

Setting BIOS Feature

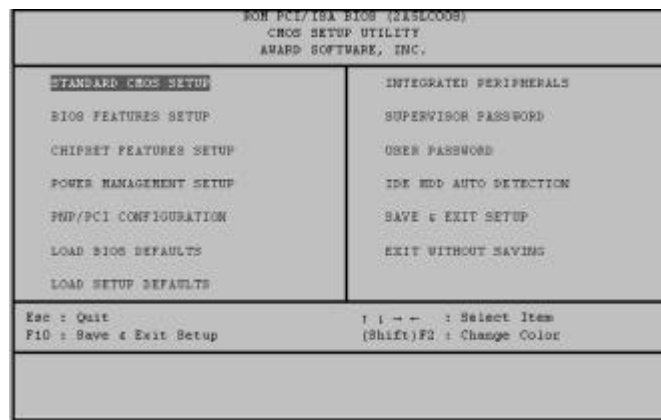
All computer mainboards provide a Setup utility program for specifying the system configuration and settings. If the mainboard came in a computer system, the proper configuration entries may have already been made. If you are installing the mainboard or reconfiguring the system or if you receive a Run Setup message, you will need to enter new setup information.

The mainboard comes with the Award BIOS chip that contains the ROM Setup information of the system. This chip serves as an interface between the processor and the rest of the mainboard's components. This chapter explains the information contained in the Setup program and tells you how to modify the settings according to the system configuration.

A Setup program built into the system BIOS, is stored in the CMOS RAM. This Setup utility program allows changes to the mainboard configuration settings. It is executed when user changes system configuration; user changes system backup battery; or the system detects a configuration error and asks the user to run the Setup program. At power-on RAM testing, the message Press <Delete> key to enter Setup appears. If you are a little bit late pressing the mentioned key, POST (Power-On Self Test) will continue with its test routines, thus preventing you from calling up Setup. If you still need to call Setup, reset the system by simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys, or by pushing the Reset button on the system case. You can also restart by turning the system off and then back on again. But do so only if the first two methods fail. Use the arrow keys to select and press <Enter> key to run the selected program.

Main CMOS Setup

When you run Setup, the CMOS SETUP UTILITY main program screen will appear with the following options:



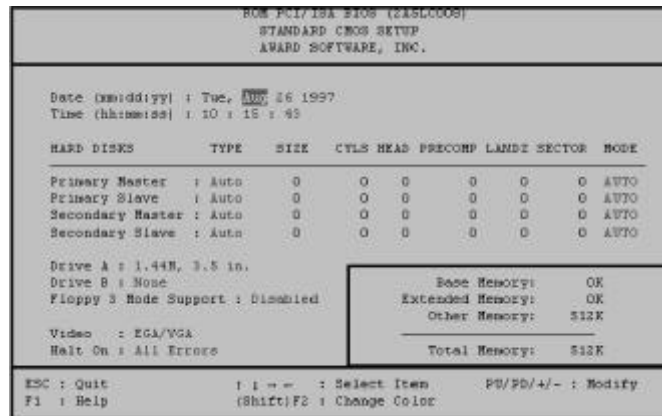
A section at the bottom of the above screen displays the control keys for this screen. Take note of these keys and their respective uses. Another section just below the control keys section displays information on the currently highlighted item in the list.

Load Defaults

The “Load BIOS Defaults” option loads the minimized settings for troubleshooting. “Load Setup Defaults” on the other hand, is for loading optimized defaults for regular use. Choosing defaults at this level will modify all applicable settings.

Standard CMOS Setup

The “Standard CMOS Setup” option allows you to record some basic system hardware configuration and set the system clock and error handling. If the mainboard is already installed in a working system, you will not need to select this option anymore. However, if the configuration stored in the CMOS memory on the mainboard gets lost or damaged, or if you change the system hardware configuration, you will need to re-specify the configuration values. The configuration values usually get lost or corrupted when the power of the onboard CMOS battery weakens.



The above screen provides you with a list of options. At the bottom are the control keys for this screen. Take note of these keys and their respective uses. User-configurable fields appear in a different color. If you need information on the selected field, press the <F1> key. The help menu will then appear to provide you with the information you need. The memory display at the lower right-hand side of the screen is read-only and automatically adjusts accordingly.

Date

To set the date, highlight the “Date” field and then press the page up/page down or +/- keys to set the current date. Follow the month, day and year format. Valid values for month, day and year are: Month: (1 to 12), Day: (1 to 31), Year: (up to 2099).

Time

To set the time, highlight the “Time” field and then press the page up/page down or +/- keys to set the current time. Follow 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), just press the <Enter> key twice if you do not want to modify the current settings.

Hard Disks

This field records the specifications for all non-SCSI hard drives installed in the system. The onboard PCI IDE connectors provide Primary and Secondary channels for connecting up to four IDE hard disks or other IDE devices. Each channel can support up to two hard disks; the first of which is the “master” and the second is the “slave”.

Specifications for SCSI hard disks need not be entered here since they operate using device drives and are not supported by any BIOS. If you installed a SCSI controller card, please refer to their respective documentations on how to install the required SCSI drivers.

For an IDE hard disk drive setup, you can:

- Use the *Auto* setting for detection during bootup.
- Use the IDE HDD AUTO DETECTION in the main menu to automatically enter the drive specifications.
- Enter the specifications yourself manually by using the “User” option.

The entries for specifying the hard disk type include CYLS (number of cylinders), HEAD (number of read/write heads), PRECOMP (write precompensation), LANDZ (landing zone), SECTOR (number of sectors) and MODE. The SIZE field automatically adjusts according to the configuration you specified. The documentation that comes with the hard disk should provide you with the information regarding the drive specifications.

The MODE entry is for IDE hard disks only, and can be ignored for MFM and ESDI drives. This entry provides three options: *Normal*, *Large*, *LBA*, or *Auto*. Set MODE to the *Normal* for IDE hard disks smaller than 528MB; set it to *LBA* for drives over 528MB that support Logical Block Addressing (LBA) to allow large IDE hard disks; set it to *Large* for drives over 528MB that do not support LBA. *Large* type of drives can only be used with MS-DOS and is very uncommon. Most IDE drives over 528MB support the *LBA* mode.

Auto Detection of Hard Disks on Bootup

For each field: Primary Master, Primary Slave, Secondary Master, and Secondary Slave, you can select *Auto* under the TYPE and MODE fields. This will enable auto detection of your IDE drives during Bootup. This will allow you to change your hard drives (with the power off) and then power on without having to reconfigure your hard drive type. If you use older hard drives which do not support this feature, then you must configure the hard drive in the standard method as described above by the “User” option.

<p>NOTE : After the IDE hard disk information has been entered into BIOS, new IDE hard disks must be partitioned (such as with FDISK) and then formatted before data can be read from and write on. Primary IDE hard drives must have its partition set to <i>active</i> (also possible with FDISK).</p>

Drive A / Drive B

These fields record the types of floppy drives installed in the system. The available options for drives A and B are: *None (default)*; *360KB, 5.25 in.*; *1.2MB, 5.25 in.*; *720KB, 3.5 in.*; *1.44MB, 3.5 in.*; *2.88MB, 3.5 in.* To enter the configuration value for a particular drive, highlight its corresponding field and then select the drive type using the left- or right-arrow key.

Floppy 3 Mode Support

This is the Japanese standard floppy drive. The standard stores 1.2MB in a 3.5inch diskette. This is normally disabled but you may choose from either: *Disabled* (default), *Drive A*, *Drive B*, and *Both*.

Video

Set this field to the type of video display card installed in the system. The options are: *EGA/VGA* (default), *Mono* (for Hercules or MDA), *CGA 40*, and *CGA 80*. If you are using a VGA or any higher resolution card, choose the “EGA/VGA” option.

Halt On

This field determines which types of errors will cause the system to halt. Choose from *All Errors* (default); *No Errors*; *All, But Keyboard*; *All, But Diskette*; and *All, But Disk/Key*.

BIOS Features Setup

The “BIOS Features Setup” option consists of configuration entries that allow you to improve the system performance, or lets you set up some system features according to your preference. Some entries here are required by the mainboard’s design to remain in their default settings.

ROM PCI/ISA BIOS (2A5LC008) BIOS FEATURES SETUP AWARD SOFTWARE, INC.		
Virus Warning	: Disabled	Video BIOS Shadow : Enabled
CPU Internal Cache	: Enabled	C8000-CBFFF Shadow : Disabled
External Cache	: Enabled	CC000-CFFFF Shadow : Disabled
Quick Power On Self Test	: Enabled	D0000-D3FFF Shadow : Disabled
Boot Sequence (LS120/ZIP100):	A,C,SCSI	D4000-D7FFF Shadow : Disabled
Boot Up Floppy Seek	: Enabled	D8000-DBFFF Shadow : Disabled
Boot Up NumLock Status	: On	DC000-DFFFF Shadow : Disabled
Gate A20 Option	: Fast	
Typematic Rate Setting	: Disabled	
Typematic Rate (Chars/Sec)	: 6	
Typematic Delay (Msec)	: 250	
Security Option	: Setup	
OS Select For DRAM > 64MB	: Non-OS2	
		ESC : Quit F1---- : Select Item
		F1 : Help PU/PD/+/- : Modify
		F5 : Old Values (Shift)F2 : Color
		F6 : Load BIOS Defaults
		F7 : Load Setup Defaults

A section at the lower right of the screen displays the control keys you can use. Take note of these keys and their respective uses. If you need information on a particular entry, highlight it and press the <F1> key. A pop-up help menu will appear to provide you with the information you need. <F5> loads the last set values, <F6> and <F7> loads the BIOS default values and Setup default values, respectively.

Virus Warning

This field protects the boot sector and partition table of the hard disk against accidental modifications. Any attempt to write to them will cause the system to halt and display a warning message. If this occurs, you can either allow the operation to continue or use a bootable virus-free floppy disk to reboot and investigate the system. This setting is recommended because of conflicts with new operating systems. Installation of new operating systems require that you disable this to prevent write errors. The options are *Disabled* (default); *Enabled*.

CPU Internal Cache / External Cache

These fields allow you to turn on or off the CPU's Internal and External built-in cache. The options are *Enabled* (default); *Disabled*.

Quick Power On Self Test

This field speeds up the Power-On Self Test (POST) routine by skipping re-testing a second, third, and fourth time. A complete test of the system is done on each test. The options are *Enabled* (default); *Disabled*.

Boot Sequence (LS120/ZIP100)

This field determines where the system looks first for an operating system. The setup default setting is to check first the floppy drive, then the hard drive, and then the SCSI device; that is, *A, C, SCSI*. The options are *A, C, SCSI* (default); *LS/ZIP, C; C, only; SCSI, C, A; SCSI, A, C; F, A, SCSI; E, A, SCSI; D, A, SCSI; CDROM, C, A; C, CDROM, A; C, A, SCSI*.

Boot Up Floppy Seek

When enabled, the BIOS will seek the floppy "A" drive one time. The options are *Enabled* (default); *Disabled*.

Boot Up NumLock Status

This field enables user to activate the Number Lock function upon system boot. The options are *On* (default); *Off*.

Gate A20 Option

When set at *Fast* will allow a faster access response under Protected Mode. The options are *Fast* (default); *Normal*.

Typematic Rate Setting

When enabled, you can set the two typematic controls listed next. The options are *Disabled* (default); *Enabled*.

Typematic Rate (Chars/Sec)

This field controls the speed at which the system registers repeated keystrokes. The options are *6* (default); *8*; *10*; *12*; *15*; *20*; *24*; and *30*.

Typematic Delay (Msec)

This field sets the time interval for displaying the first and second characters. The options are *250* (default); *500*; *750*; and *1000*.

Security Option

This field determines when the system prompts for the password. The default setting is *Setup*, where the system always boots up, and prompts for the Supervisor Password only when the Setup utility is called up. The other option is *System*, where the system prompts for the User Password every time you boot up. You can specify a password by using the *Supervisor Password* or *User Password* option from the main screen as explained later in this section. The options are *Setup* (default); *System*.

OS Select For DRAM > 64MB

Allows you to specify which operating system you are using when installed DRAM is greater than 64MB. If the operating system you are using is OS2, select *OS2*, otherwise, stay with the default setting of *Non-OS2*. The options are *Non-OS2* (default); *OS2*.

Video BIOS Shadow

This field allows you to change the video BIOS location from ROM to RAM. Relocating to RAM enhances system performance, as information access is faster than the ROM. The options are *Enabled* (default); *Disabled*.

C8000-CBFFF to DC000-DFFFF Shadow

These fields are used for shadowing other expansion card ROMs. If you install other expansion cards with ROMs on them, you will need to know which addresses the ROMs use to shadow them specifically. Shadowing a ROM reduces the memory available between 640KB and 1024KB by the amount used for this purpose. The options are *Disabled* (default); *Enabled*.

Chipset Features Setup

The “Chipset Features Setup” option controls the configuration of the board’s chipset. Control keys for this screen are the same as for the previous screen.

ROM PCI/ISA BIOS (2A5LC008) CMOS SETUP UTILITY CHIPSET FEATURES SETUP	
Video BIOS Cacheable : Enabled	CPU to PCI Write Buffer : Enabled
System BIOS Cacheable : Disabled	PCI Dynamic Bursting : Enabled
Memory Hole At 15Mb Addr.: Disabled	PCI Burst : Enabled
	PCI Master 0 WS Write : Enabled
Sustained 3T Write : Enabled	Quick Frame Generation : Enabled
CPU Pipeline : Enabled	PCI Peer Concurrency : Enabled
Memory ECC Check : Disable	
Linear Burst : Disabled	
DRAM Auto Configuration : Disabled	
DRAM Timing Control : Fast	
SDRAM Single/Burst Write : Burst	
SDRAM Cycle Length : 3	
SDRAM Bank Interleave : Disabled	
	ESC : Quit ← : Select Item
	F1 : Help PU/PD/+/- : Modify
	F5 : Old Values (Shift)F2 : Color
	F6 : Load BIOS Defaults
	F7 : Load Setup Defaults

Video BIOS Cacheable

Allows the video BIOS to be cached to allow for faster execution. Leave on default setting of *Enabled* for better performance, otherwise *Disabled*. The options are *Enabled* (Default), *Disabled*.

System BIOS Cacheable

When enabled, allows the ROM area of F000H-FFFFH to be cacheable when the cache controller is activated. The options are *Disabled* (Default), *Enabled*.

Memory Hole at 15MB Addr.

Enabling this feature reserves 15MB to 16MB memory address space to ISA expansion cards that specifically require this setting. This makes the memory from 15MB and up unavailable to the system. Expansion cards can only access memory up to 16MB. The options are *Disabled* (Default), *15M-16M*, *14M-16M*.

Sustained 3T Write

When enabled, it allows the CPU to complete the system memory writes in 3 clocks. The options are *Enabled* (default); *Disabled*.

CPU Pipeline

When enabled, this allows the CPU to execute the pipeline function. The options are *Enabled* (default); *Disabled*.

Memory ECC Check

When enabled, allows you to correct 1 bit memory errors that may occur in the memory. The options are *Disabled* (default); *Enabled*.

Linear Burst (available only when Memory ECC Check is enabled)

When enabled, it allows you to configure the CPU to SRAM data read/write mode. If you use a Cyrix or an IBM CPU and want to run it under the linear burst mode, select *Enabled*. If you use an Intel CPU, AMD CPU, Cyrix CPU (running the Intel Burst mode), IBM CPU (running the Intel Burst mode), stay with the default setting of *Disabled*. Refer to page 18, *SRAM1*. The options are *Disabled* (default); *Enabled*.

DRAM Auto Configuration

Allows you to set the type of DRAM used. This is to be set by a technician only. The options are *Disabled* (default); *60ns*; *70ns*.

DRAM Timing Control

Allows you to set the speed of data access of the VIA VT82C586B chip. The options are Fast (default); Normal; Turbo.

SDRAM Single/Burst Write (available only when DIMM modules are used instead of SIMM modules)

Allows you to set the speed of SDRAM data write whether to a single address or continuously. The options are *Burst* (default); *Single*.

SDRAM Cycle Length (available only when DIMM modules are used instead of SIMM modules)

If the CAS latency of the SDRAM DIMM is 2, set it at 2 to enhance the system's performance. If the CAS latency of the SDRAM DIMM is 3, stay with the default setting of 3. The options are 3 (default); 2.

SDRAM Bank Interleave (available only when DIMM modules are used instead of SIMM modules)

When the Bank interleave function of the SDRAM is set at 2 *Bank* or 4 *Bank*, data transaction performance is better. The options are *Disabled* (default); 2 *Bank*; 4 *Bank*.

CPU to PCI Write Buffer

The default setting of *Enabled* allows data and address access to internal buffer of the VIA VT82C586B chip so that the processor can be released from the wait state. The options are *Enabled* (default); *Disabled*.

PCI Dynamic Bursting

When enabled, the PCI controller allows bursting PCI transfer if the consecutive PCI cycles come with the address falling in the same 1KB space. This improves the PCI Bus throughput. The options are *Enabled* (default); *Disabled*.

PCI Burst

When enabled, it allows data transfer on PCI Buses to improve. Disable this item when troubleshooting. The options are *Enabled* (default); *Disabled*.

PCI Master 0 WS Write

When enabled, it allows a zero-wait-state-cycle delay when the PCI master drive writes data to DRAM. The options are *Enabled* (default); *Disabled*.

Quick Frame Generation

When enabled, it allows the system to start the PCI Bus (by asserting frame) as soon as possible when the Bus cycle is going forward to the PCI Bus. The options are *Enabled* (default), *Disabled*.

PCI Peer Concurrency

Enable this item to allow the CPU to continue its operation even when another PCI Bus is active. The options are *Enabled* (default); *Disabled*.

Power Management Setup

The “Power Management Setup” option allows you to reduce the power consumption of the system. This feature turns off the video display and shuts down the hard drive after a period of inactivity.

ROM PCI/ISA BIOS (2A5LC008) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.			
Power Management	:	Disable	
PM Control by APM	:	Yes	
Video Off Option	:	Suspend -> Off	IRQ3 (COM 2) : Primary
Video Off Method	:	DPMS Support	IRQ4 (COM 1) : Primary
MODEM Use IRQ	:	NA	IRQ5 (LPT 2) : Primary
			IRQ7 (LPT 1) : Primary
HDD Power Down	:	Disable	IRQ6 (RTC Alarm) : Disabled
Doze Mode	:	Disable	IRQ9 (IRQ2 Redir) : Disabled
Suspend Mode	:	Disable	IRQ10 (Reserved) : Disabled
			IRQ11 (Reserved) : Disabled
VGA I/O & MEMORY	:	OFF	IRQ12 (PS/2 Mouse) : Primary
LPT & COM I/O	:	LPT/COM	IRQ14 (Hard Disk) : Primary
HDD & FDD I/O	:	ON	IRQ15 (Reserved) : Disabled
ESC : Quit < : Select Item			
F1 : Help PU/PD/+/- : Modify			
F5 : Old Values (Shift)F2 : Color			
F6 : Load BIOS Defaults			
F7 : Load Setup Defaults			

Power Management

This field acts as the master control for the power management modes. *Max Saving* puts the system into power saving mode after a brief period of system inactivity; *Min Saving* is almost the same as *Max Saving* except that this time the system inactivity period is longer; *Disabled* disables the power saving features; *User Defined* allows you to set power saving options according to your preference. The options are *Disabled* (default); *User Defined*; *Min Saving*; *Max Saving*.

PM Control by APM

The option *No* allows the BIOS to ignore the APM (Advanced Power Management) specification. Selecting *Yes* will allow the BIOS wait for APM's prompt before it enters Doze mode, Standby mode, or Suspend mode. If the APM is installed, it will prompt the BIOS to set the system into the power saving mode after all tasks are done. The options are *Yes* (Default); *No*.

Video Off Option

This item allows you to activate the video off feature for the display monitor power management. The options are *Suspend -> Off* (default); *Always On*; *All Modes -> Off*.

Video Off Method

This field defines the video off features. *V/H SYNC + Blank* blanks the screen and turns off vertical and horizontal scanning; *DPMS Support* allows the BIOS to control the video display card if it supports the DPMS feature; *Blank Screen* only blanks the screen. Use the latter for display monitors that do not support the "Green" (no power management) feature. Screensaver softwares does not work with this feature. With the CRT monitor shut off, this software cannot display. The options are *DPMS Support* (default); *Blank Screen*; *V/H Sync + Blank*.

MODEM Use IRQ

This feature allows you to select the IRQ# to meet the modem's IRQ#. The options are *NA* (default); *3*; *4*; *5*; *7*; *9*; *10*; *11*.

HDD Power Down

This option shuts down any IDE hard drives in the system after a period of inactivity. The time period is user-configurable from 1 to 15 minutes. This feature does not affect SCSI hard drives. The options are *Disabled* (default); *1 Min*; . . . *15 Min*.

Doze Mode/Suspend Mode

Sets the period of time after which Doze/Suspend Mode activates. At *Max Saving*, Doze/Suspend Mode will activate after *10 seconds*. At *Min Saving*, Doze/Suspend Mode will activate after *1 hour*. If Power Management option is set at *User Defined*, user has the option to set it at *10 Sec*; *20 Sec*; *30 Sec*; *40 Sec*; *1 Min*; *2 Min*; *4 Min*;

6 Min; 8 Min; 10 Min; 20 Min; 30 Min; 40 Min; or 1 Hour. The default value is *Disabled*.

VGA I/O & Memory

Selecting *ON* will enable the power management timer when a no activity event is detected in the VGA. Select *OFF* to disable the power management timer even if a no activity event is detected. The options are *OFF* (default), *ON*.

LPT & COM I/O

Selecting *LPT/COM* will enable the power management timer when a no activity event is detected in the LPT and COM ports. Selecting *LPT* or *COM* will enable the power management timer when a no activity event is detected in the LPT or COM port. Selecting *NONE* will disable the power management timer even if a no activity event is detected. The options are *LPT/COM* (default); *NONE*; *LPT*; *COM*.

HDD & FDD I/O

Selecting *ON* will enable the power management timer when a no activity event is detected in the hard disk drive and floppy disk drive. Selecting *OFF* will disable the power management timer even if a no activity event is detected. The options are *ON* (default); *OFF*.

IRQ3 (COM 2), . . . , IRQ7 (LPT 1)

You can individually set each IRQ to be included in the sleep function. The options are *Primary* (default); *Secondary*; *Disabled*.

IRQ8 (RTC Alarm), . . . , IRQ11 (Reserved)

You can individually set each IRQ to be included in the sleep function. IRQ8 (Real Time Alarm) is usually set to *Disabled* so that any software alarm clock or event calendar can wake up the system. The options are *Disabled* (default); *Primary*; *Secondary*.

IRQ12 (PS/2 Mouse)/IRQ14 (Hard Disk)

You can set IRQ12 and IRQ14 to be included in the sleep function. The options are *Primary* (default); *Secondary*.

IRQ15 (Reserved)

You can set IRQ15 to be included in the sleep function. The options are *Disabled* (default); *Primary*; *Secondary*.

PNP and PCI Setup

The “PNP and PCI Setup” option configures the PCI Bus slots. All PCI Bus slots on the system use INTA#, thus all installed PCI cards must be set to this value.

ROM PCI/ISA BIOS (2A5LC008) PNP/PCI CONFIGURATION AWARD SOFTWARE, INC.	
PNP OS Installed : No	PCI IRQ Activated By : Level
Resources Controlled By : Auto	Assign IRQ For VGA : Disabled
Reset Configuration Data : Disabled	
IRQ Sequence:9,10,11,5,7,4,3,12,15,14	
ESC : Quit <--- : Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Values (Shift)F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults	

PNP OS Installed

When Plug and Play operating systems (OS) are installed, interrupts may be reassigned by the OS when *Yes* is selected. When a non-Plug and Play OS is installed or to prevent reassigning of interrupt settings, select *No* here. The options are *No* (Default), *Yes*.

Resources Controlled By

If set at *Auto*, BIOS automatically arranges all system resources for you. If there are conflicts or you are not satisfied with the configuration settings, simply set all the resources by selecting *Manual*. The options are *Auto* (default); *Manual*.

Reset Configuration Data

When enabled, this feature allows the system to clear the last BIOS configuration data and reset them with the default BIOS configuration data. The options are *Disabled* (default); *Enabled*.

IRQ Sequence

Allows you to set the sequence of the IRQ#. The options are 9, 10, 11, 5, 7, 4, 3, 12, 15, 14 (default); or 15, 11, 10, 9, 12, 14, 5, 7, 3, 4.

IRQ-3; -4; -5; -7; -9; -10; -11; -12; -14; -15; DMA-0; -1; -3; -5; -6; -7 Assigned to

These options, which allows you to set whether a particular IRQ# or DMA# is used by a PCI/ISA PNP or Legacy ISA card will only appear on screen if the above item Resources Controlled By is set at *Manual*. The options are *PCI/ISA PNP* (default except for IRQ-3 and IRQ-4); *Legacy ISA*.

PCI IRQ Activated By

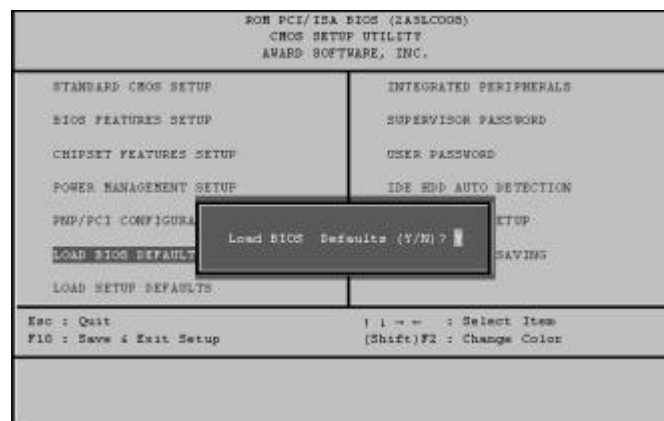
If the IDE card you are using is triggered by edge, set it at *Edge*. The options are *Level* (default); *Edge*.

Assign IRQ for VGA

If the PCI VGA card you are using does not need an IRQ, select *Disabled*, thereby releasing an IRQ for system use. The options are *Disabled* (default); *Enabled*.

Load BIOS Defaults

The “Load BIOS Defaults” option allows you to load the troubleshooting default values permanently stored in the BIOS ROM. These default settings are non-optimal and disables all high performance features. To load these default settings, highlight “Load BIOS Defaults” on the main screen and then press the <Enter> key. The system displays a confirmation message on the screen. Press the <Y> key and then the <Enter> key to confirm. Press the <N> key and then the <Enter> key to abort. This feature does not affect the fields on the Standard CMOS Setup screen.



IDE HDD Block Mode

When *Enabled*, the system executes read/write requests to hard drive in Block Mode. The options are *Enabled* (default); *Disabled*.

On-Chip Primary PCI IDE

When *Enabled*, it allows you to use the onboard primary PCI IDE. The options are *Enabled* (default); *Disabled*.

On-Chip Secondary PCI IDE

When *Enabled*, it allows you to use the onboard secondary PCI IDE. The options are *Enabled* (default); *Disabled*.

IDE Primary Master PIO (available only when On-Chip Primary PCI IDE is enabled)

Allows an automatic or a manual configuration of the PCI primary IDE hard drive (master) mode. The options are *Auto* (default); *Mode 0*; *Mode 1*; *Mode 2*; *Mode 3*; *Mode 4*.

IDE Primary Slave PIO (available only when On-Chip Primary PCI IDE is enabled)

Allows an automatic or a manual configuration of the PCI primary IDE hard drive (slave) mode. The options are *Auto* (default); *Mode 0*; *Mode 1*; *Mode 2*; *Mode 3*; *Mode 4*.

IDE Secondary Master PIO (available only when On-Chip Secondary PCI IDE is enabled)

Allows an automatic or a manual configuration of the PCI secondary IDE hard drive (master) mode. The options are *Auto* (default); *Mode 0*; *Mode 1*; *Mode 2*; *Mode 3*; *Mode 4*.

IDE Secondary Slave PIO (available only when On-Chip Secondary PCI IDE is enabled)

Allows an automatic or a manual configuration of the PCI secondary IDE hard drive (slave) mode. The options are *Auto* (default); *Mode 0*; *Mode 1*; *Mode 2*; *Mode 3*; *Mode 4*.

IDE Primary Master UDMA (available only when On-Chip Primary PCI IDE is enabled)

Allows an automatic configuration of the PCI primary IDE hard drive (master) mode if Ultra DMA is supported both on the mainboard and the hard disk. The options are *Auto* (default); *Disabled*.

IDE Primary Slave UDMA (available only when On-Chip Primary PCI IDE is enabled)

Allows an automatic configuration of the PCI primary IDE hard drive (slave) mode if Ultra DMA is supported both on the mainboard and the hard disk. The options are *Auto* (default); *Disabled*.

IDE Secondary Master UDMA (available only when On-Chip Secondary PCI IDE is enabled)

Allows an automatic configuration of the PCI secondary IDE hard drive (master) mode if Ultra DMA is supported both on the mainboard and the hard disk. The options are *Auto* (default); *Disabled*.

IDE Secondary Slave UDMA (available only when On-Chip Secondary PCI IDE is enabled)

Allows an automatic configuration of the PCI secondary IDE hard drive (slave) mode if Ultra DMA is supported both on the mainboard and the hard disk. The options are *Auto* (default); *Disabled*.

HDD S.M.A.R.T. Capability

Enable this option if the hard disk drive you are currently using supports the S.M.A.R.T. function. The options are *Disabled* (default); *Enabled*.

USB Controller

Disable this option if you are not using the onboard USB feature. The options are *Disabled* (default); *Enabled*.

BIOS Support USB Keyboard (available only when USB Controller is enabled)

When the USB devices cannot be detected automatically by the system BIOS or some driver diskettes came with the USB devices, set it at *DOS* to allow for the installation of the drivers. The options are *Setup* (default); *DOS*.

Onboard FDC Controller

When *Enabled*, the floppy disk drive (FDD) controller is activated. The options are *Enabled* (default); *Disabled*.

Onboard Serial Port 1

If Serial Port 1 uses the onboard I/O controller, you can modify the serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed. The options are *3F8/IRQ4* (default); *3E8/IRQ4*; *2F8/IRQ3*; *2E8/IRQ3*; *Disabled*.

Onboard Serial Port 2

If Serial Port 2 uses the onboard I/O controller, you can modify the serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed. The options are *2F8/IRQ3* (default); *3E8/IRQ4*; *2E8/IRQ3*; *3F8/IRQ4*; *Disabled*.

UART2 Mode (available only when Onboard Serial Port 2 is not set at Disabled)

Allows you to select the IR modes if the serial port 2 is used as an IR port. Set it at *Standard* when you use COM2 as a serial port instead of an IR port. The options are *Standard* (default); *IrDA*; *ASK-IR*.

Duplex Select (available only when UART2 Mode is not set at Standard)

This feature allows you to select the infrared data transaction method. The options are *Half* (default); *Full*.

TxD, RxD Active (available only when UART2 Mode is not set at Standard)

This feature allows you to select the active signals of the reception end and transmission end. This is mainly for technician's use only. The options are *Hi, Lo* (default); *Hi, Hi*; *Lo, Hi*; *Lo, Lo*.

Onboard Parallel Port

Allows you to select from a given set of parameters if the parallel port uses the onboard I/O controller. The options are *378/IRQ7* (default); *278/IRQ5*; *3BC/IRQ7*; *Disabled*.

Parallel Port Mode (available only when Onboard Parallel Port not set at Disabled)

Allows you to connect with an advanced printer. The options are *Normal* (default); *EPP1.7*; *SPP*; *EPP1.9*; *ECP*.

ECP Mode Use DMA (available only when Parallel Port Mode set at ECP)

This feature allows you to select the Direct Memory Access (DMA) channel. The options are *3* (default); *1*.

Supervisor Password and User Password

These two options set the system passwords. "Supervisor Password" sets a password that will be used to protect the system and the Setup utility; "User Password" sets a password that will be used exclusively on the system. By default, the system comes without any passwords. To specify a password, highlight the type you want and then press the <Enter> key. A password prompt appears on the screen. Taking note that the password is case sensitive, and can be up to 8 alphanumeric characters long, type in your password and then press the <Enter> key. The system confirms your password by asking you to type it again. After setting a password, the screen automatically reverts to the main screen. To implement the password protection, specify in the "Security Option" field of the BIOS Features Setup screen when the system will prompt for the password. If you want to disable either password, press the <Enter> key instead of entering a new password when

the “Enter Password” prompt appears. A message confirms the password has been disabled.

IDE HDD Auto Detection

The “IDE HDD Auto Detection” option detects the parameters of an IDE hard drive and automatically enters them into the Standard CMOS Setup screen. Up to four IDE drives can be detected, with parameters for each listed inside the box. To accept the optimal entries, press the <Y> key or else select from the numbers displayed under the OPTIONS field; to skip to the next drive, press the <N> key. If you accept the values, the parameters will appear listed beside the drive letter on the screen. The process then proceeds to the next drive letter. Pressing the <N> key to skip rather than to accept a set of parameters causes the program to enter zeros after that drive letter.

Remember that if you are using another IDE controller that does not feature Enhanced IDE support for four devices, you can only install two IDE hard drives. The IDE controller must support the Enhanced IDE features in order to use Drive E and Drive F.

When auto-detection is completed, the program automatically enters all entries you accepted on the field for that drive in the Standard CMOS Setup screen. Skipped entries are ignored and are not entered in the screen.

If you are auto-detecting a hard drive that supports the LBA mode, three lines will appear in the parameter box. Choose the line that lists LBA for an LBA drive. Do not select Large or Normal.

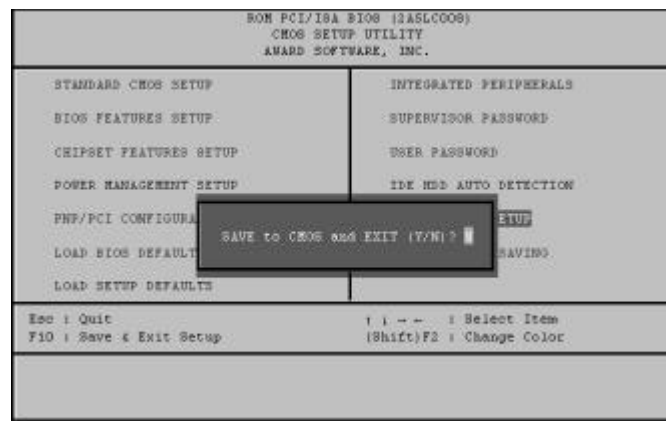
The auto-detection feature can only detect one set of parameters for a particular IDE hard drive. Some IDE drives can use more than one set. This is not a problem if the drive is new and there is nothing on it.

<p>NOTE : If your hard drive was already formatted on an older previous system, incorrect parameters may be detected. You will need to enter the correct parameters manually or use low-level format if you do not need the data stored on the hard drive.</p>

If the parameters listed differ from the ones used when the drive was formatted, the drive will not be readable. If the auto-detected parameters do not match the ones that should be used for your drive, do not accept them. Press the <N> key to reject the presented settings and enter the correct ones manually from the Standard CMOS Setup screen.

Save & Exit Setup

Select this option to save into the CMOS memory all modifications you specified during the current session. To save the configuration changes, highlight the “Save & Exit Setup” option on the main screen and then press the <Enter> key.



Exit Without Saving

Select this option to exit the Setup utility without saving the modifications you specified during the current session. To exit without saving, highlight the “Exit Without Saving” option on the main screen and then press the <Enter> key.

