



The Award BIOS supports 3 HDD modes: NORMAL, LBA and LARGE.

NORMAL

Generic access mode in which neither the BIOS nor the IDE controller will make any transformation during accessing. The maximum number of cylinders, heads and sectors for NORMAL mode are 1024, 16 and 63.

If the user sets his HDD to NORMAL mode, the maximum accessible HDD size will be 528 megabytes even though its physical size may be greater than that.

LBA (Logical Block Addressing) mode

A new HDD accessing method to overcome the 528 Megabyte bottleneck. The number of cylinders, heads and sectors shown in setup may not be the number physically contained in the HDD.

During HDD accessing, the IDE controller will transform the logical address described by sector, head and cylinder number into its own physical address inside the HDD. The maximum HDD size supported by LBA mode is 8.4 Gigabytes.

LARGE mode

Some IDE HDDs contain more than 1024 cylinder without LBA support (in some cases, users do not want LBA). The Award BIOS provides another alternative to support these kinds of HDD.

BIOS tricks DOS (or other OS) into dividing the number of cylinders is less than 1024 by dividing it by 2. At the same time, the number of heads is multiplied by 2. A reverse transformation process will be made inside INT13h in order to access the right HDD address.

If using Auto detect, the BIOS will automatically detect the IDE hard disk mode and set it as one of the three modes.

Remark

To support LBA or LARGE mode of HDDs, there must be some softwares involved which are located in Award HDD Service Routine(INT13h).It may fail to access a HDD with LBA (LARGE) mode selected if you are running under an Operating System which replaces the whole INT 13h.



Video

Set this field to the type of video display card installed in your system.

EGA/ VGA	Enhanced Graphics Adapter / Video Graphic Array. For EGA, VGA, SEGA, SVGA, or PGA monitor adapters.
CGA 40	Color Graphic Adapter, powering up in 40 column mode.
CGA 80	Color Graphic Adapter, powering up in 80 column mode.
MONO	Monochrome adapter, including high resolution monochrome adapters.

Halt On

This category determines whether or not the computer will stop if an error is detected during powering up.

No errors	The system boot will not stop for any errors that may be detected.
All errors	Whenever the BIOS detects a non-fatal error, the system will stop and you will be prompted.
All, But Keyboard	The system boot will not stop for a keyboard error; but it will stop for all other errors.
All, But Diskette	The system boot will not stop for a disk error; but it will stop for all other errors.
All, But Disk/Key	The system boot will not stop for a keyboard or disk error, but it will stop for all other errors.

Memory

This is a Display-Only Category, determined by POST (Power On Self Test) of the BIOS.

Base Memory	The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.
Extended Memory	The BIOS determines how much extended memory is presented during the POST.
Total Memory	Total memory of the system equals the sum of the above memory.



CPU SpeedEasy Setup

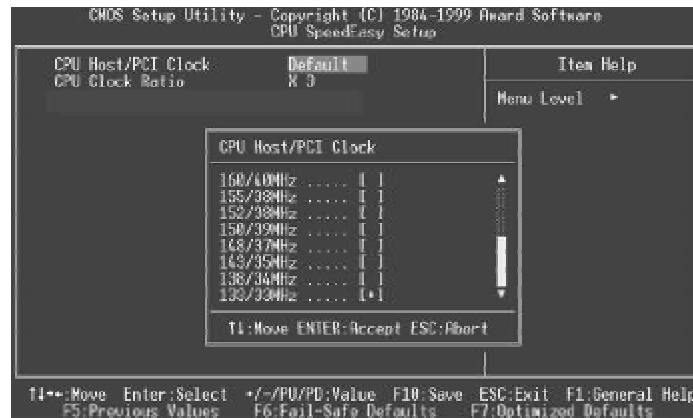


Figure-3 CPU SpeedEasy Setup Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
● CPU Host/PCI Clock	<i>Default</i>	BIOS can automatically detect the system FSB and PCI clock speed , only run at actual speed.
	100/33MHz	These items is only for users who understand the CPU and PCI clock parameters, i.e. system bus frequency "100MHz" , PCI clock frequency "33MHz".
	.	
	.	
	.	
● CPU Clock Ratio	150/37MHz	Warning: If Frequencies are set above 133MHz exceed the specifications for the onboard Intel chipset, we will not be responsible for any damages caused.
	3	This item is for unlocked processors only. If your processor's frequency multiple is detected locked, it's invalid to set frequency multiple.
	3.5	
	.	
	.	
	8	



Advanced BIOS Features Setup



Figure-4 Advanced BIOS Features Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Anti-Virus Protection	<i>Enabled</i>	Guards against boot virus threats early in the boot cycle, before they have a chance to load into your system, ensuring your computer boots to a clean operating system.
	<i>Disabled</i>	Disables this function.
• CPU internal Cache	<i>Enabled</i>	Enabling this option speeds up memory access. However, it depends on CPU/chipset design.
• External Cache	<i>Enabled</i>	Enables external L2 cache. This allows better performance.
	<i>Disabled</i>	Disables external cache.
• CPU L2 Cache ECC Checking	<i>Enabled</i>	Enables CPU L2 Cache ECC (Error Checking and Correction) function.
	<i>Disabled</i>	Disables CPU L2 Cache ECC function.
• Processor Number Feature	<i>Enabled</i>	Pentium® III processor number can be readable.
	<i>Disabled</i>	Pentium® III processor number can be unreadable.
• Quick Power On Self Test	<i>Enabled</i>	Allows the system to skip certain tests while booting. This will decrease the time needed to boot the system.
	<i>Disabled</i>	Normal POST.
• First (Second, Third) Boot Device	<i>Disabled</i>	Select Your Boot Device Priority. It could be Disabled, Floppy, LS/ZIP, HDD-0, HDD-1, HDD-2, HDD-3, SCSI, CDROM, LAN.
• Boot Other Device	<i>Floppy</i>	



• Swap Floppy Drive	<i>Enabled</i> <i>Disabled</i>	If the system has two floppy drives, choose enable to assign physical drive B to logical drive A and vice-versa.
• Boot Up Floppy Seek	<i>Enabled</i> <i>Disabled</i>	Tests floppy drives to determine whether they have 40 or 80 tracks.
• Boot Up NumLock Status	<i>On</i> <i>Off</i>	Select power on state for NumLock.
• Gate A20 Option	<i>Normal</i> <i>Fast</i>	Lets chipset control GateA20 and Normal - a pin in the keyboard controller controls GateA20. Default is Fast.
• Typematic Rate Setting	<i>Enabled</i> <i>Disabled</i>	Keystrokes repeat at a rate determined by the keyboard controller - when enabled, the typematic rate and typematic delay can be selected.
• Typematic Rate (chars/sec)	6-30	The rate at which character repeats when you hold down a key.
• Typematic Delay (Msec)	250-1000	The delay before keystrokes begin to repeat.
• Security Option	<i>Setup</i> <i>System</i>	Select whether the password is required every time the system boots or only when you enter setup.
• OS Select For DRAM>64MB	<i>Non-OS2</i> <i>OS2</i>	Select OS2 only if you are running OS/2 operating system with more than 64MB of RAM.
• Flash Write Protect	<i>Enabled</i> <i>Disabled</i>	Flash program is allowed. Does not allow flash program.
• Report NO FDD for WIN 95	<i>Yes</i> <i>No</i>	Reports NO Floppy Disk Drive for WIN 95 to release IRQ6. Does not report No Floppy Disk Drive for WIN 95.



Advanced Chipset Features Setup

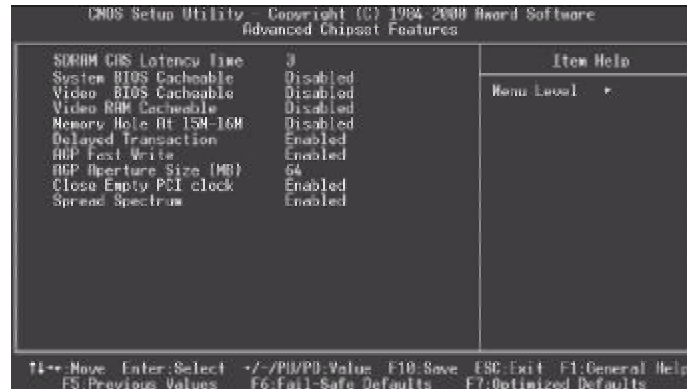


Figure-5 Advanced Chipset Features Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• SDRAM CAS Latency Time	Auto 3 2	Contains the information for SDRAM initialization procedure.
• System BIOS Cacheable	Enabled Disabled	Besides conventional memory, the system BIOS area is also cacheable. The system BIOS area is not cacheable.
• Video BIOS Cacheable	Enabled Disabled	Besides conventional memory, the video BIOS area is also cacheable. the Video BIOS area is not cacheable.
• Video RAM Cacheable	Enabled Disabled	Besides conventional memory, the video RAM area is also cacheable. the Video RAM area is not cacheable.
• Memory hole at 15M-16M	Enabled Disabled	Memory hole at 15-16M is reserved. Does not set this memory hole.
• Delayed Transaction	Enabled Disabled	Default setting is suggested.
• AGP Fast Write	Enabled Disabled	Enable AGP Fast Write. Disable AGP Fast Write.
• AGP Aperture Size(MB)	4-256	Sets the effective size of the Graphics Aperture to be used in the particular PAC Configuration.
• Close Empty PCI Clock	Enabled Disabled	Closes empty PCI clock to reduce EMI. Does not close empty PCI clock.
• Spread Spectrum	Enabled Disabled	Enables Spread Spectrum to reduce EMI. Disables Spread Spectrum.



Power Management Setup

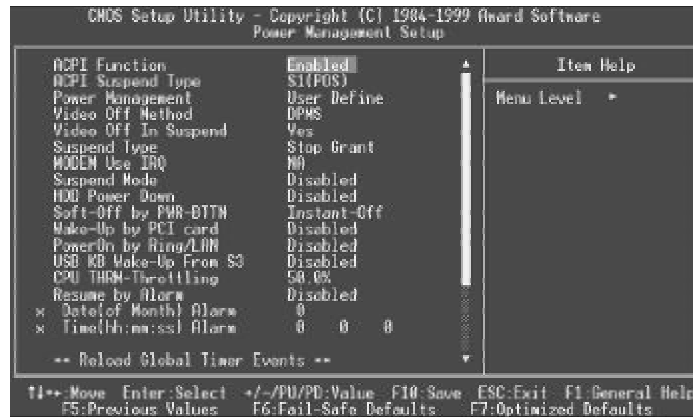


Figure-6 Power Management Setup Menu

The following indicates the options for each item and describes their meaning.

Item	Option	Description
• ACPI function	<i>Disabled</i>	Invalidates ACPI function.
	<i>Enabled</i>	Validates ACPI function.
• ACPI Suspend Type	<i>S1</i>	Selects the ACPI suspend type.
	<i>S3</i>	
• Power Management	<i>Disabled</i>	Global Power Management (PM) will be disabled.
	<i>User Define</i>	Users can configure their own Power Management Timer.
	<i>Min Saving</i>	Pre - defined timer values are used. All timers are in their MAX values.
	<i>Max Saving</i>	Pre - defined timer values are used. All timers are in their MIN values.
• Video Off Method	<i>Blank Screen</i>	The system BIOS will only blank off the screen when disabling video.
	<i>V / H SYNC +</i>	In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA card to monitor.
	<i>DPMS</i>	This function is enabled only for VGA cards supporting DPMS. Note: When the green monitor does not detect the V/H-SYNC signals, the electron gun will be turned off.
• Video Off In Suspend	<i>Yes</i>	The system will disable video when entering suspend mode.
• Video Off In Suspend	<i>Yes</i>	The system will disable video when entering suspend mode.
	<i>No</i>	Does not turn off video when entering suspend mode.



• Suspend Type	<i>Stop Grant PwrOn Suspend</i>	Selects the Suspend type.
• MODEM Use IRQ	<i>3, 5, 7, 9, 10, 11 NA</i>	Special wake-up event for Modem.
• Suspend Mode	<i>Disabled Min ~ 1Hr</i>	The system never enters Suspend mode by timer. Defines the continuous idle time before the system enters Suspend mode. If any items defined in "PM Events" are on and activated, the system will be woken up.
• HDD Power Down	<i>Disabled 1 - 15 Min</i>	HDD's motor will not be off by timer. Defines the continuous HDD idle time before the HDD enters power saving mode (motor off).
• Soft-Off by PWR-BTTN	<i>Instant-Off Delay 4 secs</i>	The system will immediately power off once the power button is pressed. The system will power off when power button is pressed for 4 seconds.
• Wake-Up by PCI card	<i>Enabled</i>	Allows the system to be woken up by PCI card. Does not allow the system to be powered on by PCI card.
• Power on by LAN/Ring	<i>Enabled</i>	Allows the system to be powered on when a Ring indicator signal comes up to UART1 or UART2 from external modem (to LAN Wake-up Header from LAN adapter or to modem Ring on Header from internal modem card).
• USB KB Wake-up From S3	<i>Disabled Enabled</i>	Does not allow Ring/LAN wake up. System can be woken up by USB Keyboard from ACPI S3 type. Please make sure JUSB jumper is set as Enabled.
	<i>Disabled</i>	Does not allow system can be woken up by USB Keyboard from ACPI S3 type.
• CPU Thermal-Throttling	<i>12.5%, 25%, 50%, 37.5%, 62.5%, 75%, 87.5%</i>	Selects the duty cycle of the STPCLK# signal, slowing down the CPU speed when the system enters green mode.
• Resume by Alarm	<i>Enabled</i>	RTC alarm can be used to generate a wake-up event to power up the system.
	<i>Disabled</i>	RTC has no alarm function.
• Primary IDE 0/1, Secondary IDE 0/1	<i>Enabled Disabled</i>	Reloads global timer, when there's an IDE event. Does not reload global timer.
• FDD/COM/LPT Port	<i>Enabled Disabled</i>	Reloads global timer, when there's a FDD/COM/LPT event. Does not reload global timer.



- PCI IRQ[A - D]#

<i>Enabled</i>	Reloads global timer, when there's an PCI event.
<i>Disabled</i>	Does not reload global timer.

PNP/PCI Configuration Setup



Figure-7 PNP/PCI Configuration Setup Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Reset Configuration Data	<i>Enabled</i>	Default is Disabled. Select Enabled to reset Extended System Configuration Data ESCD when you exit Setup, if you have installed a new add-on and the system reconfiguration has caused serious conflicts preventing the OS from booting.
	<i>Disabled</i>	Disables the configuration data function.
• Resources Controlled By	<i>Auto(ESCD)</i>	BIOS can automatically configure all boot and Plug and Play compatible devices. If you choose Auto, you cannot select IRQ DMA and memory base address fields, because BIOS automatically assigns them.
	<i>Manual</i>	



Integrated Peripherals



Figure-8 Integrated Peripherals Menu

The following indicates the options for each item and describes their meaning.

Item	Option	Description
• On-Chip Primary/Secondary PCI IDE	<i>Enabled</i> <i>Disabled</i>	On-Chip Primary/Secondary PCI IDE is enabled. On-Chip Primary/Secondary PCI IDE is disabled.
• IDE Primary/ Secondary Master/Slave PIO	<i>Mode 0 - 4</i> <i>Auto</i>	Defines the IDE primary/secondary master/ slave PIO mode. The IDE PIO mode is defined by auto -detection.
• IDE Primary/ Secondary Master/Slave UDMA	<i>Auto</i> <i>Disabled</i>	Ultra DMA mode will be enabled if an Ultra DMA device is detected. Disables this function.
• USB Controller	<i>Enabled</i> <i>Disabled</i>	Enables onchip USB controller. Disables onchip USB controller.
• USB Keyboard Support	<i>Enabled</i> <i>Disabled</i>	USB keyboard support is enabled. USB keyboard support is disabled.
• Init Display First	<i>PCI Slot</i> <i>Onboard</i>	Initializes the PCI VGA first. Initializes the AGP first. For PCI VGA or AGP, the one initialized first functions.
• AC97 Audio	<i>Enabled</i> <i>Disabled</i>	Enables the AC97 Audio onboard. Disables the AC97 Audio onboard.
• AC97 Modem	<i>Enabled</i> <i>Disabled</i>	Enables the AC97 Modem onboard. Disables the AC97 Modem onboard.
• IDE HDD Block Mode	<i>Enabled</i> <i>Disabled</i>	Allows IDE HDD to read/write several sectors at once. IDE HDD only reads/writes a sector once.



BIOS Description

- | Item | Setting | Description |
|---------------------------|---|---|
| • Power On Function | <i>BUTTON ONLY</i> | Uses the power button to power up the system. |
| • KB Power ON Password | <i>Password Enter</i> | Enables the Keyboard Password Power-On. |
| • Onboard FDC Controller | <i>Enabled</i> | Onboard floppy disk controller is enabled. |
| • Onboard Serial Port 1/2 | <i>Disabled</i> | Onboard floppy disk controller is disabled. |
| | <i>3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Auto</i> | Defines the onboard serial port address and required interrupt number. |
| | <i>Disabled</i> | Onboard serial port address and IRQ are automatically assigned. |
| • UART Mode Select | <i>Normal</i> | Onboard serial port is disabled. |
| • Rx/D, Tx/D Active | <i>Lo, Hi</i> | This option is used to configure UART Mode. |
| | <i>Hi, Lo</i> | Default setting is suggested. |
| | <i>Lo, Lo</i> | |
| | <i>Hi, Hi</i> | |
| • IR Transmission Delay | <i>Enabled</i> | Default setting is suggested. |
| | <i>Disabled</i> | |
| • UR2 Duplex Mode | <i>Full</i> | Default setting is suggested. |
| | <i>Half</i> | |
| • Use IR Pins | <i>IR-Rx2Tx2</i> | Default setting is suggested. |
| | <i>RxD2, Tx/D2</i> | |
| • Onboard Parallel Port | <i>378/IRQ7, 278/IRQ5, 3BC/IRQ7</i> | Defines onboard parallel port address and IRQ channel. |
| | <i>Disabled</i> | Onboard parallel port is disabled. |
| • Parallel Port Mode | <i>SPP</i> | Defines the parallel port mode as standard Parallel Port(SPP), Enhanced Parallel Port(EPP), or Extended Capabilities Port(ECP). |
| | <i>EPP</i> | |
| | <i>ECP</i> | |
| | <i>ECP+EPP</i> | |
| • EPP Mode Select | <i>EPP1, 7</i> | Default setting is suggested. |
| | <i>EPP1, 9</i> | |
| • EPP MDe use DMA | <i>3, 1</i> | Default setting is suggested. |



- | | | |
|---------------------------|-------------------------------|---|
| • PWRON After
PWR-Fail | <i>OFF</i> | The system remains OFF when the AC power supply resumes. |
| | <i>ON</i> | The system will be powered up when the AC power supply resumes. |
| | <i>Former-Sts</i> | Whatever the system status is before the AC power supply cuts off, the system resumes in the previous status (ON/OFF) when the AC power supply resumes. |
| • Game Port
Address | <i>Disabled</i>
201
209 | This option is used to configure Game Port Address. |
| • Midi Port Address | <i>Disabled</i>
300
330 | This option is used to configure Midi Port Address. |
| • Game Port
Address | <i>Disabled</i>
201
209 | This option is used to configure Game Port Address. |
| • Midi Port Address | <i>Disabled</i>
300
330 | This option is used to configure Midi Port Address. |
| • Midi Port IRQ | 5, 10 | Default setting is suggested. |



PC Health Status

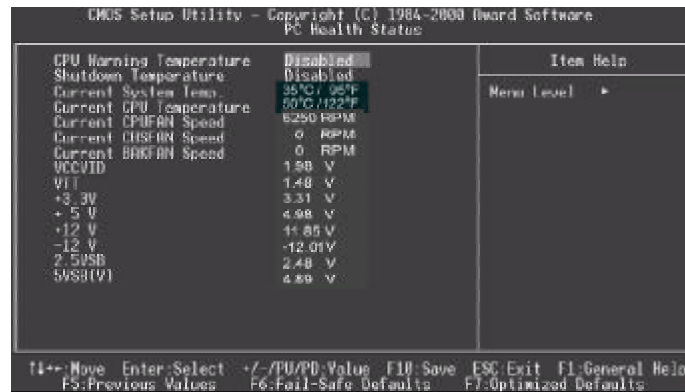


Figure-9 PC Health Status Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• CPU Warning Temperature	50°C/122°F 53°C/127°F . . . 95°C/205°F Disabled	An alarm will beep when the CPU temperature reaches the previous setting, 50°C/122°F, 53°C/127°F, 56°C/133°F, 60°C/140°F, 63°C/145°F, 66°C/151°F, 70°C/158°F, 80°C/176°F, 85°C/185°F, 90°C/194°F, 95°C/205°F. No alarm beep.
• Shutdown Temperature	60°C/140°F . . 90°C/194°F Disabled	The system will shut down automatically when the CPU temperature reaches the previous setting, 60°C/140°F, 65°C/149°F, 70°C/158°F, 75°C/167°F, 85°C/185°F, 90°C/194°F. The system remains on regardless of how much the CPU temperature is.
• Current system temp.		The temperature of the system.
• Current CPU Temperature		The temperature near CPU.
• Current CPUFAN Speed		RPM (Revolution Per Minute) Speed of fan which is connected to the fan header, CPUFAN or CHSFAN, BAKFAN. Fan speed value is based on an assumption that tachometer signal is two pulses per revolution. In other cases, you should regard it relatively.
• Current CHSFAN Speed		
• Current BAKFAN Speed		



- VCCVID
VTT
+3.3V,

+5 V,
+12 V,
-12 V,
2.5VSB
5VSB(V)

Displays current voltage value including all significant voltages of the mainboard. +3.3V, +5V, +12V, -12V, 2.5V and 5VSB are voltages from the ATX power supply, VTT(+1.5) Voltage is GTL Termination voltage from the on board regulator and VCCVID (CPU) Voltage is the CPU core voltage from the on board switching Power Supply.



Password Setting

When this function is selected, the following message appears at the center of the screen to assist you in creating a password.

ENTER PASSWORD

Type the password, up to eight characters, and press <Enter>. The password typed 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.

To disable password, just press <Enter> when you are prompted to enter password. A message will confirm the password being disabled. Once the password is disabled, the system will boot and you can enter BIOS Setup freely.

PASSWORD DISABLED

If you have selected "**System**" in "Security Option" of "BIOS Features Setup" menu, you will be prompted for the password every time the system reboots or any time you try to enter BIOS Setup.

If you have selected "**Setup**" at "Security Option" from "BIOS Features Setup" menu, you will be prompted for the password only when you enter BIOS Setup.

Supervisor Password has higher priority than User Password. You can use Supervisor Password when booting the system or entering BIOS Setup to modify all settings. Also you can use User Password when booting the system or entering BIOS Setup but can not modify any setting if Supervisor Password is enabled.

Boot with BIOS defaults

If you have made all the changes to CMOS values and the system can not boot with the CMOS values selected in setup, clear CMOS after power-down, then power on again. System will boot with BIOS default settings.