.

Valid values for month, day, and year are:

- Month   1 to 12

- Day 1 to 31

- Year 00 to 99

Time

Highlight the items on the time parameter and press ▶ or ◀ to set the time following the hour-minute-second format.

Valid values for hour, minute, and second are:

- Hour   00 to 23

- Minute   00 to 59

- Second   00 to 59

2.2.2   Diskette Drives

To enter the configuration value for the first diskette drive (drive A), highlight the Diskette Drive A parameter. Press ▶ or ◀ key to view the options and select the appropriate value.

Possible settings for the Diskette Drive parameters:

- [None   ]

- [360 KB,   5.25-inch]

- [1.2 MB,   5.25-inch]

- [720 KB,   3.5-inch]

- [1.44 MB,   3.5-inch]

- [2.88 MB,   3.5-inch]

Follow the same procedure for Diskette Drive B. Choose None if you do not have a second diskette drive.

2.2.3   IDE Drives

Move the highlight bar to the IDE Drive 0 parameter to configure the first IDE drive (drive C). Press ➡ or ⬅ to display the IDE drive types with their respective values. Select the type that corresponds to your IDE hard disk drive. Follow the same procedure for the other IDE drives, if any. Choose None if you do not have other drives.

Selecting the "Auto" Option

If you do not know the exact type of your IDE hard disk drive, select the option Auto. During the power-on self-test (POST), when the system performs self-testing and self-initialization before loading the operating system and applications, the BIOS utility automatically determines your IDE drive type. You can see the drive type and its values when you enter the BIOS Utility.

```
                                Cylinder Head Sector
IDE Drive 0 (xx MB)....[Auto]     xx     xx    xx
```

If desired, you can save the values under the option User.

```
                                Cylinder Head Sector
IDE Drive 0 (xx MB)....[User]     xx     xx    xx
```

The next time you boot the system, the BIOS utility does not have to auto-configure your IDE drive as it detects the saved disk information during POST.

> *We recommend that you copy the IDE disk drive values and keep them in a safe place in case you have to reconfigure the disk in the future.*

Follow the same procedure to auto-configure other IDE drives.

Selecting the "User" Option

There are cases when you cannot use the option Auto, instead you have to select User. Choose the User option when you have installed an IDE hard disk that was previously formatted but does not use the disk native parameters or structure, that is, the disk type may be in the IDE hard disk types list but the number of cylinders, heads, and sectors differ.

Follow these steps to configure an IDE hard disk with the User option:

1.   Highlight an IDE drive parameter.

2.   Select the option User and press ENTER.

3.   Type in the number of cylinders, heads, and sectors of the drive under the appropriate columns.

> *Be sure to have the correct IDE hard disk drive information beforehand.*

4.   Choose Yes when asked if you want to save CMOS data.

2.2.4   Total Memory

The system automatically detects the total amount of onboard memory during the POST and sets this parameter accordingly. If you install additional memory, the system automatically adjusts this parameter to display the new memory size.

2.2.5 Enhanced IDE Features

Hard Disk Block Mode

This function enhances disk performance depending on the hard disk in use. If you set this parameter to `Enabled`, it allows data transfer in block (multiple sectors) by increasing the data transfer rate to 256 bytes per cycle. If your system does not boot after enabling this parameter, change the setting to `Disabled`. This parameter is normally set to `Enabled`.

Advanced PIO Mode

Enabling this parameter allows for faster data recovery and read/write timing that reduces hard disk activity time. This results to better hard disk performance.

To utilize this feature, your hard disk must support the advanced PIO mode. If not, set this parameter to `Disabled`. Refer to your hard disk documentation for information about the advanced PIO mode.

Hard Disk Size > 504 MB

This enhanced IDE feature works only under DOS and Windows 3.x environments. If enabled, it allows you to use a hard disk with a capacity of more than 504 MB. This is made possible through the Logical Block Address (LBA) mode translation. Other operating systems require this parameter to be set to `Disabled`.

Hard Disk 32-bit Access

Enabling this parameter improves system performance by allowing the use of the 32-bit hard disk access. This enhanced IDE feature works only under DOS, Windows 3.x and Novell NetWare. If your software or hard disk does not support this function, set this parameter to `Disabled`.

2.2.6　　Large Memory Support Mode

The available settings for this parameter are `Normal` and `Advanced`. Set this parameter to `Advanced` if you are working under Windows NT 3.1 environment. The setting allows you to support an extended memory higher than 64 MB. The default setting is `Normal`.

2.2.7　　Num Lock After Boot

This parameter allows you to activate the Num Lock function upon booting. The default setting is `Enabled`.

2.2.8　　Memory Test

When set to `Enabled`, this parameter allows the system to perform a RAM test during the POST routine. When set to `Disabled`, the system detects only the memory size and bypasses the test routine. The default setting is `Disabled` .

2.2.9　　Quiet Boot

This parameter enables or disables the quiet boot function. When set to `Enabled`, BIOS is in graphical mode and displays only an identification logo during POST and while booting. After which the screen displays the operating system prompt (such as DOS) or logo (such as Windows 95). If any error occurred while booting, the system automatically switches to the text mode.

Even if your setting is `Enabled`, you may also switch to the text mode while booting by pressing F9 after you hear a beep that indicates the activation of the keyboard.

When set to `Disabled`, BIOS is in the conventional text mode where you see the system initialization details on the screen.

2.2.10 Configuration Table

This parameter allows you to display the configuration table after POST but before booting. The configuration table gives a summary of the hardware devices and settings that BIOS detected during POST. A sample configuration table appears below.

```
CPU ID      :  Pentium        Base Memory:   :   xxx KB
CPU Clock   :  200 MHz        Extended Memory: xxxx KB
Math Coprocessor:Installed    Shadow RAM    :   xxx KB
IDE Drive 0 :  xxx MB         Internal Cache :  xxx KB, Enabled
IDE Drive 1 :  xxx MB         External Cache :  xxx KB, Enabled
IDE Drive 2 :  xxx MB         Pointing Device:  None
IDE Drive 3 :  xxx MB         SIMM 1-2 Type  :  Fast Page Mode
Diskette Drive A: xx-MB, xx-inch    SIMM 3-4 Type  :  EDO
Diskette Drive B: None        SIMM 5-6 Type  :  None
Serial Port(s) : 3F8h, 2F8h   USB HC        :   Disabled
Parallel Port  : 378h
```

2.3   Advanced System Configuration

The Advanced System Configuration option allows you to configure the advanced system memory functions.

Do not change any settings in the Advanced Configuration if you are not a qualified technician to avoid damaging the system.

The following screen shows page one the Advanced System Configuration parameters.

```
        Advanced System Configuration          Page 1/2

   Internal Cache (CPU Cache).......... [Enabled ]
   External Cache ..................... [Enabled ]


   E0000h - FFFFFh (System BIOS) ...... [Cacheable]
   C0000h - C7FFFh (Video BIOS)........ [Cacheable]
   USB Host Controller................. [Disabled ]


   ↓ = Move Highlight Bar,   → ← = Change Setting
   PgDn/PgUp = Move Screen,   F1 = Help,   Esc  =  Exit
```

The following screen shows page two the Advanced System Configuration parameters.

```
        Advanced System Configuration          Page 2/2

   Memory at 15MB - 16MB Reserved for........[System ]Use

   DRAM Leadoff Timing (Read/Write/RAS##Pre). [7/6/4]
   RAS to CAS Delay .........................[3 ]
   DRAM Write Burst Timing ..................[X-3-3-3]
   DRAM Read Burst Timing (EDO/FPM)..........[X-2-2-2/X-3-3-3]

   ECC/Parity Mode Selection ................[Disabled]
```

```
  ↓ = Move Highlight Bar,   → ← = Change Setting
  PgDn/PgUp = Move Screen,   F1 = Help,   Esc = Exit
```

2.3.1   Internal Cache (CPU Cache)

This parameter enables or disables the first-level cache memory. The default setting is `Enabled`.

2.3.2   External Cache

This parameter enables or disables the second-level cache memory. The default setting is `Enabled`.

2.3.3   E0000h - FFFFFh (System BIOS)

Set this parameter to `Cacheable` if you want the system BIOS to run directly from the cache memory, thus allowing your system to function faster. Set this to `Non-cacheable` to run the system BIOS from RAM. The default is `Cacheable`.

2.3.4   C0000h - C7FFFh (Video BIOS)

Set this parameter to `Cacheable` if you want the video BIOS to run directly from the cache memory, thus allowing your system to function faster. Set this to `Non-cacheable` to run the video BIOS from RAM. The default is `Cacheable`.

2.3.5   USB Host Controller

This parameter lets you enable or disable the USB controller. The USB function allows your system to support additional peripherals. The default setting is `Disabled`.

2.3.6   Memory at 15MB - 16MB

This parameter allows you to reserve a memory range for the use of either the system or an expansion board to prevent memory address conflicts.

Before setting this parameter, check your add-on card manual to determine if your add-on card needs this memory space. If not, set this parameter to System Use .

2.3.7   DRAM Leadoff Timing (Read/Write/RAS#Pre)

Before data can be accessed, the core logic chip must issue the Memory Address signal, column address strobe (CAS) signal and row address strobe (RAS) signal to the DRAM. However, these signals are not issued at the same time. The period it takes for the core logic chip to charge the RAS signal before issuance is called the RAS precharge time. The time difference between the issuance of RAS and CAS signals is called the leadoff time.

The leadoff time varies for read, write and RAS signal precharge actions. Some DRAMs may even require a longer delay to access data. This parameter allows you to set the leadoff time.   The available settings are 7/6/4, 7/6/3, 6/5/4, and 6/5/3. The default setting is 7/6/4.

2.3.8   RAS to CAS Delay

This function allows you to set the wait state between the RAS and CAS signals. The available settings are 3 and 2 clocks. The default setting is 3 clocks.

However, if you install DRAMs with EDO (Extended Data Output) function, you must change the setting to 2 clocks. This will give you a better system performance.

2.3.9   DRAM Write Burst Timing

This parameter adjusts the write wait-state between the L2 and the DRAM cache. The L2 cache is processed through write-back method and each cache write process consists of four continuous cache write cycles. Therefore, this setting has four numbers to adjust.

The available settings are `X-4-4-4`, `X-3-3-3`, and `X-2-2-2`. The value of `x` depends on the DRAM Leadoff Timing parameter setting. Faster DRAMs require shorter wait states. The default setting for this parameter is `X-3-3-3`.

2.3.10   DRAM Read Burst Timing (EDO/FPM)

This parameter adjusts the read wait-state between the L2 and the DRAM cache. Similar to the DRAM Write Burst Timing, this parameter also has four numbers to adjust. Everytime the CPU reads a L2 cache miss, it reads four continuous memory cycles on four continuous addresses from the DRAM cache.

The read burst timing varies for Extended Data Output (EDO) and Fast Page Mode (FPM) DRAMs. The available settings `are X-3-3-3/ X-4-4-4`, `X-2-2-2/X-3-3-3`, and `X-4-4-4/X-4-4-4`. The value of `x` depends on the DRAM Leadoff Timing parameter setting. Faster DRAMs require shorter wait states.   The default setting for this parameter is `X-2-2-2/X-3-3-3`.

2.3.11   ECC/Parity Mode Selection

This parameter allows you to enable or disable the ECC and parity check feature. The selections for this parameter are `Parity`, `ECC` and `Disabled`. Take note that Fast-page mode SIMMs supports both ECC and parity mode while EDO SIMMs supports only ECC mode. Select `Disabled` if you installed SIMMs without parity.

2.4   PCI System Configuration

The PCI System Configuration allows you to specify the settings for your PCI devices.

```
┌──────────────────────────────────────────────────────────────┐
│           PCI System Configuration          Page 1/1          │
├──────────────────────────────────────────────────────────────┤
│                                                                │
│   PCI IRQ Setting ............[  Auto  ]                        │
│                               INTA    INTB    INTC    INTD     │
│      *PCI Slot 1..............[--]    [--]    [--]    [--]      │
│      *PCI Slot 2..............[--]    [--]    [--]    [--]      │
│      *PCI Slot 3..............[--]    [--]    [--]    [--]      │
│      *PCI Slot 4..............[--]    [--]    [--]    [--]      │
│                                                                │
│   PCI IRQ Sharing ............[Yes]                             │
│   VGA Palette Snoop ..........[Disabled]                       │
│   Plug & Play OS .............[Yes]                             │
│   Reset Resources Assignment...[No]                            │
│                                                                │
│                                                                │
├──────────────────────────────────────────────────────────────┤
│   ↓ = Move Highlight Bar,    → ← = Change Setting              │
│   PgDn/PgUp = Move Screen,   F1 = Help,   Esc  =  Exit         │
└──────────────────────────────────────────────────────────────┘
```

2.4.1   PCI IRQ Setting

This parameter allows for Auto or Manual configuration of PCI devices. If you use plug-and-play (PnP) devices, you can keep the default setting Auto. The system then automatically configures the PnP devices. If your PCI device is not a PnP, you can manually assign the interrupt for each of the device.

> *Refer to your manual for technical information about the PCI card.*

PCI Slots

These parameters allow you to specify the appropriate interrupt for each of the PCI devices. You can assign `IRQ5`, `IRQ9`, `IRQ10`, `IRQ11`, or `IRQ15` to the slots.

Press ⬆ or ⬇ to move between fields. Press ➡ or ⬅ to select options.

2.4.2 PCI IRQ Sharing

Setting this parameter to `Yes` allows you to assign the same IRQ to two different devices. To disable the feature, select `No`.

> *Enable this parameter only if there are no IRQs available to assign for the remaining device function.*

2.4.3 VGA Palette Snoop

This parameter permits you to use the palette snooping feature if you installed more than one VGA card in the system.

The VGA palette snoop function allows the control palette register (CPR) to manage and update the VGA RAM DAC (Digital Analog Converter, a color data storage) of each VGA card installed in the system. The snooping process lets the CPR send a signal to all the VGA cards so that they can update their individual RAM DACs. The signal goes through the cards continuously until all RAM DAC data have been updated. This allows display of multiple images on the screen.

> *Some VGA cards have required settings for this feature. Check your VGA card manual before setting this parameter.*

2.4.4   Plug & Play OS

When this parameter is set to Yes, BIOS initializes only PnP boot devices such as SCSI cards. When set to No, BIOS initializes all PnP boot and non-boot devices such as sound cards.

> *Set this parameter to Yes only if your operating system is Windows 95.*

2.4.5   Reset Resources Assignment

Set this parameter to Yes to avoid IRQ conflict when installing non-PnP or PnP ISA cards. This clears all resource assignments and allows BIOS to reassign resources to all installed PnP devices the next time the system boots. After clearing the resource data, the parameter resets to No.

Refer to section 1.8 for instructions on installing and configuring ISA cards.

2.5 Power Saving Configuration

The Power Saving Configuration parameters are configurable only if your system supports the power management feature.

The following screen shows the Power Saving Configuration parameters and their default settings:

```
┌─────────────────────────────────────────────────────────────┐
│       Power Saving Configuration            Page 1/1         │
├─────────────────────────────────────────────────────────────┤
│                                                              │
│  Power Management Mode ................[Enabled ]           │
│     IDE Hard Disk Standby Timer .......[15] Minute(s)        │
│     System Standby Timer ..............[15] Minute(s)        │
│     System Suspend Timer ..............[15] Minute(s)        │
│                                                              │
│  Monitored Activities                                        │
│     IRQ 3.........[Disabled]      IRQ 9.........[Disabled]   │
│     IRQ 4.........[Disabled]      IRQ 10........[Disabled]   │
│     IRQ 5.........[Disabled]      IRQ 11........[Disabled]   │
│     IRQ 6.........[Enabled ]      IRQ 12........[Enabled ]   │
│     IRQ 7.........[Disabled]      IRQ 14........[Enabled ]   │
│     IRQ 8         [Disabled]      IRQ 15........[Disabled]   │
│                                                              │
├─────────────────────────────────────────────────────────────┤
│   ↓ = Move Highlight Bar,   → ← = Change Setting            │
│   PgDn/PgUp = Move Screen,   F1 = Help,   Esc  =  Exit       │
└─────────────────────────────────────────────────────────────┘
```

2.5.1   Power Management Mode

This parameter allows you to reduce power consumption. When this parameter is set to `Enabled`, you can configure the IDE hard disk and system timers. Setting to `Disabled` deactivates the power management feature and all the timers.

IDE Hard Disk Standby Timer

This parameter allows the hard disk to enter standby mode after inactivity of 1 to 15 minutes, depending on your setting. When you access the hard disk again, allow 3 to 5 seconds (depending on the hard disk) for the disk to return to normal speed. Set this parameter to `Off` if your hard disk does not support this function.

System Standby Timer

This parameter sets the system to a "fast-on" power saving mode. It automatically enters into the standby mode after a specified period of inactivity. Any keyboard or mouse action, or any enabled monitored activities occurring through the IRQ channels resume system operation. See section 2.5.2.

System Suspend Timer

This parameter sets the system to the lowest power saving mode. It automatically enters into the suspend mode after a specified period of inactivity.

In suspend mode, the CPU clock stops. Any keyboard or mouse action, or any enabled monitored activities occurring through the IRQ channels resume system operation. See section 2.5.2.

2.5.2 Monitored Activities

The IRQ items under this parameter allow you to monitor system activities occurring through the IRQ channels to determine whether or not to enter power saving mode.

For example, if you assign IRQ 3 to a fax/modem and you set this item to `Enabled`, any fax/modem activity wakes up the system from standby mode.

2.6 System Security Setup

The Setup program has a number of security features to prevent unauthorized access to the system and its data.

The following screen appears if you enter the Setup program and select System Security.

```
                        System Security            Page 1/1


 Disk Drive Control
   Diskette Drive.................[         Normal       ]
   Hard Disk Drive...............[         Normal       ]
   System Boot Drive.............[Drive A then C]
   Boot from CD-ROM..............[Disabled]
 Onboard Communication Ports
   Serial Port 1 Base Address.....[  3F8h    ]
   Serial Port 2 Base Address.....[  2F8h    ]
   Parallel Port Base Address.....[378 (IRQ 7)]
      Operation Mode.............[Standard Parallel Port (SPP)] Mode
         ECP DMA Channel..........[-]
 Onboard PS/2 Mouse (IRQ 12)......[Enabled ]

 Setup Password...................[  None  ]
 Power On Password................[  None  ]


   ↓ = Move Highlight Bar,   → ← = Change Setting
    PgDn/PgUp = Move Screen,   F1 = Help,   Esc = Exit
```

2.6.1 Disk Drive Control

The disk drive control features allow you to enable or disable the read/write functions of a disk drive. These features can also control the diskette drive or the hard disk drive boot function to prevent loading operating systems or other programs from a certain drive while the other drives are operational.

Table 2-1 lists the drive control settings and their corresponding functions.

Table 2-1   Drive Control Settings

Diskette Drive	
Setting	**Description**
Normal	Diskette drive functions normally
Write Protect All Sectors	Disables the write function on all sectors
Write Protect Boot Sector	Disables the write function only on the boot sector
Disabled	Disables all diskette functions
Hard Disk Drive	
Setting	**Description**
Normal	Hard disk drive functions normally
Write Protect All Sectors	Disables the write function on all sectors
Write Protect Boot Sector	Disables the write function only on the boot sector
Disabled	Disables all hard disk functions
System Boot Drive	
Setting	**Description**
Drive A then C	The system checks drive A first. If there is a diskette in the drive, the system boots from drive A. Otherwise, it boots from drive C.
Drive C then A	The system checks drive C first. If there is a hard disk (drive C) installed, the system boots from drive C. Otherwise, it boots from drive A.
C:	The system always boots from drive C.
A:	The system always boots from drive A.

Table 2-1   Drive Control Settings (continued)

Boot from CD-ROM	
Setting	**Description**
Enabled	The system checks for a bootable CD in the CD-ROM. If a CD is present, the system boots from the CD-ROM. Otherwise, it boots from the drive specified in the System Boot drive parameter.
Disabled	System boots from the drive specified in the System Boot Drive parameter.

2.6.2   Onboard Communication Ports

Serial Port 1 Base Address

This parameter allows you to set the serial port 1 logical base address.

Table 2-2   Serial Port 1 Settings

Setting	Description
3F8h	Serial port 1 with address 3F8h using IRQ4
2F8h	Serial port 1 with address 2F8h using IRQ3
3E8h	Serial port 1 with address 3E8h using IRQ4
2E8h	Serial port 1 with address 2E8h using IRQ3
Disabled	Disables serial port 1

Serial Port 2 Base Address

This parameter allows you to set the serial port 2 logical base address.

Table 2-3   Serial Port 2 Settings

Setting	Description
3F8h	Serial port 2 with address 3F8h using IRQ4
2F8h	Serial port 2 with address 2F8h using IRQ3
3E8h	Serial port 2 with address 3E8h using IRQ4
2E8h	Serial port 2 with address 2E8h using IRQ3
Disabled	Disables serial port 2

If you assign 3F8h to serial port 1, you may only assign 2F8h or 2E8h to serial port 2.

If you assign 2F8h to serial port 1, you may only assign 3F8h or 3E8h to serial port 2.

Parallel Port Base Address

The system has one parallel port. Table 2-4 lists the options for selecting the parallel port address. You also have the option to disable the parallel port.

Table 2-4   Parallel Port Settings

Setting	Function
3BCh (IRQ 7)	Corresponds to the parallel port with address 3BCh
378h (IRQ 7)	Corresponds to the parallel port with address 378h
278h (IRQ 5)	Corresponds to the parallel port with address 278h
Disabled	Disables the parallel port

To deactivate the parallel port, select the `Disabled` option. If you install an add-on card that has a parallel port whose address conflicts with the parallel port onboard, the system automatically disables the onboard functions.

Check the parallel port address on the add-on card and change the address to one that does not conflict.

OPERATION MODE

This item allows you to set the operation mode of the parallel port. Table 2-5 lists the different operation modes.

Table 2-5   Parallel Port Operation Mode Settings

Setting	Function
Standard Parallel Port (SPP)	Allows normal speed one-way operation
Standard and Bidirectional	Allows normal speed operation in a two-way mode
Enhanced Parallel Port (EPP)	Allows bidirectional parallel port operation at maximum speed
Extended Capabilities Port (ECP)	Allows parallel port to operate in bidirectional mode and at a speed higher than the maximum data transfer rate

ECP DMA CHANNEL

This item becomes active only if you select `Extended Capabilities Port (ECP)` as the operation mode. It allows you to assign DMA channel 1 or DMA channel 3 for the ECP parallel port function (as required in Windows 95).

2.6.3   Onboard PS/2 Mouse (IRQ 12)

This parameter enables or disables the onboard PS/2 mouse. When set to `Enabled`, it allows you to use the onboard PS/2 mouse assigned with IRQ12. When set to `Disabled`, it deactivates the mouse and makes IRQ12 available for use of other devices.

2.6.4   Setup Password

The Setup Password prevents unauthorized access to the BIOS utility.

Setting a Password

1.   Make sure that JP1 is set to pins 2-3 (bypass password).

> *You cannot enter the BIOS utility if a Setup password does not exist and JP1 is set to pins 1-2 (password check enabled).*
>
> *By default, JP1 is set to pins 2-3 (bypass password).*

2.   Enter BIOS utility and select System Security.

3.   Highlight the Setup Password parameter and press the [↑] or [↓] key. The password prompt appears:
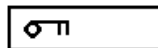
4.   Type a password. The password may consist of up to seven characters.

> *Be very careful when typing your password because the characters do not appear on the screen.*

5. Press ⌊ENTER⌋. A prompt asks you to retype the password to verify your first entry.

6. Retype the password then press ⌊ENTER⌋.

   After setting the password, the system automatically sets the Setup Password parameter to Present.

7. Press ⌊ESC⌋ to exit the System Security screen and return to the main menu.

8. Press ⌊ESC⌋ to exit the BIOS utility. A dialog box appears asking if you want to save the CMOS data.

9. Select Yes to save the changes and reboot the system.

10. While rebooting, turn off the system then open the housing.

11. Set JP1 to pins 1-2 to enable the password function.

The next time you want to enter the BIOS utility, you must key-in your Setup password.

Changing or Removing the Setup Password

Should you want to change your setup password, do the following:

1. Enter the BIOS utility and select System Security.

2. Highlight the Setup Password parameter.

3. Press ⬅ or ➡ to display the password prompt and key-in a new password.

    or

    Press ⬅ or ➡ and select None to remove the existing password.

4. Press ESC to exit the System Security screen and return to the main menu.

5. Press ESC to exit the BIOS utility. A dialog box appears asking if you want to save the CMOS data.

6. Select Yes to save the changes.

Bypassing the Setup Password

If you forget your setup password, you can bypass the password security feature by hardware. Follow these steps to bypass the password:

1. Turn off and unplug the system.

2. Open the system housing and short pins 2-3 of JP1 to bypass the password function.

3. Turn on the system and enter the BIOS utility. This time, the system does not require you to type in a password.

You can either change the existing Setup password or remove it by selecting None*. Refer to the previous section for the procedure.*

2.6.5   Power On Password

The Power On Password secures your system against unauthorized use. Once you set this password, you have to type it whenever you boot the system. To set this password, enter the BIOS utility, select System Security, then highlight the Power On Password parameter. Follow the same procedure as in setting the Setup password.

Make sure to set JP1 to 1-2 to enable the Power On password.

2.7 Load Setup Default Settings

Use this option to load the default settings for the optimized system configuration. When you load the default settings, some of the parameters are grayed-out with their fixed settings. These grayed parameters are not user-configurable.

The following dialog box appears when you select Load Setup Default Settings from the main menu.

```
Load Setup Default Settings
Are you sure

        [Yes]        [No]
```
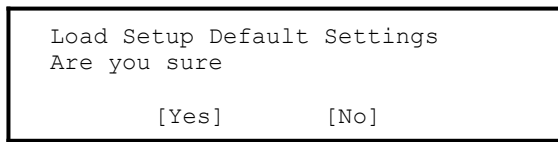
Select Yes to load the default settings.

2.8   Leaving Setup

Examine the system configuration values. When you are satisfied that all the values are correct, write them down. Store the recorded values in a safe place. In the future, if the battery loses power or the CMOS chip is damaged, you will know what values to enter when you rerun Setup.

Press ESC to leave the system configuration setup. If there is any change in the BIOS utility functions, the following screen appears:

```
Do you want to save CMOS data?

        [Yes]          [No]
```

Use the arrow keys to select your response. Select Yes to store the new data in CMOS. Select No to retain the old configuration values. Press ENTER .