

Chapter 3

AWARD® BIOS SETUP

Award® BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed RAM (CMOS RAM), so that it retains the Setup information when the power is turned off.

3.1 Entering Setup

Power on the computer and press or <Ctrl><Alt><Esc> keys immediately to allow you to enter Setup.

TO ENTER SETUP BEFORE BOOT PRESS <CTRL-ALT-ESC>
OR KEY

If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the “RESET” button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to,

PRESS <F1> TO CONTINUE, <CTRL-ALT-ESC>
OR TO ENTER SETUP

3.2 Getting Help

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu/Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window, press <F1> or <Esc>.

3.3 The Main Menu

Once you enter Award® BIOS CMOS Setup Utility, the Main Menu (Figure 1) will appear on the screen. The Main Menu allows you to select from ten setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

ROM PCI/ISA BIOS (2A59IM4C)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING

Esc : Quit ↑↓→← : Select Item
F10 : Save & Exit Setup (Shift)F2 : Change Color

Time, Date, Hard Disk Type...

Standard CMOS Setup

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

BIOS Features Setup

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

Chipset Features Setup

This setup page includes all the items of chipset special features.

Power Management Setup

This category determines the power consumption for system after setting the specified items. Default value is Disable.

PNP/PCI Configuration Setup

This category specifies the IRQ level for PCI and ISA devices.

Load Setup Defaults

Chipset defaults indicates the values required by the system for the maximum performance.

Integrated Peripherals

Change, set or disable onboard I/O, IRQ, DMA assignment.

Supervisor Password/User Password

Change, set or disable password. This function allows the user access to the system and setup or just setup.

IDE HDD Auto Detection

Automatically configure hard disk parameters.

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

3.4 Standard CMOS Setup

The items in Standard CMOS Setup Menu are divided into 11 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.

ROM PCI/ISA BIOS (2A59IM4A)

STANDARD CMOS SETUP

AWARD SOFTWARE, INC.

Date(mm:dd:yy): Wed, October 08,1997

Time(hh:mm:ss): 00:00:00

HARD DISKS	TYPE	SIZE	CYLS	HEADS	PRECOMP	LANDZONE	SECTOR MODE
Primary Master:	Auto	0	0	0	0	0	AUTO
Primary Slave :	Auto	0	0	0	0	0	AUTO
Secondary Master :	Auto	0	0	0	0	0	AUTO
Secondary Slave :	Auto	0	0	0	0	0	AUTO

Drive A : 1.44M,3.5in.

Drive B : None

Floppy 3 Mode Support: Disabled

Base Memory: 640K

Extended Base Memory: 15360K

Other Memory: 384K

Video : EGA/VGA

Halt On : All, but Keyboard

Total Memory: 16384K

ESC : Quit

F1 : Help

↑↓→← : Select Item

(Shift)F2 : Change Color

PU/PD/+/- : Modify

3-5

Date

The date format is <day><month> <date> <year>.

Day	Day of the week, from Sun to Sat, determined by BIOS. Read-only.
month	The month from Jan. through Dec.
date	The date from 1 to 31, can be keyed by numeric function keys.
year	The year, depends on the year of the BIOS

Time

The time format is <hour> <minute> <second>.

PrimaryMaster/PrimarySlave SecondaryMaster/Secondary Slave

These categories identify the types of 2 channels that have been installed in the computer. There are 45 pre-defined types and 4 user definable types for Enhanced IDE BIOS. Type 1 to Type 45 are pre-defined. Type User is user-definable.

Press PgUp/<+> or PgDn/<-> to select a numbered hard disk type or type the number and press <Enter>. Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category. If your hard disk drive type is not matched or listed, you can use Type User to define your own drive type manually.

If you select Type User, related information is asked to be entered to the following items. Enter the information directly from the keyboard and press <Enter>. This information should be provided in the documentation from your hard disk vendor or the system manufacturer.

If the controller of HDD interface is ESDI, the selection shall be “Type 1”.

If the controller of HDD interface is SCSI, the selection shall be “None”.

If the controller of HDD interface is CD-ROM, the selection shall be “None”.

CYLS.	number of cylinders
HEADS	number of heads
PRECOMP	write precom
LANDZONE	landing zone
SECTORS	number of sectors
MODE HDD	access mode

3.5 BIOS Features Setup

ROM PCI/ISA BIOS (2A59IM4A)
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	: Disabled	D0000-D3FFF Shadow	: Disabled
Boot Sequence	: A,C,SCSI	D4000-D7FFF Shadow	: Disabled
Swap Floppy Drive	: Disabled	D8000-DBFFF Shadow	: Disabled
Boot up NumLock status	: On	DC000-DFFFF Shadow	: Disabled
Gate A20 Option	: Fast		
Security Option	: Setup		
PS/2 mouse function ctrl.	: Enabled		
PCI/VGA palette snoop	: Disabled		
OS select for DRAM>64MB	: Non-OS2		
Report No FDD For WIN 95	: Yes		
		Esc : Quit ↑↓←→ : Select item	
		F1 : Help PU/PD/+/- : modify	
		F5 : Old Value(Shift) F2 : Color	
		F7 : Load Setup Defaults	

Virus Warning

During and after the system boots up, any attempt to write to the boot sector or partition table of the hard disk drive will halt the system and the following error message will appear. For the meantime, you can run an anti-virus program to locate the problem.

!WARNING!

Disk Boot Sector is to be modified

Type “Y” to accept write or “N” to abort write

Award Software, Inc.

Disabled (default) No warning message to appear when anything attempts to access the boot sector or hard disk partition table.

Enabled Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector of hard disk partition table.

Note: *This function is available only for DOS and other OS that do not trap INT13.*

CPU Internal Cache

The default value is Enabled. If your CPU is without Internal Cache, then this item “CPU Internal Cache” will not be shown.

Enabled (default) Enable cache

Disabled Disable cache

Note: The internal cache is built in the processor.

External Cache

Choose Enabled or Disabled. This option enables the level 2 cache memory.

Quick Power On Self Test

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

Enabled Enable quick POST

Disabled (default) Normal POST

Boot Sequence

This category determines which drive the computer searches first for the disk operating system (ex. DOS). The settings are A,C,SCSI/LS/ZIP,C/C,A,SCSI/C,CD-ROM,A/CD-ROM,C,A/D,A,SCSI/E,A,SCSI/F,A,SCSI/SCSI,A,C/SCSI,C,A/C only. Default value is A,C,SCSI.

Swap Floppy Drive

Switches the floppy disk drives between being designated as A and B. Default is Disabled.

Boot Up NumLock Status

The default value is On.

On (default) Keypad is numeric keys.

Off Keypad is arrow keys.

Gate A20 Option

Normal The A20 signal is controlled by keyboard controller or chipset hardware.

Fast(default) The A20 signal is controlled by port 92 or chipset specific method.

Security Option

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

System The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt.

Setup(default) The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt.

PS/2® Mouse Function Control

When enabled, allows you to release IRQ12 for using the PS/2® mouse. The options are: Enabled(default) or Disabled.

PCI VGA Palette Snooping

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 the boot information and the 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, where the VGA controller is on the PCI bus and a non-VGA graphic controller is on an ISA bus, the Write Access to the palette will not show up on the ISA bus if the PCI VGA controller responds to the Writes.

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.

Disabled (default)	Disables the function
Enabled	Enables the function

OS Selection for DRAM > 64MB

Allows OS2® to be used with > 64 MB of DRAM. Settings are Non-OS/2 (default) and OS2. Set to OS/2 if using more than 64MB and running OS/2®.

Report No FDD For WIN 95

When set to yes, BIOS will not report any IRQ for FDD when FDD is disabled in Windows®95. This function is only used when you are testing SCT for Windows®95 Logo.

Video BIOS Shadow

Determines whether video BIOS will be copied to RAM for faster execution. Video shadow will increase the video performance.

Enabled (default)	Video shadow is enabled
Disabled	Video shadow is disabled

C8000 - CFFFF Shadow/E8000 - EFFFF Shadow

Determines whether the optional ROM will be copied to RAM for faster execution.

Enabled	Optional shadow is enabled
Disabled (default)	Optional shadow is disabled

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

3.6 Chipset Features Setup

The Chipset Features Setup option is used to change the values of the chipset registers. These registers control most of the system options in the computer.

Choose the “CHIPSET FEATURES SETUP” from the Main Menu and the following screen will appear.

ROM PCI/ISA BIOS(2A59IM4A)
CMOS SETUP UTILITY
CHIPSET FEATURES SETUP

Auto Configuration	: Enabled	Passive Release	: Enabled
AT Bus Clock	: CLK2/4	ISA Line Buffer	: Enabled
DRAM Write WS	: x-2-2-2	Delay Transaction	: Disabled
Page Mode Read WS	: x-3-3-3		
RAS Precharge Period	: 3T	Hit/Miss Check Point	: T2end
RAS-To-CAS Delay Time	: 3T		
EDO Read WS	: x-2-2-2		
DRAM Speculative Read	: Disabled		
SDRAM CAS Latency	: 3		
SDRAM Access Timing	: 3-4-7		
SDRAM Speculative Read	: Disabled		
Pipelined Function	: Enabled		
DRAM Refresh Period	: 60 us		
DRAM Data Integrity Mode	: Disabled		
Memory Hole At 15-16M	: Disabled		
Primary Frame Buffer	: 2 MB	Esc : Quit	↑↓←→ : Select item
VGA Frame Buffer	: Enabled	F1 : Help	PU/PD/+/- : modify
Data Merge	: Enabled	F5 : Old Value(Shift)	F2 : Color
Byte Merge	: Disabled	F7 : Load Setup Defaults	
Fast Back-to-Back	: Disabled		

Note: Change these settings only, if you’re familiar with the chipset.

Auto Configuration

Choosing Enabled (default) will automatically configure chipset features using default settings. Choose Disable to customize setup.

AT Bus Clock

Leave on default setting of CLK 2/4.

DRAM Write WS

This option chooses the Write Burst Timing for accessing DRAM. See: DRAM Read Burst Option. Choose x222/x333.

Page Mode Read WS

This option chooses the Write Burst Timing for accessing FP mode. Choose x222/x333.

RAS Precharge Period

Leave on default setting of 3T.

Ras-to CAS Delay Time

The settings are 2 or 3. 2 RAS to CAS delay is set to 2 clock, while 3 RAS to CAS delay is set to 3 clock. The clock is dependent with the DRAM Timing and Bus Clock.

EDO Read WS

This option chooses the Write Burst Timing for accessing EDO. Choose x222/x333.

DRAM Speculative Read

Leave on default setting of Disabled.

SDRAM CAS Latency

The settings are 3 or 2. This option is for SDRAM CAS latency time. The default setting is 3.

SDRAM Access Timing

Leave on the default setting of 3-4-7.

SDRAM Speculative Read

The settings are enable or disable. If you only use One Bank for SDRAM and there's no EDO or FP mixed together, the setting is Enable. If two banks are used by SDRAM, it will automatically be set to disable. The default setting is Disabled.

Memory Hole At 15M-16M

Choosing Enabled will enable a memory hole in the DRAM space. The CPU cycle matching the enabled hole will be passed on to the PCI. PCI cycles matching an enabled hole are ignored. Disabled (default) will disable this function.

Note: A selected (Enabled) hole is not remapped.

3.7 Power Management Setup

The Power Management Setup will appear on your screen like this:

ROM PCI/ISA BIOS (2A59IM4A)		
POWER MANAGEMENT SETUP		
AWARD SOFTWARE, INC.		
Power Management	:User Define	** External Switch **
PM Control by APM	:Yes	Power Button :Power Off
Modem Use IRQ	:3	
Video Off Option	:Suspend->off	
Video Off Method	:DPMS Support	
** PM Monitor **		
HDD Power Down	:Disable	
Doze Mode	:Disable	
Standby Mode	:Disable	
Suspend Mode	:Disable	
** Standby Events **		
Primary HDD	:Disabled	
Floppy	:Disabled	
Serial Ports	:Enabled	
Keyboard	:Enabled	
Parallel Ports	:Disabled	
		Esc : Quit ↑↓→← : Select item
		F1 : Help PU/PD/+/- : modify
		F5 : Old Value(Shift) F2 : Color
		F7 : Load Setup Defaults

Power Management

This category determines the power consumption for system after selecting below items. Default value is Disable. The following pages tell you the options of each item & describe the meaning of each options.

Power Management

Disable	Global Power Management will be disabled.
User Define	Users can configure their own power management.
Min Saving	Pre-defined timer values are used such that all timers are in their MAX value.
Max Saving	Pre-defined timer values are used such that all timers are in their MIN value.

PM Control by APM

No	System BIOS will ignore APM when power managing the system.
Yes	System BIOS will wait for APM's prompt before it enter any PM mode.

Note : Enable this for O.S. with APM like Windows®95, Windows®NT, etc.

MODEM Use IRQ

This indicates which IRQ no. will be used by the MODEM (if there is a MODEM). The settings are 3, 4, 5, 7, 9, 10, or N/A.

Video Off Option

The settings are “Susp, Stby->Off” , “Suspend->Off” (default setting), “Always on”, and “All modes-> off”.

Video Off Method

Blank Screen	The system BIOS will only blank off the screen when disabling video.
V/H SYNC+Blank	In addition to (1), BIOS will also turn off the V-SYNC & H-SYNC signals from VGA card to monitor.
DPMS	This function is enabled only for VGA card supporting DPMS.

Note: Green monitors detect the V/H SYNC signals to turn off its electron gun.

HDD Power Down

This option specifies the power conserving state that the hard disk drive enters after the specified period of hard drive inactivity has expired. The settings are Disabled, Standby or Suspend. The Optimal and Fail-Safe default settings are Disabled.

Doze Mode

Disable	System will never enter DOZE mode.
1 Min/2 Min/	Defines the continuous idle time before the
4 Min/6 Min/	system enters DOZE mode.
8 Min/10 Min/	If any item defined in the options of “Power
20 Min/30 Min/	Down and Resume events” is enabled & active,
40 Min/50 Min	DOZE timer will be reloaded. When the system
1 Hr	have entered Doze mode, any of the items
	enabled in “Wake Up Events in Doze and
	Standby” will trigger the system to wake up.

Standby Mode

Disable	System will never enter STANDBY mode.
1 Min/2 Min/	Defines the continuous idle time before the
4 Min/6 Min/	system enters STANDBY mode.
8 Min/10 Min/	If any item defined in the options of “Power
20 Min/30 Min/	Down and Resume events” is enabled & active,
40 Min/50 Min	STANDBY timer will be reloaded. When the
1 Hr	system has entered Standby mode , any of the
	items that are enabled in “Wake Up Events of
	Doze and Standby” will trigger the system to
	wake up.

Suspend Mode**Disable**

System will never enter SUSPEND mode.

1 Min/2 Min/

Defines the continuous idle time before the system enters SUSPEND mode.

4 Min/6 Min/**8 Min/10 Min/****20 Min/30 Min/****40 Min/50 Min****1 Hr**

If any item defined in the options of “Power Down & Resume Events” is enabled & active, SUSPEND timer will be reloaded. When the system has entered SUSPEND mode, any of the items enabled in the “Power Down & Resume Events” will trigger the system to wake up.

3.8 PNP/PCI Configuration Setup

You can manually configure the PCI Device’s IRQ. The following pages tell you the options of each item & describe the meaning of each options.

**ROM PCI/ISA BIOS (2A69HM4D)
PNP/PCI CONFIGURATION SETUP
AWARD SOFTWARE, INC.**

PnP OS Installed :Yes	PCI IDE 2nd Channel : Disabled
Resources Controlled By :Manual	PCI IRQ Activied By : Level
Reset Configuration Data :Disabled	PCI IDE IRQ Map To : ISA
IRQ-3 assigned to :PCI/ISA PnP	Assign IRQ for VGA : Enabled
IRQ-4 assigned to :PCI/ISA PnP	
IRQ-5 assigned to :PCI/ISA PnP	
IRQ-7 assigned to :PCI/ISA PnP	
IRQ-9 assigned to :PCI/ISA PnP	
IRQ-10assigned to :PCI/ISA PnP	
IRQ-11assigned to :PCI/ISA PnP	
IRQ-12assigned to :PCI/ISA PnP	
IRQ-14assigned to :PCI/ISA PnP	
IRQ-15assigned to :PCI/ISA PnP	
DMA-0assigned to :PCI/ISA PnP	Esc : Quit ↑↓←→: Select item F1 : Help PU/PD/+/- : modify F5 : Old Value(Shift) F2 : Color F7 : Load Setup Defaults
DMA-1assigned to :PCI/ISA PnP	
DMA-3assigned to :PCI/ISA PnP	
DMA-5assigned to :PCI/ISA PnP	
DMA-6assigned to :PCI/ISA PnP	
DMA-7assigned to :PCI/ISA PnP	

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. So, for non-PnP operating system (DOS, Netware®), this option must set to NO.

Resources Controlled By

By Choosing “Auto”, the system BIOS will detect the system resources and automatically assign the relative IRQ and DMA Channel for each peripheral.

By Choosing “Manual”(default), the user will need to assign IRQ & DMA for add-on cards. Be sure that there is no conflict for IRQ/DMA and I/O ports.

Note: When choosing “Auto”, you must be sure that all of the system add-on cards are PnP type.

Reset Configuration Data

The system BIOS supports the PnP features so the system needs to record which resource is assigned and protect 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 will be forced to update the system’s ESCD. Then, this option will be auto-set to Disable.

IRQ-3	assigned to	: PCI/ISA PnP
IRQ-4	assigned to	: PCI/ISA PnP
IRQ-5	assigned to	: PCI/ISA PnP
IRQ-7	assigned to	: PCI/ISA PnP
IRQ-9	assigned to	: PCI/ISA PnP
IRQ-10	assigned to	: PCI/ISA PnP
IRQ-11	assigned to	: PCI/ISA PnP
IRQ-12	assigned to	: PCI/ISA PnP
IRQ-14	assigned to	: PCI/ISA PnP

IRQ-15 assigned to	:	PCI/ISA PnP
DMA-0 assigned to	:	PCI/ISA PnP
DMA-1 assigned to	:	PCI/ISA PnP
DMA-3 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 card. PCI/ISA PnP signifies that a resource is assigned to the PCI Bus or provides for ISA PnP add-on cards and peripherals.

PCI IDE 2nd Channel

The settings are Enabled and Disabled. Leave on the default setting of Disabled.

PCI IRQ Activated By

This sets the method by which the PCI bus recognizes that an IRQ service is being requested by a device. Under all circumstances, you should retain the default configuration unless advised otherwise by your system’s manufacturer. The settings are Level(default) and Edge.

PCI IDE IRQ Map To

PCI-Auto: This setting is for off-board PCI IDE card and is fully compatible with PCI specifications.

PCI-Slot 1-4: This setting is used if off-board PCI IDE card is not fully compatible with PCI specifications. You must specify which PCI slot the PCI IDE Card is installed in.

ISA: This setting is used if the off-board PCI IDE card uses an edge trigger and IRQ routes directly to the ISA Bus.

Note: The user will need to disable the on-board on-chipset PCI IDE controller when installing off-board PCI IDE add-on cards. (See the INTEGRATED PERIPHERALS SETUP) These two options choose the primary and secondary IDE Channel interrupts when the user installs off-board PCI IDE add-on cards.

Assign IRQ for VGA

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

3.10 Integrated Peripherals

ROM PCI/ISA BIOS (2A69HM4D)
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.

On-Chip IDE Controller : Enabled	Onboard FDC Controller : Enabled
On-Chip Secondary IDE : Enabled	Onboard Serial Port 1 : 3F8/IRQ4
IDE Primary Master PIO : Auto	
IDE Primary Slave PIO : Auto	Onboard Serial Port 2 : 2F8/IRQ3
IDE Secondary Master PIO : Auto	UR2 Mode : Normal
IDE Secondary Slave PIO : Auto	
IDE Primary Master UDMA : Auto	Onboard Parallel Port : 378/IRQ7
IDE Primary Slave UDMA : Auto	Parallel Port Mode : SPP
IDE Secondary Master UDMA: Auto	
IDE Secondary Slave UDMA : Auto	
IDE HDD Block Mode : Enabled	
On-Chip USB Controller : Disabled	
RING POWER ON Controller : Disabled	
RTC POWER ON Controller : Disabled	
	Esc : Quit ↑↓←→ : Select item
	F1 : Help PU/PD/+/- : modify
	F5 : Old Value(Shift) F2 : Color
	F7 : Load Setup Defaults

On-Chip IDE Controller
Enabled/Disabled

On-Chip Secondary IDE
Enabled/Disabled

The system provides for an On-Board On-Chipset PCI IDE controller that supports Dual Channel IDE (Primary and Secondary). A maximum of 4 IDE devices can be supported. If the user installs the Off-Board PCI IDE controller (i.e. add-on cards), the user must choose which channels will be disabled. This will depend on which channel will be used for the Off-Board PCI IDE add-on card.

IDE Primary Master PIO**Auto/Mode0/Mode1-4****IDE Primary Slave PIO****Auto/Mode0/Mode1-4****IDE Secondary Master PIO****Auto/Mode0/Mode1-4****IDE Secondary Slave PIO****Auto/Mode0/Mode1-4**

For these 4 IDE options, choose “Auto” to have the system BIOS auto detect the IDE HDD operation mode for PIO access.

Note: Some IDE HDD cannot operate at the responding HDD’s mode. When the user has selected “Auto” and the system BIOS has accepted the HDD response mode, the user may degrade the HDD’s operation mode. Ex: If the HDD reported it can operate in mode 4 but it is not operating properly, the user will have to manually change the operation mode to mode 3.

Choosing Mode 1-4 will have the system ignore the HDD’s reported operation mode and use the selected mode instead.

Note: According to ATA specs. Mode 4 transfer rate is > Mode 3 > Mode 2 > Mode 1 > Mode 0. If the user’s HDD can operate at Mode 3 the user can also select a slower Mode (i.e. Mode 0-2) but not a faster Mode (ie Mode 4).

IDE HDD Block Mode

Enabled/Disabled Enabled allows the Block mode access for the IDE HDD.

On-chip USB Controller

Enabled/Disabled

Choosing Enabled, will enable the on-board USB port.

Onboard FDC Controller

Enabled/Disabled

The system has an on-board Super I/O chip with a FDD controller that supports 2 FDDs for 360K/720K/1.2M/1.44M/2.8M. Choose “Enabled” to use the on-board FDD controller for accessing the FDD. Otherwise choose “Disabled” to use the off-board FDD controller.

Onboard Serial Port 1

Disabled/(3F8/IRQ4)/(2F8/IRQ3)/(3E8/IRQ4)/(2E8/IRQ3)

Onboard Serial Port 2

Disabled/(3F8/IRQ4)/(2F8/IRQ3)/(3E8/IRQ4)/(2E8/IRQ3)

The system has an On-board Super I/O chipset with 2 serial ports. The On-board serial ports can be selected as:

Disabled	
3F8/IRQ4	COM 1 uses IRQ4
2F8/IRQ3	COM 2 uses IRQ3
3E8/IRQ4	COM 3 uses IRQ4
2E8/IRQ3	COM 4 uses IRQ3

Note: Because the ISA Bus Interrupt accepts low to high edge trigger, the interrupt request line cannot be shared by multiple sources. If an off-board ISA add-on card with a serial port is installed, the user may have to disable the on-board serial port because it will conflict with IRQ request line for the off-board serial port.

Onboard Parallel Port

Disabled
(3BCH/IRQ7)/
(278H/IRQ5)/
(378H/IRQ5)

There is a built-in parallel port on the on-board Super I/O chipset that provides Standard, ECP, and EPP features. It has the following options:

Disable

3BCH/IRQ7	Line Printer port 0
278H/IRQ5	Line Printer port 2
378H/IRQ5	Line Printer port 1

Onboard Parallel Mode

SPP : Standard Parallel Port
EPP : Enhanced Parallel Port
ECP : Extended Capability Port

SPP/(EPP/SPP)/
ECP(ECP/EPP)

To operate the onboard parallel port as Standard Parallel Port only, choose “SPP.” To operate the onboard parallel port in the ECP and SPP modes simultaneously, choose “ECP/SPP.” By choosing “ECP”, the onboard parallel port will operate in ECP mode only. Choosing “ECP/EPP” will allow the onboard parallel port to support both the ECP and EPP modes simultaneously. The ECP mode has to use the DMA channel, so choose the onboard parallel port with the ECP feature. After selecting it, the following message will appear: “ECP Mode Use DMA”. At this time, the user can choose between DMA channels 3 or 1. The onboard parallel port is EPP Spec. compliant, so after the user chooses the onboard parallel port with the EPP

function, the following message will be displayed on the screen: “EPP Mode Select.” At this time either EPP 1.7 spec. or EPP 1.9 spec. can be chosen.

3.11 Supervisor/User Password Setting

This Main Menu item lets you configure the system so that a password is required each time the system boots or an attempt is made to enter the Setup program. Supervisor Password allows you to change all CMOS settings but the User Password setting doesn't have this function. The way to set up the passwords for both Supervisor and User are as follow:

1. Choose "Change Password" in the Main Menu and press <Enter>.

The following message appears:

"Enter Password:"

2. The first time you run this option, enter your password up to only 8 characters and press <Enter>. The screen does not display the entered characters. For no password just press <Enter>.
3. After you enter the password, the following message appears prompting you to confirm the password:

"Confirm Password:"

4. Enter exactly the same password you just typed in to confirm the password and press <Enter>.
5. Move the cursor to Save & Exit Setup to save the password.
6. If you need to delete the password you entered before, choose the Supervisor Password and press <Enter>. It will delete the password that you had before.
7. Move the cursor to Save & Exit Setup to save the option you did. Otherwise, the old password will still be there the next time you turn on your machine.

3.12 IDE HDD Auto Detection

You can use this utility to automatically detect the characteristics of most hard drives.

When you enter this utility, the screen asks you to select a specific hard disk for Primary Master. If you accept a hard disk detected by the BIOS, you can enter “Y” to confirm and then press <Enter> to check next hard disk. This function allows you to check four hard disks. You may press the <Esc> after the <Enter> to skip this function and go back to the Main Menu.

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HARD DISKS	TYPE	SIZE	CYLS	HEADS	PRECOMP	LANDZONE	SECTOR	MODE
Primary Master:	Auto	0	0	0	0	0	0	AUTO
Primary Slave :	Auto	0	0	0	0	0	0	AUTO
Secondary Master :	Auto	0	0	0	0	0	0	AUTO
Secondary Slave :	Auto	0	0	0	0	0	0	AUTO

Select Primary Master

Option (N=Skip) : N

OPTIONS	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
2	2112	1023	64	0	4094	63	LBA
1	2113	4095	16	65535	4094	63	NORMAL
3	2113	2047	32	65535	4094	63	LARGE

[ESC: Skip]