



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.

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.
Other Memory	This is the memory that can be used for different applications. Shadow RAM is most used in this area.
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 Speed	<i>Jumper Emulation</i>	This item is only for users who understand all the CPU parameters, i.e. system bus frequency, “66/75/100/112/133/140/150MHz” and multiplication of processor core frequency for system bus frequency “x3, x3.5, x4, x4.5, x5, x5.5, x6, x6.5, x7, x7.5, x8”.
	200MHz(66x3)	Selects the CPU speed according to your CPU brand and type.
	233MHz(66x3.5)	
	.	
	.	
	533MHz(66x8)	
	300MHz(100x3)	
	350MHz(100x3.5)	
	.	
	.	
	.	
	800MHz(100x8)	
	400MHz(133x3)	
	.	
	866MHz(133x6.5)	



Advanced BIOS Features Setup



Figure-4 Advanced BIOS Features Menu

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

Item	Option	Description
• ChipAwayVirus On Guard	Enabled	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.
	Disabled	Disables this function.
• CPU Internal Cache	Enabled	Enabling this option speeds up memory access.
	Disabled	However, it depends on CPU/chipset design.
• External Cache	Enabled	Enables external L2 cache. This allows better performance.
	Disabled	Disables external cache.
• CPU L2 Cache ECC Checking	Enabled	Enables CPU L2 Cache ECC (Error Checking and Correction) function.
	Disabled	Disables CPU L2 Cache ECC function.
• Quick Power On Self Test	Enabled	Allows the system to skip certain tests while booting. This will decrease the time needed to boot the system.
	Disabled	Normal POST.
• First (Second, Third) Boot Device	Disabled	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	Floppy	



• 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>	Does not allow flash program. Flash program is allowed.
• 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

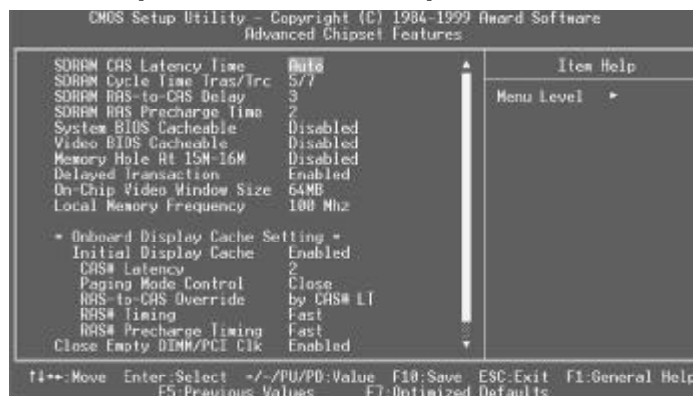


Figure-5 Advanced Chipset Features Menu

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	<i>Auto</i> 3 2	Contains the information for SDRAM initialization procedure.
• SDRAM Cycle Time Tras/Trc	5/7 6/8	
• SDRAM RAS To CAS Delay	2 3	Adds a delay time between the assertion of RAS and CAS. Without additional delay time. Default setting is suggested.
• SDRAM RAS Precharge Time	2 3	
• System BIOS Cacheable	<i>Enabled</i> <i>Disabled</i>	Besides conventional memory, the system BIOS area is also cacheable.
• Video BIOS Cacheable	<i>Enabled</i> <i>Disabled</i>	Besides conventional memory, video RAM area is also cacheable. Video RAM area is not cacheable.
• Memory hole at 15M-16M	<i>Disabled</i> <i>Enabled</i>	Memory hole at 15-16M is reserved for expanded ISA card. Does not set this memory hole.
• Delayed Transaction	<i>Disabled</i> <i>Enabled</i> <i>Disabled</i>	Default setting is suggested.
• On-Chip Video Window Size	32/64MB <i>Disabled</i>	Selects graphic display cache window size. Does not select it.
• Local Memory Frequency	100MHz 133MHz	Defines the local memory frequency, 100MHz or 133MHz.
• Close Empty DIMM/PCI Clk	<i>Enabled</i> <i>Disabled</i>	Closes empty DIMM clock or PCI clock to reduce EMI. Does not close empty DIMM/PCI clock.
• Spread Spectrum	<i>Enabled</i> <i>Disabled</i>	Enables Spread Spectrum to reduce EMI. Disables Spread Spectrum.



Power Management Setup

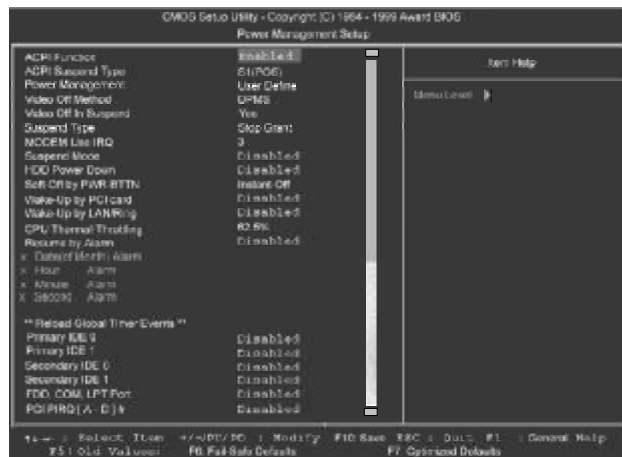


Figure-6 Power Management Setup Menu

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

Item	Option	Description
• ACPI function	<i>Disabled</i> <i>Enabled</i>	Invalidates ACPI function. Validates ACPI function.
• ACPI Suspend Type	<i>S1</i> <i>S3</i>	Selects the ACPI suspend type.
• Power Management	<i>Disabled</i> <i>User Define</i> <i>Min Saving</i> <i>Max Saving</i>	Global Power Management (PM) will be disabled. Users can configure their own Power Management Timer. Pre - defined timer values are used. All timers are in their MAX values. Pre - defined timer values are used. All timers are in their MIN values.
• Video Off Method	<i>Blank Screen</i> <i>V / H SYNC +</i> <i>DPMS</i>	The system BIOS will only blank off the screen when disabling video. In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA card to monitor. 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.



	No	Does not turn off video when entering suspend mode.
• Suspend Type	Stop Grant PwrOn Suspend	Selects the Suspend type.
• MODEM Use IRQ	3, 5, 7, 9, 10, 11 NA	Special wake-up event for Modem.
• Suspend Mode	Disabled Min ~ 1Hr	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	Disabled 1 - 15 Min	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	Instant-Off Delay 4 secs	They 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	Enabled	Allows the system to be woken up by PCI card. Does not allow the system to be powered on by PCI card.
• Wake-Up by LAN/Ring	Enabled	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).
• CPU Thermal-Throttling	Disabled 12.5%, 25%, 50%, 37.5%, 62.5%, 75%, 87.5%	Does not allow Ring/LAN wake up. Selects the duty cycle of the STPCLK# signal, slowing down the CPU speed when the system enters green mode.
• Resume by Alarm	Enabled	RTC alarm can be used to generate a wake-up event to power up the system.
• Primary IDE 0/1, Secondary IDE 0/1	Disabled Enabled Disabled	RTC has no alarm function. Reloads global timer, when there's an IDE event. Does not reload global timer.
• FDD/COM/LPT Port	Enabled	Reloads global timer, when there's a FDD/COM/LPT event.
• PCI IRQ [A - D] #	Disabled Enabled Disabled	Does not reload global timer. Reloads global timer, when there's an PCI event. 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.
• Resources Controlled By	<i>Disabled</i> <i>Auto(ESCD)</i> <i>Manual</i>	Disables the configuration data function. 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.