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## 2. BIOS Setup

### **Introduction**

This manual discussed the Award Setup program built into the ROM BIOS. The Setup program allows the user to modify the basic system configuration. This special information is then stored in battery-backed RAM so that it retains the setup information when the power is turned off.

The Award BIOS installed in your computer system's ROM (Read Only Memory) is a custom version of an industry standard BIOS. This means that it supports Intel Celeron/ Coppermine PIII and VIA Cyrix processors input/output system. The BIOS provides critical low-level support for standard devices such as disk drives and serial and parallel ports.

The rest of this manual is intended to guide you through the process of configuring your system using Setup.

### **Plug and Play Support**

This AWARD BIOS supports the Plug and Play Version 1.0A specification. ESCD(Extended System Configuration Data)write is supported.

### **EPA Green PC Support**

This AWARD BIOS supports Version 1.03 of the EPA Green PC specification.

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### **APM Support**

This AWARD BIOS supports Version 1.1&1.2 of the Advanced Power Management(APM) specification. Power management features are implemented via the System Management Interrupt(SMI). Sleep and Suspend power management modes are supported. Power to the hard disk drives and video monitors can be managed by this AWARD BIOS.

### **PCI Bus Support**

This AWARD BIOS also supports Version 2.1 of the Intel PCI (Peripheral Component Interconnect) local bus specification.

### **Support CPU**

This AWARD BIOS supports the Intel Celeron/Coppermine PIII and VIA Cyrix CPU processor.

### **Using Setup**

In general, you use the arrow keys to highlight items, press <Enter> to select, use the <PgUp> and <PgDn> keys to change entries, press <F1> for help and press <Esc> to quit. The following table provides more detail about how to navigate in the Setup program by using the keyboard.

**Note:**

**(BIOS version 1.0 is for reference only. If there is a change in BIOS version, please use the actual version on the BIOS.)**

<b>Keystroke</b>	<b>Function</b>
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left(menu bar)
Right arrow	Move to the item on the right(menu bar)
Esc	Main Menu: Quit without saving changes Submenus: Exit Current page to the next higher level menu
Move Enter	Move to item you desired
PgUp key	Increase the numeric value or make changes
PgDn key	Decrease the numeric value or make changes
+Key	Increase the numeric value or make changes
-Key	Decrease the numeric value or make changes
Esc Key	Main menu-Quit and not save changes into CMOS Status Page Setup Menu and option Page Setup Menu-Exit Current page and return to Main Menu
F1 Key	General help on Setup navigation keys.
F5 Key	Load previous values from CMOS
F6 Key	Load the fail-safe defaults from BIOS default table
F7 Key	Load the optimized defaults
F10 Key	Save all the CMOS changes and exit

## 2.1 Main Menu

Once you enter AWARD BIOS CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup function. Use the arrow keys to select among the items and press<Enter> to accept and enter the sub-menu.

### “WARNING”

*The information about BIOS defaults on manual (Figure 1,2,3,4,5,6,7,8,9,10,11,12,13,14)is just for reference, please refer to the BIOS installed on the board for updated information.*

### © Figure 1. Main Menu

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Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PNP/PCI Configuration	Save & Exit Setup
PC Health Status	Exit Without Saving
Esc : Quit F9 : Menu in BIOS ←→↑↓: Select Item	
F10 : Save & Exit Setup	
Time , Date , Hard Disk Type ...	

### Standard CMOS Features

This setup page includes all the items in standard compatible BIOS.

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**Advanced BIOS Features**

This setup page includes all the items of the BIOS special enhanced features.

**Advanced Chipset Features**

This setup page includes all the items of the Chipset special enhanced features.

**Integrated Peripherals**

This selection page includes all the items of the IDE hard drive and Programmed Input/Output features.

**Power Management Setup**

This setup page includes all the items of the power management features.

**PnP/PCI Configuration**

This setup page includes the user defined or default IRQ Setting.

**PC Health Status**

This page shows the hardware Monitor information of the system.

**Frequency / Voltage Control**

This setup page controls the CPU's clock and frequency ratio.

**Load Fail-Safe Defaults**

Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate.

**Load Optimized Defaults**

These settings are more likely to configure a workable computer when something is wrong. If you cannot boot the computer successfully, select the BIOS Setup options and try to diagnose the problem after the computer boots. These settings do not provide optional performance.

**Set Supervisor Password**

Change, set, or, disable password. It allows you to limit access to the system and Setup, or just to Setup.

**Set User Password**

You can specify both a User and a Supervisor password. When you select either password option, you are prompted for a 1-6 character password. Enter the password and then retype the password when prompted.

**Save & Exit Setup**

Save CMOS value changes to CMOS and exit setup.

**Exit Without Saving**

Abandon all CMOS value changes and exit setup.

## 2.2 Standard CMOS Features

This item in the Standard CMOS Setup Menu is divided into 10 categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

### ◎ Figure 2. Standard CMOS Features

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Standard CMOS Features

Date(mm:dd:yy)	Tue,Jun 6 2000	Item Help
Time (hh:mm:ss)	11:26:10	Menu Level
IDE Primary Master		Change the day, month, year and century.
IDE Primary Slave		
IDE Secondary Master		
IDE Secondary Master		
Drive A	1.44M,3.5 in	
Drive B	None	
Video	EGA/VGA	
Halt On	All,But Keyboard	
Base Memory	640K	
Extended Memory	65472K	
Total	1024K	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  
F1:General Help F5:Previous Values F6:Fail-Safe Defaults  
F7:Optimized Defaults

**Main Menu Selections**

This table shows the selections that you can make on the Main Menu.

Item	Options	Description
Date	Month DD YYYY	Set the system,date. Note that the 'Day' automatically changes when you set the data.
IDE Primary Master	Options are in its sub menu.	Press<Enter> to enter the sub menu of detailed.
IDE Primary Slave	Options are in its sub menu.	Press<Enter> to enter the sub menu of detailed.
IDE Secondary Master	Options are in its sub menu.	Press<Enter> to enter the sub menu of detailed.
IDE Secondary Slave	Options are in its sub menu.	Press<Enter> to enter the sub menu of detailed.
Drive A Drive B	None 360K, 5.25in 1.2M, 5.25in 720K, 3.5in 1.44M, 3.5in 2.88M, 3.5in	Select the type of floppy disk drive installed in your system.
Video	EGA/VGA CGA 40 CGA 80 MONO	Select the default video device.



Item	Options	Description
Halt On	All Errors No Errors All, but Keyboard All, but Diskette All, but Disk/Key	Select the situation in which you want the BIOS to stop the POST process and notify.
Base Memory	N/A	Displays the amount of conventional memory detected during boot up.
Extended Memory	N/A	Displays the amount of conventional memory detected during boot up.
Total Memory	N/A	Displays the total memory available in the system.

## 2.3 Advanced BIOS Features

### © Figure 3. Advanced BIOS Features

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#### Advanced BIOS Features

Virus Warning	Disabled	Item Help
CPU Internal Cache	Enabled	Menu Level  Allows you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempts to write data into this area, BIOS will show a warning message on screen and alarm beep
External Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	
Processor Number Feature	Enabled	
Quick Power On Self Test	Enabled	
First Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	CD-ROM	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Disabled	
Boot Up NumLock Status	On	
Gate A20 Option	Fast	
Typematic Rate Setting	Disabled	
Typematic Rate (Chars/Sec)	6	
Typematic Delay (Msec)	250	
Security Option	Setup	
OS Select For DRAM	Non-OS2	
Video BIOS Shadow	Enabled	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  
 F1:General Help F5:Previous Values F6:Fail-Safe Defaults  
 F7:Optimized Defaults

### Virus Warning

This option allows you to choose the VIRUS Warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempts to write data into this area, BIOS will show a warning message on screen and alarm beep.

**The Choices:** Disabled(default), Enabled.

### CPU Internal Cache

These two categories speed up memory access. However, it depends on CPU/chipset design.

**Enabled (default)** Enabled cache.

**Disabled** Disabled cache.

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**External Cache**

This fields allow you to Enable or Disable the CPU'S "Level 2" secondary cache. Caching allows better performance.

**Enabled (default)**                      Enabled cache.

**Disabled**                                  Disabled cache.

**CPU L2 Cache ECC Checking**

The item allows you to enable/disable CPU L2 Cache ECC Checking.

**The Choices:** Enabled(default), Disabled.

**Processor Number Feature**

The item will show up when you install the Pentium III processor.

**Enabled (default)**                      Pentium Processor Number Feature.

**Disabled**                                  Disabled.

**Quick Power On Self Test**

This category speeds up Power on Self-Test(POST) after you power up the computer. If it is set to Enable, BIOS will shorten or skip some check items during POST.

**Enabled (default)**                      Enabled quick POST.

**Disabled**                                  Normal POST.

**First/Secondary/Third Boot Device**

This BIOS attempts to load the operating system from the devices in the sequence selected in these items.

**The Choices:** Floppy, LS120, HDD-0, SCSI, CDROM, HDD-1, HDD-2, HDD-3, ZIP100, USB-FDD, USB-ZIP, USB-CDROM, USB-HDD, LAN, Disabled.

**Boot Other Device**

**The Choices:** Enabled(default), Disabled.

**Swap Floppy Drive**

If the system has two floppy drives, you can swap the logical drive name assignments.

**The Choices:** **Disabled**(default), Enabled.

**Boot Up Floppy Seek**

Seek disk drives during boot up. Disabled speeds boot-up.

**The Choices:** **Disabled**(default), Enabled.

**Boot Up NumLock Status**

Select power on state for Numlock.

**On (default)**

Numpad is number keys.

**Off**

Numpad is arrow keys.

**Gate A20 Option**

Select if chipset or keyboard controller should control Gate A20.

**Normal**

A pin in the keyboard controller controls Gate A20.

**Fast (default)**

Lets chipset control Gate A20.

**Typematic Rate Setting**

**Enabled**

Enabled this option to adjust the keystroke repeat rate.

**Disabled (default)**

Disabled.

**Typematic Rate (Char/Sec)**

Range between 6(**default**) and 30 characters per second.

This option controls the speed of repeating keystrokes.

**Typematic Delay (Msec)**

This option sets the time interval for displaying the first and the second characters.

**The Choices:** **250**(default), 500, 750, 1000.

## Security Option

This category allows you to limit access to the system and Setup, or just to Setup.

<b>System</b>	The system will not boot and access to Setup will be denied if the correct password is not entered in prompt.
<b>Setup (default)</b>	The system will boot, but access to Setup will be denied if the correct password is not entered in prompt.

## OS Select For DRAM

Select the operating system that is running with greater than 64MB of RAM on the system.

**The Choices: Non-OS2(default), OS2.**

## Video BIOS Shadow

Determines whether video BIOS will be copied to RAM for faster execution.

**Enabled (default)** Optional ROM is enabled.

**Disabled** Optional ROM is disabled.

C8000-CFFFF Shadow / D0000-DFFFF Shadow

Determines whether video BIOS will be copied to RAM for faster execution.

**Enabled** Optional ROM is Shadowed.

**Disabled (default)** Optional ROM is not Shadowed.

**Note:** For C8000-DFFFF option-ROM on PCI BIOS, BIOS will automatically enable the shadow RAM. User does not have to select the item.

## 2.4 Advanced Chipset Features

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as DRAM and external cache. It also coordinates communications of the PCI bus. It must be stated that these items should never need to be altered. The default settings have been chosen because they provide the best operating conditions for your system. The only time you might consider making any changes would be if you discovered that data was lost while using your system.

### © Figure 4. Advanced Chipset Features

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#### Advanced Chipset Features

DRAM Clock / Drive Control	Press Enter	Item Help
AGP & P2P Bridge Control	Press Enter	Menu Level
CPU & PCI Bus Control	Press Enter	
Memory Hole	Disabled	
System BIOS Cacheable	Disabled	
Video RAM Cacheable	Disabled	
Memory Parity / ECC Check	Disabled	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  
 F1:General Help F5:Previous Values F6:Fail-Safe Defaults  
 F7:Optimized Defaults

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#### DRAM Clock / Drive Control

Current FSB Frequency		Item Help
Current DRAM Frequency		Menu Level
DRAM Clock	By SPD	
DRAM Timing	By SPD	
*SDRAM Cycle Length	3	
*Bank Interleave	Disabled	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  
 F1:General Help F5:Previous Values F6:Fail-Safe Defaults  
 F7:Optimized Defaults

## DRAM Clock

This item determines DRAM Clock following the CPU host clock.

**The Choices:** By SPD(default), Host CLK, HCLK-33, HCLK+33.

## DRAM Timing

**The Choices:** By SPD(default), Manual.

## SDRAM Cycle Length

When synchronous DRAM is installed, the number of clock cycle of CAS latency depends on the DRAM timing. Do not reset this field from the default value specified by the system designer.

**The Choices:** 3(default), 2, Auto.

## Bank Interleave

**The Choices:** Disabled(default), Enabled.

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### AGP & P2P Bridge Control

AGP Aperture Size	64M	Item Help
AGP Mode	4X	Menu Level
AGP Driving Control	Auto	
AGP Driving Value	DA	
AGP Fast Write	Disabled	
AGP Master 1WS Write	Disabled	
AGP Master 1WS Read	Disabled	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  
 F1:General Help F5:Previous Values F6:Fail-Safe Defaults  
 F7:Optimized Defaults

## AGP Aperture Size

Select the size of the Accelerated Graphic Port(AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycle that hit the aperture range are forwarded to the AGP without any translation.

**The Choices:** 64M(default), 32M, 16M, 8M, 4M, 128M.

**AGP Mode**

**The Choices:** 4X(default), 2X, 1X.

**AGP Driving Control**

By choosing “Auto” the system BIOS will enable the AGP output Buffer Drive strength that were defined by AGP Card. By choosing “Manual”, it allows user to set AGP output Buffer Drive strength by manual.

**The Choices:** Auto(default), Manual.

**AGP Fast Write**

**The Choices:** Disabled(default), Enabled.

**AGP Master 1WS Write**

When Enabled, write data to the AGP (Accelerated Graphic Port) that will be executed with one wait states.

**The Choices:** Disabled(default), Enabled.

**AGP Master 1WS Read**

When Enabled, read data to the AGP (Accelerated Graphic Port) that will be executed with one wait states.

**The Choices:** Disabled(default), Enabled.

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**CPU & PCI Bus Control**

CPU to PCI Write Buffer	Enabled	Item Help
PCI Master 0 WS Write	Enabled	Menu Level
PCI Delay Transaction	Disabled	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  
 F1:General Help F5:Previous Values F6:Fail-Safe Defaults  
 F7:Optimized Defaults



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**CPU to PCI Write Buffer**

When this field is Enabled, write from the CPU to the PCI bus are buffered, to compensate for the speed differences between the CPU and the PCI bus. When Disabled, the are not buffered and the CPU must wait until the write is complete before starting another write cycle.

**The Choices:** Enabled(default), Disabled.

**PCI Master 0 WS Write**

When this field is Enabled, write data to the PCI bus are executed with zero wait states.

**The Choices:** Enabled(default), Disabled.

**PCI Delay Transaction**

**The Choices:** Disabled(default), Enabled.

**Memory Hole**

In order to improve performace, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory's space below 16MB.

**The Choices:** Diastbled(default), Enabled.

**System BIOS Cacheable**

When enabled, the access to the system BIOS ROM address at F0000H-FFFFFFH is cached.

**The Choices:** Disabled(default), Enabled.

**Video RAM Cacheable**

**Enabled** Enabled Video RAM Cacheable.

**Disabled (default)** Disabled Video RAM Cacheable.

**Memory Parity / ECC Check**

**The Choices:** Disabled(default), Enabled.

## 2.5 Integrated Peripherals

### © Figure 5. Integrated Peripherals

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#### Integrated Peripherals

VIA Onchip IDE Device	Press Enter	Item Help
VIA Onchip PCI Device	Press Enter	Menu Level
Super IO Device	Press Enter	
Init Display First	PCI Solt	
Onchip USB Connetor	All Enabled	
USB Keyboard Support	Disabled	
IDE HDD Block Mode	Enabled	
PWRON After PWR-Fail	Off	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit

F1:General Help F5:Previous Values F6:Fail-Safe Defaults

F7:Optimized Defaults

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#### VIA Onchip IDE Device

On-Chip IDE Channel 0	Enabled	Item Help
On-Chip IDE Channel 1	Enabled	Menu Level
IDE Prefetch Mode	Enabled	
Primary Master PIO	Auto	
Primary Slave PIO	Auto	
Secondary Master PIO	Auto	
Secondary Slave PIO	Auto	
Primary Master UDMA	Auto	
Primary Slave UDMA	Auto	
Secondary Master UDMA	Auto	
Secondary Slave UDMA	Auto	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit

F1:General Help F5:Previous Values F6:Fail-Safe Defaults

F7:Optimized Defaults

#### On-Chip IDE Channel 0

**Enabled (default)**

Enabled onboard 1st channel  
IDE port.

**Disabled**

Disabled onboard 1st channel  
IDE port.

#### On-Chip IDE Channel 1

**Enabled (default)**

Enabled onboard 2nd channel  
IDE port.

**Disabled**

Disabled onboard 2nd channel  
IDE port.

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**IDE Prefetch Mode**

The onboard IDE drive interface supports IDE prefetching, for faster drive access. If you install a primary and or secondary add-in IDE interface, set this field to Disabled if the interface does not support prefetching.

**The Choices:** Enabled(default), Disabled.

**Primary Master PIO(for onboard IDE 1st channel)**

<b>Auto (default)</b>	BIOS will automatically detect the IDE HDD Accessing mode.
<b>Mode 0~5</b>	Manually set the IDE Accessing mode.

**Primary Slave PIO(for onboard IDE 2nd channel)**

<b>Auto (default)</b>	BIOS will automatically detect the IDE HDD Accessing mode.
<b>Mode 0~5</b>	Manually set the IDE Accessing mode.

**Secondary Master PIO(for onboard IDE 1st channel)**

<b>Auto (default)</b>	BIOS will automatically detect the IDE HDD Accessing mode.
<b>Mode 0~5</b>	Manually set the IDE Accessing mode.

**Secondary Slave PIO(for onboard IDE 2nd channel)**

<b>Auto (default)</b>	BIOS will automatically detect the IDE HDD Accessing mode.
<b>Mode 0~5</b>	Manually set the IDE Accessing mode.

**Primary Master UDMA**

<b>Auto (default)</b>	BIOS will automatically detect the IDE HDD Accessing mode.
<b>Disabled</b>	Disabled.

**Primary Slave UDMA****Auto (default)**

BIOS will automatically detect the IDE HDD Accessing mode.

**Disabled**

Disabled.

**Secondary Master UDMA****Auto (default)**

BIOS will automatically detect the IDE HDD Accessing mode.

**Disabled**

Disabled.

**Secondary Slave UDMA****Auto (default)**

BIOS will automatically detect the IDE HDD Accessing mode.

**Disabled**

Disabled.

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**VIA Onchip PCI Device**

VIA-3058 AC97 Audio	Auto	Item Help
VIA-3068 AC97 Modem	Auto	Menu Level
VIA-3043 Onchip LAN	Disabled	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  
 F1:General Help F5:Previous Values F6:Fail-Safe Defaults  
 F7:Optimized Defaults

**VIA-3058 AC97 Audio**

The default setting of this item utilizes an onboard sound chip for audio output. There is no need to buy and insert a sound card. If a sound card is installed, disable this item.

**The Choices:** Auto(default), Disabled**VIA-3068 AC97 Modem**

The item allows you to control the onboard MC97 Modem controller.

**The Choices:** Auto(default), Disabled.

**VIA-3043 Onchip LAN**

**The Choices:** Disabled(default), Enabled.

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**Super IO Device**

Onboard FDC Controller	Enabled	Item Help
Onboard Serial Port 1	3F8/IRQ4	Menu Level
Onboard Serial Port 2	2F8/IRQ3	
UART Mode Select	Normal	
RxD,TxD Active	Hi,Lo	
IR Transmission Delay	Enabled	
UR2 Duplex Mode	Half	
Use IR Pins	IR/Rx2Tx2	
Onboard Paraller Port	378/IRQ7	
Parallel Port Mode	SPP	
EPP Mode Type	EPP1.7	
ECP Mode Use DMA	3	
Game Port Address	201	
Midi Port Address	330	
Midi Port IRQ	10	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  
 F1:General Help F5:Previous Values F6:Fail-Safe Defaults  
 F7:Optimized Defaults

**Onboard FDC Controller**

**Enabled (default)**

Enabled onboard FDC Controller.

**Disabled**

Disabled onboard FDC Controller.

**Onboard Serial Port1**

Select an address and corresponding interrupt for the first and second serial ports.

**The Choices:** 3F8/IRQ4(default), Auto, (2F8/IRQ3), (3E8/IRQ4), (2E8/IRQ3), Disabled.

**Onboard Serial Port 2**

**Auto**

BIOS will automatically setup the Serial Port 2 address.

**3F8/IRQ4**

Enabled onboard Serial Port 2 and address is 3F8.

**2F8/IRQ3 (default)**

Enabled onboard Serial Port 2 and address is 2F8.

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<b>3E8/IRQ4</b>	Enabled onboard Serial Port2 and address is 3E8.
<b>2E8/IRQ3</b>	Enabled onboard Serial Port2 and address is 2E8.
<b>Disabled</b>	Disabled.

**UART Mode Select**

This item allows you to select which Infra Red(IR) function of the onboard I/O chip you wish to use.

**The Choices:** **Normal**(default), IrDA, SCR, ASKIR.

**UR2 Duplex Mode**

This item allows you to select which Infra Red(IR) function of the onboard I/O chip you wish to use.

**The Choices:** **Half**(default), Full.

**Onboard Parallel Port**

This item allows you to select the I/O address with which to access the onboard parallel port controller.

**Disabled.**

**378/IRQ7. (default)**

**278/IRQ5.**

**3BC/IRQ7.**

**Parallel Port Mode**

<b>SPP (default)</b>	Using Parallel port as Standard Parallel Port.
<b>EPP</b>	Using Parallel port as Enhanced Parallel Port.
<b>ECP</b>	Using Parallel port as Extended Capabilities Port.
<b>ECP/EPP</b>	Using Parallel port as ECP/EPP mode.

**Game Port Address**

<b>201 (default)</b>	Set onboard game port to 201.
<b>209</b>	Set onboard game port to 209.
<b>Disabled</b>	Disabled.

**Midi Port Address**

<b>300</b>	Set Midi Port address to 300.
<b>330 (default)</b>	Set Midi Port address to 330.

**Midi Port IRQ**

<b>10 (default)</b>	Set Midi Port IRQ to 10.
<b>5</b>	Set Midi Port IRQ to 5.

**Init Display First**

<b>PCI Slot (default)</b>	Set Init Display First to PCI Slot.
<b>Onboard AGP</b>	Set Init Display First to onboard AGP.

**Onchip USB Connector**

This should be enabled if your system has a USB installed on the system board and you wish to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature.

**The Choices:** **All Enabled**(default), All Disabled, 1&2 USB Port, 2&3 USB Port, 1&3 USB Port, 1 USB Port, 2 USB Port, 3 USB Port.

**USB Keyboard Support**

Select Enabled if your system contains a Universal Serial Bus(USB) controller and you have a USB keyboard.

**The Choices:** **Disabled**(default), Enabled.

**IDE HDD Block Mode**

<b>Enabled (default)</b>	Enabled.
<b>Disabled</b>	Disabled.

**PWRON After PER-Fail**

This option will determine how the system will power on after a power failure.

**The Choices:** **Off**(default), On, Auto.

## 2.6 Power Management Setup

The Power Management Setup allows you to configure your system to most effectively save energy while operating in a manner consistent with your own style of computer use.

### © Figure 6. Power Management Setup

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#### Power Management Setup

ACPI Function	Enabled	Item Help
ACPI Suspend Type	S1(POS)	Menu Level
Power Management Option	User Define	
HDD Power Down	Disabled	
Suspend Mode	Disabled	
Video Off Option	Suspend->Off	
Video Off Method	V/H SYNC+Blank	
Modem Use IRQ	3	
Soft-Off by PWRBTN	Instant-Off	
IRQ / Event Activity Monitoring	Press Enter	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  
 F1:General Help F5:Previous Values F6:Fail-Safe Defaults  
 F7:Optimized Defaults

#### ACPI Function

This item display status of the Advanced Configuration and Power Management (ACPI).

#### ACPI Suspend Type

The item allows you to select the suspend type under ACPI operating system.

**S1(POS)** (default) Power on Suspend.

**S3(STR)** Suspend to RAM.

#### Power Management Option

This option allows you to set each mode individually.

When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

**The Choices:** **User Define** (default), Min Saving, Max Saving.



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**HDD Power Down**

By default, this is “Disabled”, meaning that no matter the mode of the rest of the system, the hard drive will remain ready. Otherwise, you have a range of choices from 1 to 15 minutes or Suspend. This means that you can select to have your hard disk drive be turned off after a selected number of minutes or when the rest of the system goes into a suspend mode.

**The Choices: Disabled**(default).

**Suspend Mode**

The **Suspend Mode** fields set the Period of time after each of these modes activates. At Max Saving, these modes activate sequentially (in the given order) after one minute; at Min Saving after one hour.

**The Choices: Disabled**(default).

**Video Off Option**

This field determines when to activate the video off feature for monitor power management.

**The Choices: Suspend->off**(default), Always on.

**Video Off Method**

This determines the manner in which the monitor is blanked.

**V/H SYNC+Blank**  
(default)

This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.

**Blank Screen**

This option only writes blanks to the video buffer.

**DPMS Support**

Initial display power management signaling.

## Modem Use IRQ

This determines the IRQ, which can be applied in Modem use.

**3(default)**

**4/5/7/9/10/11/NA**

## Soft-Off by PWRBTN

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has “hung”.

**The Choices: Instant-Off(default), Delay 4 Sec.**

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### IRQ / Event Activity Monitoring

VGA	OFF	Item Help
LPT & COM	LPT/COM	Menu Level
HDD & FDD	ON	
PCI Master	OFF	
Wake Up On LAN/Ring	Disabled	
RTC Alarm Resume	Disabled	
Date (of Month)	0	
Resume Time (hh:mm:ss)	0 0 0	
Primary INTR	ON	
IRQs Activity Monitoring	Press Enter	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  
 F1:General Help F5:Previous Values F6:Fail-Safe Defaults  
 F7:Optimized Defaults

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### IRQs Activity Monitoring

IRQ 3 (COM2)	Enabled	Item Help
IRQ 4 (COM1)	Enabled	Menu Level
IRQ 5 (LPT2)	Enabled	
IRQ 6 (Floppy Disk)	Enabled	
IRQ 7 (LPT1)	Enabled	
IRQ 8 (RTC Alarm)	Enabled	
IRQ 9 (IRQ2 Redir)	Enabled	
IRQ 10 (Reserved)	Enabled	
IRQ 11 (Reserved)	Enabled	
IRQ 12 (PS2/Mouse)	Enabled	
IRQ 13 (Coprocessor)	Enabled	
IRQ 14 (Hard Disk)	Enabled	
IRQ 15 (Reserved)	Enabled	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  
 F1:General Help F5:Previous Values F6:Fail-Safe Defaults  
 F7:Optimized Defaults

---

**IRQ / Event Activity Monitoring**

If you highlight the “Press Enter” next to the “Wake Up Events” label and then press the enter key, it will take you to a submenu with the following options:

**VGA**

When set to On, any event occurring at a VGA port will awaken a system which has been powered down.

**LPT & COM**

When set to On, any event occurring at a COM(serial) / LPT (printer) port will awaken a system which has been powered down.

**HDD & FDD**

When set to On(default), any event occurring at a hard or floppy drive will awaken a system which has been powered down.

**PCI Master**

When set to On, any event occurring at a PCI port will awaken a system which has been powered down.

**Modem Ring Resume**

To use this function, you need a LAN add-on card which supports power on function. It should also support the wake-up on LAN jump. **The Choices: Disabled**(default).

**RTC Alarm Resume**

When “Enabled”, you can set the date and time at which the RTC (real-time clock) alarm awakens the system from Suspend mode.

---

**IRQs Activity Monitoring**

When set to On(default), any event occurring at Primary INTR will awaken a system which has been powered down.

The following is a list of IRQ, Interrupt ReQuests, which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service. As above, the choices are On and Off. Off is the default. When set On, activity will neither prevent the system from going into a power management mode nor awaken it.

IRQ3	(COM1)
IRQ4	(COM2)
IRQ5	(LPT2)
IRQ6	(Floppy Disk)
IRQ7	(LPT1)
IRQ8	(RTC Alarm)
IRQ9	(IRQ2 Redir)
IRQ10	(Reserved)
IRQ11	(Reserved)
IRQ12	(PS/2 Mouse)
IRQ13	(Coprocessor)
IRQ14	(Hard Disk)
IRQ15	(Reserved)

## 2.7 PnP/PCI Configurations

This section describes configuring the PCI bus system. PCI or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed of the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

### © Figure 7. PnP/PCI Configurations

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#### PnP/PCI Configurations

PNP OS Installed	No	Item Help
Reset Configuration Data	Disabled	Menu Level
Resources Controlled By IRQ Resources	Auto(ESCD) Press Enter	Select Yes if you are using a Plug and Play capable operating system
PCI/VGA Palette Snoop	Disabled	select No if you need the BIOS to configure non- boot devices
Assign IRQ For VGA	Enabled	
Assign IRQ For USB	Enabled	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  
F1:General Help F5:Previous Values F6:Fail-Safe Defaults  
F7:Optimized Defaults

### PNP OS Installed

When set to YES, BIOS will only initialize the PnP cards used for booting (VGA, IDE, SCSI). The rest of the cards will be initialized by the PnP operating system like Windows 95. When set to No, BIOS will initialize all the PnP cards. Therefore for non-PnP operating systems (DOS, Netware), this option must be set to No.

## Reset Configuration Data

The system BIOS supports the PnP feature so the system needs to record which resource is assigned and proceeds resources from conflict. Every peripheral device has a node, which is called ESCD. This node records which resources are assigned to it. The system needs to record and update ESCD to the memory locations. These locations (4K) are reserved at the system BIOS.

If Disabled (Default) is chosen, the system's ESCD will update only when the new configuration varies from the last one. If Enabled is chosen, the system is forced to update ESCDs and then is automatically set to the "Disabled" mode.

IRQ3	assigned to:PCI/ISA PnP
IRQ4	assigned to:PCI/ISA PnP
IRQ5	assigned to:PCI/ISA PnP
IRQ6	assigned to:PCI/ISA PnP
IRQ7	assigned to:PCI/ISA PnP
IRQ8	assigned to:PCI/ISA PnP
IRQ9	assigned to:PCI/ISA PnP
IRQ10	assigned to:PCI/ISA PnP
IRQ11	assigned to:PCI/ISA PnP
IRQ12	assigned to:PCI/ISA PnP
IRQ13	assigned to:PCI/ISA PnP
IRQ14	assigned to:PCI/ISA PnP
IRQ15	assigned to:PCI/ISA PnP
DMA-0	assigned to:PCI/ISA PnP
DMA-1	assigned to:PCI/ISA PnP
DMA-2	assigned to:PCI/ISA PnP
DMA-3	assigned to:PCI/ISA PnP
DMA-4	assigned to:PCI/ISA PnP
DMA-5	assigned to:PCI/ISA PnP
DMA-6	assigned to:PCI/ISA PnP
DMA-7	assigned to:PCI/ISA PnP

---

The above settings will be shown on the screen only if “Manual” is chosen for the resources controlled by function.

Legacy is the term which signifies that a resource is assigned to the ISA Bus and provides for non-PnP ISA add-on cards. PCI/ISA PnP signifies that a resource is assigned to the PCI Bus or provides for ISA PnP add-on cards and peripherals.

### **Resources Controlled By**

By Choosing “Auto” (default), the system BIOS will detect the system resources and automatically assign the relative IRQ and DMA channel for each peripheral. By Choosing “Manual” the user will need to assign IRQ & DMA for add-on cards. Be sure that there are no IRQ/DMA and I/O port conflicts.

### **IRQ Resources**

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

---

**PCI / VGA Palette Snoop**

Choose Disabled or Enabled. Some graphic controllers which are not VGA compatible take the output from a VGA controller and map it to their display as a way to provide boot information and VGA compatibility.

However, the color information coming from the VGA controller is drawn from the palette table inside the VGA controller to generate the proper colors, and the graphic controller needs to know what is in the palette of the VGA controller. To do this, the non-VGA graphic controller watches for the write access to the VGA palette and registers the snoop data. In PCI based systems, the Write Access to the palette will not show up on the ISA bus if the PCI VGA controller responds to the Write.

In this case, the PCI VGA controller should not respond to the Write, it should only snoop the data and permit the access to be forwarded to the ISA bus. The non-VGA ISA graphic controller can then snoop the data on the ISA bus. Unless you have the above situation, you should disable this option.

<b>Disabled</b> (default)	Function Disabled.
<b>Enabled</b>	Function Enabled.

**Assign IRQ For VGA**

Lets the user choose which IRQ to assign for the VGA.

**Assign IRQ For USB**

Lets the user choose which IRQ to assign for the USB.



## 2.8 PC Health Status

### © Figure 8. PC Health Status

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#### PC Health Status

CPU Warning Temperature	Disabled	Item Help
Current System Temp.		Menu Level
Current CPU Temperature		
Current CPU Fan1 Speed		
Current CPU Fan2 Speed		
Current CPU Fan3 Speed		
IN0(V)		
IN1(V)		
IN2(V)		
+5V		
+12V		
-12V		
VBAT(V)		
5VSB(V)		
Shut down Temperature	Disabled	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  
 F1:General Help F5:Previous Values F6:Fail-Safe Defaults  
 F7:Optimized Defaults

#### Current Voltage(V) Vcore +12V / -12V / +5V / 5VSB / VBAT

Detect system's voltage status automatically.

#### Current CPU / System Temperature(°C / °F)

This field displays the current CPU temperature,if your computer contains a monitoring system.

#### Current CPU Fan1 / Fan2 / Fan3 Speed

These field displays the current speed of up to System Fans,if your computer contains a monitoring system.

**CPU Warning Temperature(°C)**

<b>Disabled (default)</b>	Disabled.
<b>60°C / 140°F</b>	Monitor CPU Temp.at 60°C / 140°F.
<b>50°C / 122°F</b>	Monitor CPU Temp.at 50°C / 122°F.
<b>53°C / 127°F</b>	Monitor CPU Temp.at 53°C / 127°F.
<b>56°C / 133°F</b>	Monitor CPU Temp.at 56°C / 133°F.
<b>63°C / 145°F</b>	Monitor CPU Temp.at 63°C / 145°F.
<b>66°C / 151°F</b>	Monitor CPU Temp.at 66°C / 151°F.
<b>70°C / 158°F</b>	Monitor CPU Temp.at 70°C / 158°F.

**Shutdown Temperature(°C / °F)**

<b>Disabled (default)</b>	Disabled.
<b>60°C / 140°F</b>	Monitor CPU Temp.at 60°C / 140°F, if Temp.>60°C / 140°F system will automatically power off.
<b>65°C / 149°F</b>	Monitor CPU Temp.at 65°C / 149°F, if Temp.>65°C / 149°F system will automatically power off.
<b>70°C / 158°F</b>	Monitor CPU Temp.at 70°C / 158°F, if Temp.>70°C / 158°F system will automatically power off.
<b>75°C / 167°F</b>	Monitor CPU Temp.at 75°C / 167°F, if Temp.>75°C / 167°F system will automatically power off.

## 2.9 Frequency / Voltage Control

### © Figure 9. Frequency / Voltage Control

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#### Frequency / Voltage Control

Auto Detect DIMM / PCI CLK CPU / AGP / PCI Clock	Enabled Default	Item Help
		Menu Level

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  
 F1:General Help F5:Previous Values F6:Fail-Safe Defaults  
 F7:Optimized Defaults

#### Auto Detect DIMM / PCI CLK

This item allows you to enable/disable auto detect DIMM / PCI CLOCK.

**The Choices:** Enabled(default), Disabled.

#### CPU / AGP / PCI Clock

This item allows you to select the CPU / AGP / PCI clock from 100/66/33MHz, 103/68/34MHz, 107/71/35MHz, 110/73/35MHz, 115/76/38MHz, 133/66/33MHz, 138/69/34MHz, 141/70/35MHz, 144/72/36MHz, 150/75/37MHz, 155/77/38MHz, 160/80/40MHz, 166/83/41MHz, 200/66/33MHz depending on the CPU Host Clock .

**The Choices:** Default(default).

## 2.10 Load Fail-Safe Defaults

When you press <Enter> on this item, you get a confirmation dialog box with a message similar to:

© **Figure 10. Load Fail-Safe Defaults**

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Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	<b>Load Fail-Safe Defaults</b>
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power Management	<b>Load Fail-Safe Default (Y/N)? N</b>
PNP/PCI Configuration	Save & Exit Setup
PC Health Status	Exit Without Saving
Esc : Quit F9 : Menu in BIOS ←→↑↓: Select Item	
F10 : Save & Exit Setup	
Time , Date , Hard Disk Type ...	

Pressing ‘Y’ loads the default values that are factory settings for optimal performance of system operations.

## 2.11 Load Optimized Defaults

When you press <Enter> on this item, you get a confirmation dialog box with a message similar to:

© **Figure 11. Load Optimized Defaults**

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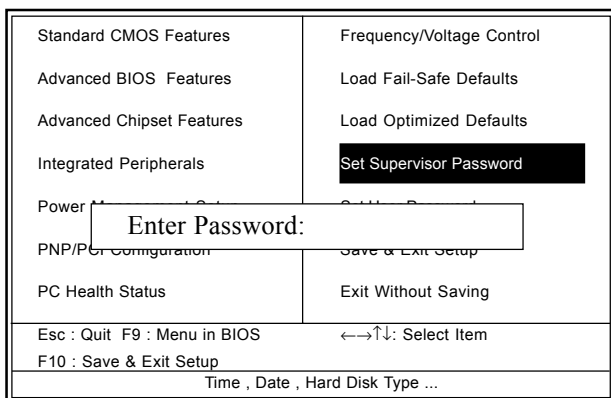
Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	<b>Load Optimized Defaults</b>
Integrated Peripherals	Set Supervisor Password
Power	Load Optimized Default (Y/N)? N
PNP/PCI Configuration	Save & Exit Setup
PC Health Status	Exit Without Saving
Esc : Quit F9 : Menu in BIOS ←→↑↓: Select Item	
F10 : Save & Exit Setup	
Time , Date , Hard Disk Type ...	

Pressing 'Y' loads the default values that are factory settings for optimal performance of system operations.

## 2.12 Set Supervisor / User Password

### © Figure 12. Set Supervisor / User Password

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When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

### Enter Password

Type a password, up to eight characters, and press <Enter>. The password you type now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <ESC> to abort the selection and not enter a password. To disable the password, just press <Enter> when you are prompted to enter a password. A message will confirm that you wish to disable the password. Once the password is disabled, the system will boot and you can enter setup freely.

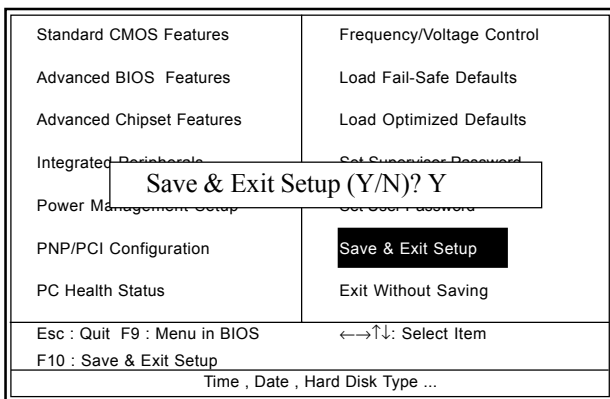
**Password Disabled**

If you select “System” at the Security Option of BIOS Features Setup Menu, you will be prompted for the password every time when the system is rebooted, or any time when you try to enter Setup. If you select “Setup” at the Security Option of the BIOS Features Setup Menu, you will be prompted only when you try to enter Setup.

## 2.13 Save & Exit Setup

### © Figure 13. Save & Exit Setup

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Typing “Y” will quit the Setup Utility and save the user setup value to RTC CMOS RAM.

Typing “N” will return to the Setup Utility.



## 2.14 Exit Without Saving

© Figure 14. Exit Without Saving

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Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	
Power Management Setup	Set User Password
PNP/PCI Configuration	Save & Exit Setup
PC Health Status	<b>Exit Without Saving</b>
Esc : Quit F9 : Menu in BIOS ←→↑↓: Select Item	
F10 : Save & Exit Setup	
Time , Date , Hard Disk Type ...	

Typing “Y” will quit the Setup Utility without saving to RTC CMOS RAM.

Typing “N” will return to the Setup Utility.

Date :     /     /

## Warranty Card/Technical Fault Report

M/B Model No.: \_\_\_\_\_ Vender

Serial No. : \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Hardware Configuration Used :

CPU	
RAM (Brand,MB )	
Video Card	
Hard Drive	
Other Card	

Diagnostic Software Used :

--

Fault Description :

--