

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.

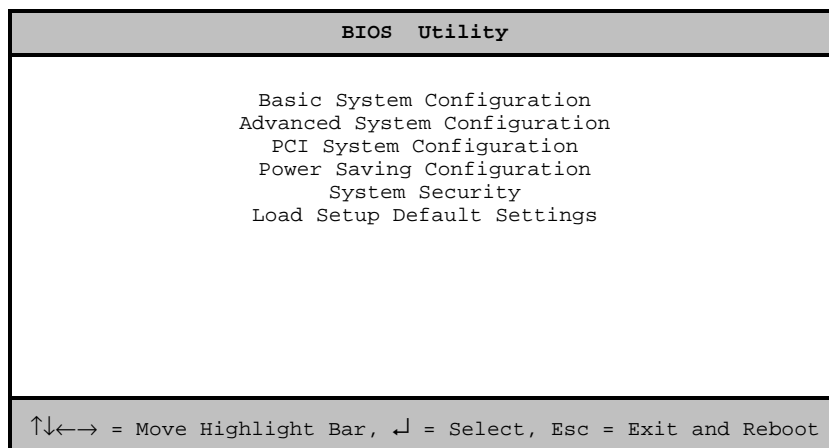
Before running, have the following information ready:

- **Diskette drive type** The standard diskette drive type is either 5.25-inch, 360 KB/1.2 MB or 3.5-inch, 720 KB/1.44 MB/2.88 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

During power-on self test (POST), press the key combination **CTRL** **ALT** **ESC** 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:



You can enter Setup only during POST.

The parameters on the screens show default values. These values may not be the same as those in your system.

2.2 Basic System Configuration

Select 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 -----	[XX/XX/XX]	
Time -----	[XX:XX:XX]	
Diskette Drive A -----	[XXX MB, XX-inch]	
Diskette Drive B -----	[None]	
IDE Drive 0 (XXX MB)[Auto]	Cylinder Head Sector	
IDE Drive 1 (XXX MB)[Auto]	XXX XX XX	
IDE Drive 2 [Auto]	XXX XX XX	
IDE Drive 3 [Auto]		
Base Memory-----	[XXX] KB	
Extended Memory-----	[XXXX] KB	
Total Memory-----	[XXXX] 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 **↑** or **↓** to highlight the desired parameter.
2. Press **→** or **←** to select the desired option for an item.
3. Press **PGDN** to turn to the next page, or press **PGUP** to return to the previous page.
4. Press **ESC** 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-----	[None]	
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]	
↑ ↓ = Move Highlight Bar, → ← = Change Setting PgDn/PgUp = Move Screen, F1 = Help, Esc = Exit		

To use the Help option, press **F1**. 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  or  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  or  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  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 Diskette Drive A. Press  or  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  or  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 (xx MB) [Auto]	xxx	xx	xx

You can also save the values under *User*.

	Cylinder	Head	Sector
IDE Drive 0 (xx MB) [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 `ENTER` 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 Settings

The Communication Settings parameters allow you to set the baud rate, parity, stop bit and data length for the first serial port. The values for this parameter are:

- 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



The baud rate maximum value 9600 BPS applies only to POST under UNIX environment. The system I/O chipset SMC 37C935 supports up to 460.8KBPS.

There is one restriction on the options available for the communication status parameters. 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

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, Windows 3.x and Windows 95 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 3.1 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*, video RAM to *Shadow*, and enables the first-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 first-level cache. The default setting is *Enabled*.

2.3 Advanced System Configuration

Select the parameter Advanced System Configuration from the main menu to configure the system memory. The screen below shows 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]	
Memory at 15 MB - 16 MB Reserved for ---	[System] Use	
ECC/Parity Mode Selection -----	[Disabled]	
Operation of ECC -----	[Both]	
↑ ↓ = 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 the expansion board's ROM.

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 lets you enable or disable the second-level cache. 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 ECC/Parity Mode Selection

This parameter allows you to enable or disable the ECC and parity check feature. Select `Disabled` if you installed SIMMs without parity or ECC.

Operation of ECC

This parameter allows you to select the error detection mode. The following are the ECC operation options.

- `None` - detects single-bit errors and automatically corrects any error but does not set the single-bit error flag in the chipset. In this option, the operating system does not receive any signal even if there are system errors.
- `Single-bit` - detects single-bit errors, automatically corrects any error, and sets the single-bit error flag in the chipset. The setting of the single-bit error flag is a signal to the operating system that ECC detected single-bit errors.
- `Multiple-bit` - detects multiple-bit errors and sets the multiple-bit error flag in the chipset but does not correct the errors. The setting of the multiple-bit error flag is a signal to the operating system that ECC detected multiple-bit errors.

- Both - detects both single- and multiple-bit errors but corrects only single-bit errors. This option sets either the single- or the multiple-bit flags in the chipset to send signals to the operating system that ECC detected errors.

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	[--]	[--]	[--]	[--]
VGA Palette Snoop [Disabled]					
SCSI & ASM Adapter [Disabled]					
Boot Device [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 device is not a PnP, you can manually assign the interrupt for each of the device or use the ICU utility to reserve system resource for the installed non-PnP devices.







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 IRQ3, IRQ4, IRQ5, IRQ7, IRQ9, IRQ10, IRQ11, IRQ12, or IRQ15 to the slots, i.e., if these IRQs are not used by other devices.



Use the  or  key to move between fields.

Use the  or  key to select options.

2.4.2 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.

The default setting for this parameter is *Disabled*.



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

2.4.3 SCSI & ASM Adapter

This parameter allows you to enable or disable the SCSI function of the SCSI/ASM card installed in your system. If you do not have any, set this to *Disabled*.

Boot Device

During POST, the normal booting procedure starts with the initialization of the ISA card, followed by the PCI card, then the onboard SCSI, if present. Enabling this parameter changes the normal booting sequence of the system, doing the SCSI initialization prior to add-on card initialization.

This is configurable only if the SCSI & ASM Adapter parameter is enabled.

2.5 Power Saving Configuration

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

Power Saving Configuration		Page 1/1
Power Management Mode----- [Disabled]		
IDE Hard Disk Standby Mode----- [15] Minute(s)		
System Standby Mode----- [15] Minute(s)		
System Wakeup Events		
IRQ 0----- [Disabled]	IRQ 8-----[Disabled]	
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----- [Disabled]	IRQ 13-----[Disabled]	
IRQ 7----- [Disabled]	IRQ 14-----[Disabled]	
	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-----[1/2/3.../15 min/Off]

System Standby Mode

This parameter provides a fast-on power saving mode by setting the CPU, monitor and IDE device(s) to go into Standby mode. If the system is idle for a specified period of time, it automatically enters the Suspend mode. Any action detected from the enabled system wakeup events returns the system to full power.

System Standby Mode----[1/2/3/.../15 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 (IDE)-----		[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 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		

Press  or  to move the highlight from one parameter to the next.
Press  or  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 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 2-2 lists the drive control settings and their corresponding functions.

Table 2-2 *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

Table 2-2 Drive Control Settings (continued)

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.
Boot from CD-ROM (IDE)	
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 2-3 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 2-4 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 2-5 lists the options for selecting the parallel port address. You also have the option to disable the parallel port.

Table 2-5 Parallel Port 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



The 3BCh (IRQ 7) setting works only with Standard Parallel Port (SPP) and Standard and Bidirectional operation modes.

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 2-6 lists the different operation modes.

Table 2-6 *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



When you select the Enhanced Parallel Port (EPP) or Extended Capabilities Port (ECP) as operation mode, the parallel port base address 3BCh (IRQ 7) is not available.

ECP DMA CHANNEL

This item becomes active only if you select Extended Capabilities Port (ECP) as the operation mode. It allows you to select DMA channel 1 or DMA channel 3 (as required in Windows95).

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 sets IRQ12 available for the use of other devices.

2.6.4 Setup Password

The Setup Password prevents unauthorized access to the BIOS utility.



Setting a Password

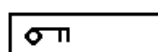
1. Make sure that JP2 is set to pins 2-3 (bypass password).



You cannot enter the BIOS utility if a Setup password does not exist and JP2 is set to pins 1-2 (password check enabled).

By default, JP2 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:

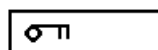
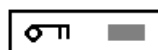


4. Type a password. The password may consist of up to seven characters.



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

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



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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 JP2 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.

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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 JP2 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 JP2 to 1-2 to enable the Power On password.

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 **ESC** to leave the system configuration 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 **ENTER**.