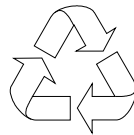


V35

User's Guide



100% Recycled Paper

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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

Screen messages

a, e, s, etc.



Represents text input by the user.

Denotes actual messages that appear onscreen.

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.

x

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Chapter 1

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, or 166/66 MHz. It has three ISA and four PCI slots (with one PCI- and ISA-shared slot) for future expansion. It also has six 72-pin SIMM sockets that allow memory upgrade to a maximum of 192 MB. To further enhance system performance, the board integrates a 256-KB pipelined-burst cache.

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

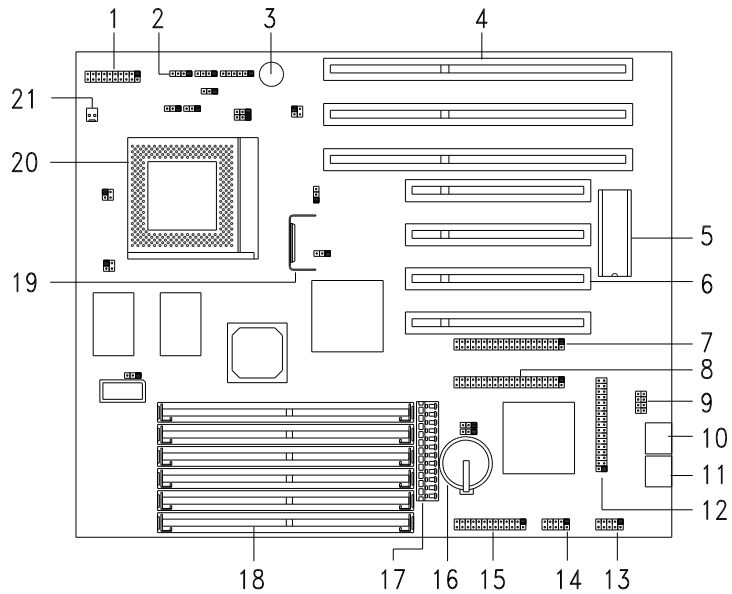
The system is fully compatible with MS-DOS V6.X, OS/2, UNIX, Windows NT and Windows 95 operating systems.

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 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 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 | Multifunction connector | 13 | COM2 connector |
| 2 | IDE LED connector | 14 | COM1 connector |
| 3 | Buzzer | 15 | Parallel connector |
| 4 | ISA slots | 16 | Battery |
| 5 | BIOS | 17 | Power connector |
| 6 | PCI slots | 18 | 72-pin SIMM sockets |
| 7 | HDD 2 connector | 19 | Voltage regulator with heatsink |
| 8 | HDD 1 connector | 20 | CPU socket |
| 9 | USB connector (optional) | 21 | Two-pin fan connector |
| 10 | PS/2 mouse connector | | |
| 11 | PS/2 keyboard connector | | |
| 12 | FDD connector | | |

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.

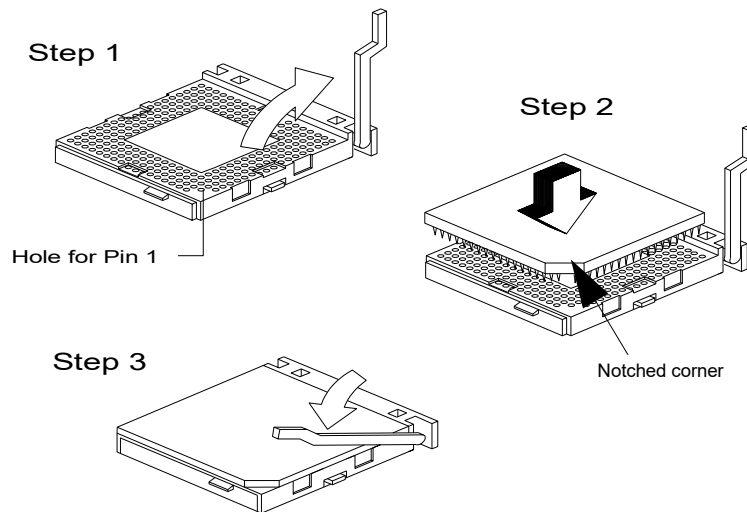


Figure 1-2 Installing a CPU

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.

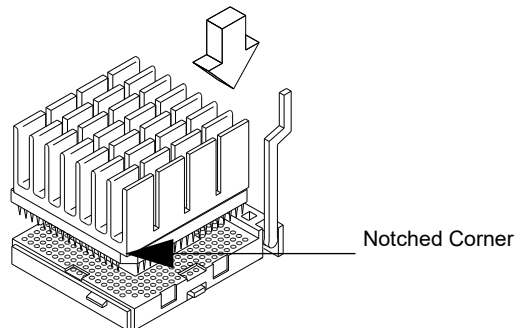


Figure 1-3 Installing an OverDrive CPU

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

1.5 Jumper Settings

Figure 1-4 shows the jumper locations.

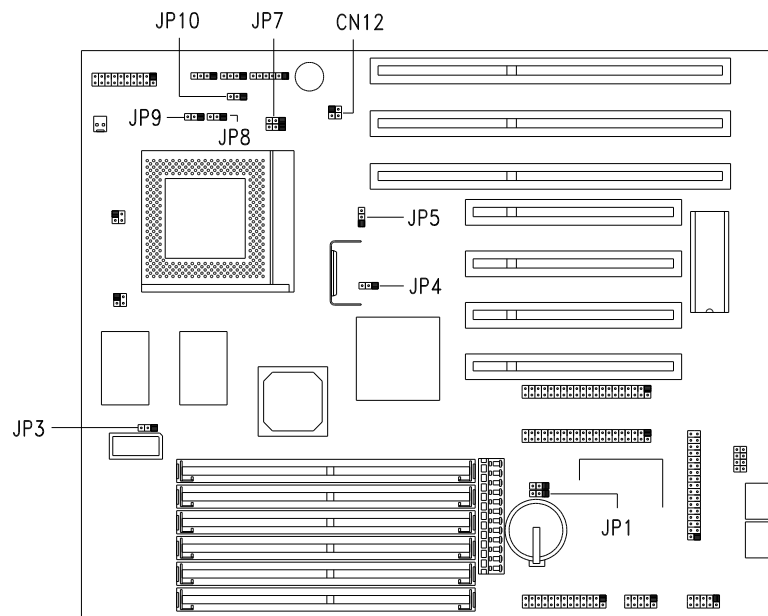


Figure 1-4 Jumper Locations



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 Reserved
JP5	1-2 2-3 *	3.3V operating voltage 3.6V operating voltage
JP7	1-2 2-3 *	Disables second-level cache Enables 256-KB L2 cache size
JP10	1-2 2-3 *	Enables SMI switch Enables Reset switch

Table 1-3 CPU Frequency Select

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

* Default setting

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 board accept single-density (4 and 8-MB) and double-density (16 and 32-MB) SIMMs, with 70 ns or less DRAM speed. Table 1-4 lists the possible memory configurations.

Table 1-4 Memory Configurations

Bank 0		Bank 1		Bank 2		Total Memory
Slot 1	Slot 2	Slot 3	Slot 4	Slot 5	Slot 6	
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
48 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

16 MB	16 MB	16 MB	16 MB	8 MB	8 MB	80 MB
-------	-------	-------	-------	------	------	-------

Table 1-5 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	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. Slip a SIMM at a 45° angle into a socket with the component side facing down. Always install SIMMs beginning with bank 0.



Be careful when inserting or removing SIMMs. Forcing a SIMM in or out of a socket can damage the socket or the SIMM (or both).

2. Gently push the SIMM up until the pegs of the socket slip into the holes on the SIMM and the holding clips lock the SIMM into a vertical position.



The SIMM should be at a 90° angle when installed.

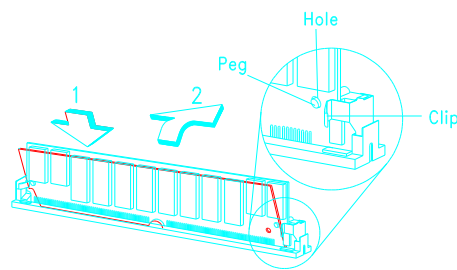


Figure 1-5 Installing a SIMM



See section 1.7 for the post-installation instructions.

1.6.2 Removing a SIMM

1. Press the holding clips on both sides of the SIMM outward to release it.
2. Press the SIMM downward to about a 45° angle.
3. Gently pull the SIMM out of the socket.

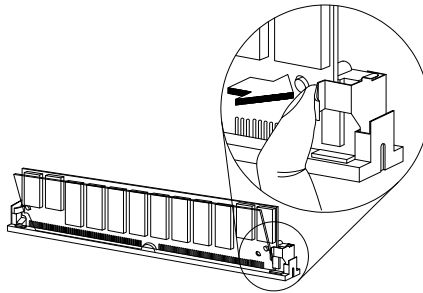


Figure 1-6 Removing a SIMM

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 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.

1.8 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

1.9.1 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.

1.9.2 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 1-5 lists the system error messages in alphabetical order.

Table 1-5 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 1-4.
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 1-5 *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 I or ba^.
Press F1 to Setup or other key to continue	Press I and reconfigure the system.
Press Esc to turn off NMI, any key to reboot	Press ^ 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.

1.9.3 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.

Chapter 2

BIOS Utility

Most systems are 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 error messages, check the computer's internal battery. If the battery is dead or not properly connected, the system cannot retain configuration values in CMOS RAM.

Before running, have the following information ready:

- **Diskette drive type** The standard diskette drive type is either 5.25-inch, 1.2 MB or 3.5-inch, 1.44 MB.
- **Hard disk drive type** To determine your drive type, compare the information on the label pasted to your hard disk (or supplied in vendor documentation) with the disk types listed in Table 2-1.

2.1 Entering Setup



Close all open files and leave your application program before entering Setup. You cannot exit back into an application. The system automatically reboots when you leave Setup.

Press the key combination `ba^` to enter Setup. You do not need to insert a diskette or load an operating system. Just press the key combination.

The following screen shows the Setup main menu:

```
BIOS Utility

Basic System Configuration
Advanced System Configuration
PCI System Configuration
Power Saving Configuration
System Security
Load Setup Default Settings

↓ = Move Highlight Bar, ← = Select, Esc = Exit and Reboot
```

2.2 Basic System Configuration

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

The screen below shows the Basic System Configuration Setup menu:

Basic System Configuration		Page 1/2	
Date -----	[03/17/95]		
Time -----	[14:00:19]		
Diskette Drive A -----	[1.44 MB, 3.5-inch]		
Diskette Drive B -----	[None]		
		Cylinder	Head
IDE Drive 0 (234 MB) [Auto]		967	16
IDE Drive 1 (0 MB) [Auto]			31
IDE Drive 2 [Auto]			
IDE Drive 3 [Auto]			
Base Memory-----	[640] KB		
Extended Memory-----	[7168] KB		
Total Memory-----	[7808] KB		
Math Coprocessor-----	[Installed]		
Video Display-----	[VGA/EGA]		
↓ = Move Highlight Bar, → ← = Change Setting PgDn/PgUp = Move Screen, F1 = Help, Esc = Exit			

The command line at the bottom of the display has three functions. It tells you how to view the configuration options for each parameter, how to move the highlight bar from one parameter to the next, and how to change the value for each parameter.

1. Press w or y to highlight the desired parameter.
2. Press x or z to select the desired option for an item.
3. Press } to turn to the next page, or press { to return to the previous page.

4. Press ^ to exit the configuration menu.

The screen below shows page 2 of the Basic System Configuration menu:

```
Basic System Configuration Page 2/2

Communication Settings
  Baud Rate-----[9600] BPS
  Parity-----[ Odd]
  Stop Bits-----[ 1 ] Bit(s)
  Data Length-----[ 8 ] Bits
Enhanced IDE Features
  Hard Disk Block Mode-----[Enabled ]
  Advanced PIO Mode-----[Enabled ]
  Hard Disk Size > 504 MB-----[Enabled ]
  Hard Disk 32 Bit Access-----[Enabled ]
  Large Memory Support Mode-----[Normal ]
  Num Lock After Boot -----[Enabled ]
  Memory Test-----[Disabled]
  Auto Configuration Mode-----[Enabled ]
  Fast Boot Mode-----[Enabled ]
  Quiet Boot Mode-----[Enabled ]
  Configuration Table-----[Disabled]

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

To use the Help option, press I. A window appears onscreen with a brief description of the currently highlighted parameter.

The following sections explain the different parameters and their settings.

2.2.1 Date and Time

Date

To set the date, highlight the Date parameter. Press x or z to set the current date, following the month, day, and year format.

Valid values for month, day, and year are:

Month	1 to 12
Day	1 to 31
Year	00 to 99

Time

To set the time, highlight the Time parameter. Press x or z to set the current time in the hour, minute, and second format.

Valid values for hour, minute, and second are:

Hour	00 to 23
Minute	00 to 59
Second	00 to 59

After setting the date and time, you need not set them again. As long as the internal battery remains good and is connected, the clock continues to keep the date and time accurately. When the operating system asks for the date and time, press e twice if you do not want to change the values of these parameters.

You can bypass the date and time prompts by creating an AUTOEXEC.BAT file. Refer to the MS-DOS manual.

2.2.2 Diskette Drives

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

The Diskette Drive parameters have the following options:

- 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 to enter the value for the Diskette Drive B parameter. Choose *None* if you do not have a second diskette drive.

2.2.3 IDE Drives

The system supports four IDE devices. The onboard IDE connector 1 is for the first and second IDE devices. The IDE connector 2 is reserved for the third and fourth IDE devices.

Move the highlight bar to IDE Drive 0 to configure the hard disk drive (drive C). Press **x** or **z** to display the hard disk options with their respective values. Select an option that corresponds to your hard disk type. Follow the same procedure to enter the values for the IDE Drive 1 parameter. Choose *None* if you do not have a second hard disk drive.

To automatically configure your third IDE device, highlight the parameter IDE Drive 2 and select *Auto*.

Highlight the parameter IDE Drive 3 and follow the same procedure to configure your fourth IDE device. Set both parameters to None if you want to bypass the feature.

Selecting the Auto Option

If you do not know the type of your hard disk, select the option `Auto`. When you select this option, the BIOS utility automatically determines the type of your hard disk during POST. You can see your hard disk values when you enter the BIOS Setup.

	Cylinder	Head	Sector
IDE Drive 0 (xxMB) [Auto]	xxx	xx	xx

You can also save the values under `User`.

	Cylinder	Head	Sector
IDE Drive 0 (xxMB) [User]	xxx	xx	xx

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



We recommend that you copy the hard disk values and keep them in a safe place in case you have to reconfigure the system in the future.

Follow the same procedure to auto-configure other installed disks.

Selecting the User Option

There are cases when you cannot use the `Auto` option. Instead, you have to select the `User` option. This is when you installed a hard disk that was previously formatted but not using the disk default parameters or structure. The disk type may be in the hard disk type list but the number of cylinders, heads, and sectors differ.

Follow these steps to use the `User` option:

1. Highlight `User`.
2. Type in the number of cylinders, heads, and sectors of the hard disk.



You must have obtained the correct hard disk information beforehand.

3. Choose `Yes` when asked if you want to save the CMOS data.



BIOS automatically configures the additional disk(s). However, if your system cannot recognize the hard disk type, connect your additional hard disk(s) to the IDE hard disk connector 1. Configure the hard disk either as IDE Drive 0 or IDE Drive 1. To configure, set the value to `User`. Press `e` and type the value of the disk parameters

Hard Disk Types

The following table lists the hard disk types.

Table 2-1 Hard Disk Types

Type	Cylinders	Heads	Sectors per Track
0	(indicates SCSI or no hard disk)		
1	306	4	17
2	615	4	17
3	615	6	17
4	940	8	17
5	940	6	17
6	615	4	17
7	462	8	17
8	733	5	17
9	900	15	17
10	820	3	17
11	855	5	17
12	855	7	17
13	306	8	17
14	733	7	17
15	(reserved)		
16	612	4	17
17	977	5	17
18	977	7	17
19	1024	7	17
20	733	5	17
21	733	7	17
22	733	5	17
23	306	4	17

Table 2-1 Hard Disk Types (continued)

Type	Cylinders	Heads	Sectors per Track
24	612	4	17
25	306	4	17
26	612	4	17
27	698	7	17
28	976	5	17
29	306	4	17
30	611	4	17
31	732	7	17
32	1023	5	17
33	751	8	17
34	755	16	17
35	731	13	26
36	980	15	17
37	936	16	17
38	981	5	17
39	981	10	17
40	762	8	39
41	980	5	17
42	832	8	33
43	683	12	38
44	513	16	38
45	776	8	33
46	683	16	38
47	832	6	33
48	615	2	34
49	989	16	63
50	823	4	38
51	1001	5	17
52	1024	17	22

Table 2-1 Hard Disk Types (continued)

Type	Cylinders	Heads	Sectors per Track
53	723	13	51
54	548	8	38
55	1013	4	41
56	929	15	17
57	817	14	36
58	723	13	81
59	802	4	39
60	1024	9	17
61	895	5	55
62	(reserved)		
63	966	10	34
64	1024	8	17
65	1024	11	17
66	918	11	17
67	905	9	17
68	1024	10	17
69	1024	12	17
70	1024	13	17
71	1024	14	17
72	1024	2	17
73	1024	16	17
74	918	15	17
75	820	6	17
76	1024	5	17
77	1024	8	17
78	(reserved)		
79	1001	15	32
80	1024	16	63

Table 2-1 Hard Disk Types (continued)

Type	Cylinders	Heads	Sectors per Track
81	1024	10	17
82	1024	11	17
83	1024	15	17
84	776	8	33
85	926	13	17
86	805	4	26
87	976	5	17
88	745	4	28
89	747	2	28
90	782	2	1Bh
91	985	13	32
92	816	15	32
93	968	5	17
94	903	8	46
95	966	5	34
96	535	10	50
97	715	10	50
98 ~ 100	(reserved)		
Auto or User	(User-defined)		

2.2.4 System Memory

The system automatically detects the total amount of onboard memory and sets the corresponding value in the Setup program. This information is not adjustable by the user and is for display only. If you install additional memory, the system automatically updates the Total Memory parameter to show the new memory size.

```
Base Memory -----[ 640 ] KB
Extended Memory -----[ 7168 ] KB
Total Memory -----[ 7808 ] KB
```

2.2.5 Math Coprocessor

This parameter automatically detects the presence of the coprocessor and is for display only. The option set by the system is:

```
Math Coprocessor ----- [Installed ]
```

2.2.6 Video Display

The video display is the monitor on which the operating system prompt appears when you boot the system. The system automatically detects the video mode of your primary display and sets the configuration value accordingly.

```
Video Display ----- [VGA/EGA ]
```

2.2.7 Communication Status

The Communication Status parameters let you set the baud rate, parity, stop bit, and data length for the first serial port (COM 1).

- Baud rate: 110 to 9600 bits per second (BPS)
- Parity: odd, even, or none
- Stop bit: 1 or 2 stop bits
- Data length: 7- or 8-bit data word

There is only one restriction on the available options. If your data length parameter is an 8-bit data word, you must select one of the following combinations:

- 1 stop bit and odd (or even) parity
- 2 stop bits and no parity

Default values are 9600 BPS, odd parity, 1 stop bit, and 8-bit data word.

2.2.8 Enhanced IDE Features

Hard Disk Block Mode

This function enhances disk performance depending on the hard disk in use. If enabled, it allows data transfers in block (multiple sectors) by increasing the data transfer rate to 256 bytes/cycle. However, if your system does not boot after enabling this parameter or if your hard disk does not support this function, change the setting to *Disabled*. The default is *Enabled*.

Advanced PIO Mode

Enabling this parameter improves system performance by allowing the use of faster hard drives. If your hard disk does not support this function, set this parameter to *Disabled*. The default is *Enabled*.

Hard Disk Size > 504 MB

This enhanced IDE feature only works 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 be set to *Disabled*. The default is *Enabled*.

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 only works under DOS, Windows 3.x, Windows 95, and Novell NetWare. If your software or hard disk does not support this function, set this parameter to *Disabled*. The default is *Enabled*.

2.2.9 Large Memory Support Mode

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

2.2.10 Num Lock After Boot

This parameter enables users to activate the Num Lock function upon system boot.

2.2.11 Memory Test

The system performs a RAM test during the POST routine. Set this parameter to *Disabled* to bypass this test.

2.2.12 Auto-configuration Mode

Set this parameter to *Enabled* if you do not know the hard disk drive type parameters and the onboard communication port configuration. When enabled, this parameter sets the hard disk drive type to *Auto* and the System Speed to *High*. It also enables the system and video RAM, as well as the first and second-level cache. The default setting is *Enabled*.

2.2.13 Fast Boot Mode

This parameter allows the system to boot faster by skipping some POST routines. If enabled, it sets the System Speed to *High* and enables Shadow RAM, as well as the primary and second-level cache. The default setting is *Enabled*.

2.2.14 Quiet Boot Mode

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 *t* 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.

2.2.15 Configuration Table

This parameter allows you to enable or disable the appearance of 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. Following is a sample configuration table.

CPU/CLK	: Pentium/133 MHz	Base Memory:	: xxx KB
Math Coprocessor:	Installed	Extended Memory:	xxxx KB
IDE Drive 0	: xxx MB	Shadow RAM	: xxx KB
IDE Drive 1	: xxx MB	Internal Cache	: xxx KB, Enabled
IDE Drive 2	: xxx MB	External Cache	: xxx KB, Enabled
IDE Drive 3	: xxx MB	Serial Port(s)	: 3F8h, 2F8h
Diskette Drive A:	xx-MB, xx-inch	Parallel Port	: 378h
Diskette Drive B:	None	Printing Device:	None

2.3 Advanced System Configuration

Select the option Advanced System Configuration from the main menu to configure the system memory. The screen below shows page one of the Advanced System Configuration menu.

Advanced System Configuration	Page 1/2
Shadow RAM	
E0000h - FFFFFh (System BIOS)---	[Enabled]
C0000h - C7FFFh (Video BIOS)----	[Enabled]
C8000h - CBFFFh -----	[Disabled]
CC000h - CFFFFh -----	[Disabled]
D0000h - D3FFFh -----	[Disabled]
D4000h - D7FFFh -----	[Disabled]
D8000h - DBFFFh -----	[Disabled]
DC000h - DFFFFh -----	[Disabled]
Internal Cache (CPU Cache) -----	[Enabled]
External Cache -----	[Enabled]
E0000h - FFFFFh (System BIOS) ----	[Cacheable]
C0000h - C7FFFh (Video BIOS) -----	[Cacheable]
↓ = Move Highlight Bar, → ← = Change Setting PgDn/PgUp = Move Screen, F1 = Help, Esc = Exit	

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

Advanced System Configuration	Page 2/2
Memory at 15 MB - 16 MB 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]	
Parity/ECC Selection -----[Disabled]	
↓ = Move Highlight Bar, → ← = Change Setting PgDn/PgUp = Move Screen, F1 = Help, Esc = Exit	

2.3.1 Shadow RAM

The Shadow RAM parameter allows you to change the system BIOS and video BIOS locations from ROM to RAM. When the system boots, the BIOS routines are copied into the RAM area. Relocating to RAM enhances system performance, as information access is faster than ROM.

The address range E0000h - FFFFFh is for shadowing the system BIOS. This item is always set to *Enabled* and is not user-configurable. The address range C0000h - C7FFFh is for shadowing the video BIOS. The remaining address ranges are for I/O ROM functions.

To change the BIOS location from ROM to RAM, select *Enabled*. If you select *Disabled*, the BIOS information remains in ROM. The default setting for all RAM shadowing is *Disabled*.

2.3.2 Internal Cache (CPU Cache)

This parameter enables or disables the internal cache memory. The default setting is *Enabled*.

2.3.3 External Cache

This parameter enables or disables the external cache memory. The default setting is *Enabled*.

2.3.4 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*.

2.3.5 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*.

2.3.6 Memory at 15MB-16MB

To prevent memory address conflicts between the system and expansion boards, reserve this memory range for the use of either the system or an expansion board.

2.3.7 DRAM Lead-off 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 lead-off time.

The lead-off 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 lead-off 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 Lead-off Timing parameter setting. Faster DRAMs require shorter wait states. For system board with cache upgrade socket, you can install pipelined-burst, synchronous DRAMs to upgrade the L2 cache. If you upgrade your cache memory, we recommend that you change the parameter setting to X-2-2-2 to improve system performance.

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 Lead-off 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 Parity/ECC Selection

This parameter allows you to enable or disable the ECC and parity check features. Select **Parity** to enable the parity check feature. Select **ECC** to enable the ECC feature. The ECC feature enables BIOS to detect and correct data errors.

Disable this parameter if you installed SIMMs without parity or if you want to disregard the function.

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	[9]	[--]	[--]	[--]	[--]
PCI Slot 2	[--]	[--]	[--]	[9]	[--]
PCI Slot 3	[--]	[--]	[9]	[--]	[--]
PCI Slot 4.....	[--]	[9]	[--]	[--]	[--]
VGA Palette Snoop	[Disabled]				
↓ = 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.

If you install Windows 95 OS in your system, you must set the PCI IRQ setting parameter to Auto.

PCI Slots

These parameters allow you to specify the appropriate interrupt for each of the PCI devices. You can assign IRQ5, IRQ9, IRQ10, IRQ11, IRQ14, or IRQ15 to the slots.

If you install a single-function card on a PCI slot, only the corresponding PCI slot parameter is configurable. The other PCI slot parameters are not configurable and are usually grayed. However, if you install a multi-function card, the configurable PCI slot parameters depend on the number of function that your card supports.



Use the w or y key to move between fields.

Use the x or z key to select options.

2.4.2 VGA Palette Snoop

PCI devices support the palette snooping technique that enables the device to control access to their palette registers. Set this parameter to `Enabled` to activate the palette snooping function in the PCI VGA devices installed in your system. Check your VGA card manual for more information about this function. The default setting is `Disabled`.

2.5 Power Saving Configuration

The following screen appears if you select the option Power Saving Configuration from the main menu.

Power Saving Configuration		Page 1/1
Power Management Mode-----	[Enabled]	
IDE Hard Disk Standby Mode-----	[15] Minute(s)	
System Suspend Mode-----	[15] Minute(s)	
System Wakeup Events		
IRQ 0-----[Disabled]	IRQ 8-----[Enabled]	
IRQ 1-----[Enabled]	IRQ 9-----[Disabled]	
IRQ 3-----[Disabled]	IRQ 10-----[Disabled]	
IRQ 4-----[Disabled]	IRQ 11-----[Disabled]	
IRQ 5-----[Disabled]	IRQ 12-----[Enabled]	
IRQ 6-----[Enabled]	IRQ 13-----[Enabled]	
IRQ 7-----[Disabled]	IRQ 14-----[Enabled]	
	IRQ 15-----[Disabled]	
↓ = Move Highlight Bar, → ← = Change Setting PgDn/PgUp = Move Screen, F1 = Help, Esc = Exit		

2.5.1 Power Management Mode

The Power Management Mode allows you to reduce power consumption. If enabled, you can set the following parameters:

IDE Hard Disk Standby Mode

This parameter allows you to set the hard disk to go into Standby mode after inactivity of 1 ~ 15 minutes. When the hard disk is accessed again, allow 3 ~ 5 seconds (depending on the HDD in use) for the hard disk to return to normal speed. Turn this function off if your hard disk does not support this function.

```
IDE Hard Standby Mode--Off [1/2/3 ./15 min]
```

System Suspend Mode

This parameter provides a fast-on power saving mode by setting the monitor to Suspend mode and the HDD to Standby mode. If the system is idle for a specified period of time, it automatically enters the Suspend mode. Any keyboard or mouse action returns the system to full power.

```
System Suspend Mode--[2/5/10/15.120 min/Off]
```

2.5.2 System Wakeup Events

This function allows the user to configure the Power Management Mode by checking the activities of the IRQ channels. Any activity detected from the enabled channels resumes the system to full power. Disable the channels that you want to bypass.

2.6 System Security Setup

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

Enter the Setup program and select the option System Security Setup. The following screen appears:

System Security	Page 1/1
Diskette 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 ---	[278h (IRQ5)]
Operation Mode -----	[Standard and Bidirectional] 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	

Press w or y to move the highlight from one parameter to the next. Press x or z to change the setting.

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 hard disk drive boot function to prevent loading operating systems or other programs from a certain drive while the other drives remain operational.

Table 2-2 summarizes the functions of the drive control parameters.

Table 2-2 Drive Control Parameters

Diskette Drive Parameter	Function
Normal	Diskette drive functions normally.
Write Protect All Sectors	Disables the write functions on all sectors.
Write Protect Boot Sector	Disables the write function only on boot sector.
Disabled	Disables all diskette functions.
Hard Disk Drive Parameter	Function
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 boot sector.
Disabled	Disables all hard disk functions.
System Boot Drive Parameter	Function
Drive A then C	System boots from A to C.
Drive C then A	System boots from C to A.
C	System always boots from drive C.
A	System always boots from drive A.
Boot From CD-ROM Parameter	Function
Enabled	System boots from CD-ROM drive
Disabled	System boots as specified in the System Boot Drive parameter



The drive control settings that you specify take effect only if the diskette and hard disk controllers are not disabled through jumper

settings.

2.6.2 Onboard Communication Ports

Serial Port 1 Base Address

This parameter enables the onboard serial port 1 and sets its address.

Table 2-3 Serial Port 1 Parameters

Parameter	Function
Serial 1 (3F8h)	COM 1 with address 3F8h
Serial 2 (2F8h)	COM 2 with address 2F8h
Serial 3 (3E8h)	COM 3 with address 3E8h
Serial 4 (2E8h)	COM 4 with address 2E8h
Disabled	Disables serial port 1

Serial Port 2 Base Address

This parameter enables the onboard serial port 2 and sets its address.

Table 2-4 Serial Port 2 Parameters

Parameter	Function
Serial 1 (3F8h)	COM 1 with address 3F8h
Serial 2 (2F8h)	COM 2 with address 2F8h
Serial 3 (3E8h)	COM 3 with address 3E8h
Serial 4 (2E8h)	COM 4 with address 2E8h
Disabled	Disables serial port 2

Parallel Port Base Address

The system has one parallel port. Table 2-5 lists the options for selecting the parallel port address. You also have the option to disable the parallel port.

Table 2-5 *Parallel Port Control Parameters*

Parameter	Function
3BCh	Corresponds to the parallel port with address 3BCh.
378h	Corresponds to the parallel port with address 378h.
278h	Corresponds to the parallel port with address 278h.
Disabled	Disables the parallel port.

To deactivate the parallel port, select `Disabled`. If you install an add-on card that has a parallel port whose address conflicts with the onboard parallel port, 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 2-6 lists the different operation modes of the parallel port.

Table 2-6 Parallel Port Operation Mode Settings

Setting	Function
Standard Parallel Port (SPP)	Allows normal-speed operation but in one direction only.
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.
Standard and Bidirectional	Allows normal speed operation in a two-way mode.

ECP DMA CHANNEL

This parameter allows you to assign a DMA channel for the ECP function. Therefore, this is configurable only if the Operation Mode parameter is set to *ECP mode*. The available DMA channel selections are *DMA 1* and *DMA 3*.

2.6.3 Onboard PS/2 Mouse (IRQ12)

Enabling this parameter allows the system to support a PS/2 mouse and automatically assigns IRQ12 to this function. Disable the parameter to bypass the option or to reserve IRQ12 for other function.

2.6.4 Setup Password

This option lets you set a password for running the Setup program. Highlight the parameter Setup Password and press x or z. The screen displays a key pattern and requests you to enter a password as shown in the following sample screen:

○□

Type your password (up to 7 characters), then
press ENTER. ESC=Cancel

To ensure accuracy, the system requests you to retype the password before it stores the value. If the second password does not match the first one, the following message appears:

○□ █

○□

Incorrect password specified. Please try
again. ESC=Cancel

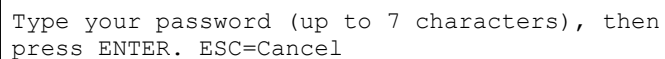
After you have specified the Setup password, this parameter changes to Present automatically.



After setting the password, make sure that you set JP1 to 1-2. Otherwise, your system will not boot.

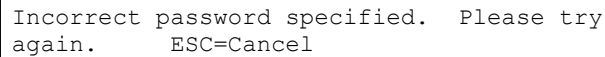
2.6.5 Power-on Password

This option enables you to set a system password. Select `None` to disable the password feature. Select `Present` and the screen displays a key pattern and requests you to enter a password as shown in the following screen:



The maximum password length is seven characters. These must be ASCII characters. Type your password carefully, as the characters do not appear onscreen. To ensure accuracy, the system requests you to retype the password before it stores the value.

If the two passwords entered are not identical, the following screen appears:



The password you choose initially can be easily changed or removed at a later date.

The password prompt appears each time the system boots if the Password Type parameter is set as `Power-on`. To disable this option enter the current system password at the password prompt followed by a slash (/).

To change the existing password, enter the current password at the prompt when you boot the system, followed by a slash (/) and the new password that you wish to specify. Again, be careful when typing the password as it does not appear onscreen when you enter it.



After setting the password, make sure that you set JP1 to 1-2. Otherwise, your system will not boot.

2.7 Load Setup Default Settings

This parameter loads the default values to the system configuration parameters. The default values are the optimized configuration settings for the system. If you select this option, the following prompt appears:

BIOS Utility
Basic System Configuration Advanced System Configuration PCI System Configuration Power Saving Configuration System Security Load Setup Default Settings
Load Default Settings Are you sure ? [Yes] [No]
↓ = Move Highlight Bar, ← = Select, Esc = Exit and Reboot

Select **Yes** to automatically load the parameter default settings. Select **No** to disregard the option.



If the battery loses power or the CMOS chip is damaged, select Load Default Settings from the Setup main menu. This automatically re-loads the default settings and configures the system.

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, such as in this manual.

Press \wedge to leave the system configuration setup. If there is any change in the configuration values and security setup, 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 RAM. Select `No` to retain the old configuration values. Then press `e`.