

Chapter 4

AWARD BIOS

Description

Entering BIOS Setup

Power on the computer, when the following message appears briefly at the bottom of the screen during the POST (Power On Self Test), press key or simultaneously press <Ctrl> + <Alt> + <Esc> keys.

Press to enter SETUP

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 twelve setup functions and two exit choices. Use the arrow keys to select from among the items and press <Enter> to accept or enter the sub-menu.

ROM PCI/ISA BIOS (2A59IQ1F) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP PNP/PCI CONFIGURATION LOAD SETUP DEFAULTS	INTEGRATED PERIPHERALS PASSWORD SETTING IDE HDD AUTO DETECTION SAVE & EXIT SETUP EXIT WITHOUT SAVING
Esc : Quit	↑↓→← : Select Item
F10 : Save & Exit Setup	(Shift) F2 : Change Color
Time, Date, Hard Disk Type...	

Figure-1 Main Menu For BIOS Setup

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Standard CMOS Setup

Use the arrow keys to highlight the item, then use the < PgUp> or <PgDn> keys to select the value you want in each item.

Date (mm:dd:yy): Thu, Mar 6, 1997							
Time(hh:mm:ss): 00:00:00							
HARD DISKS MODE	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR
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							
Drive A	: 1.44M, 3.5 in.	<div>Base Memory : 640 K</div> <div>Extended Memory : 7168K</div> <div>Other Memory : 384 K</div> <div>Total Memory : 8192K</div>					
Drive B	: None						
Video	: EGA/VGA						
Halt On	: All Errors						
ESC : Quit		↑ ↓ → ← : Select Item		PU/PD/+/- : Modify			
F1 : Help		(Shift)F2 : Change Color					

Figure-2 Standard CMOS Setup Menu

Hard Disk

Primary Master/Primary Slave/Secondary Master/Secondary Slave

The categories identify the types of 2 channels that have been installed in the computer. There are 45 predefined types and 4 user definable types that are used for Enhanced IDE BIOS. Type 1 to Type 45 are predefined. Type "User" is user-definable. If your hard disk drive type does not match with the drive table or listed in it, you can use Type "User" to define your own drive type manually.

If you select Type “**Auto**”, BIOS will Auto-Detect the HDD & CD-ROM drive at the POST stage and show the IDE for HDD & CD-ROM drive.

If you select Type “**User**”, related information is asked to be entered into the following items. Enter the information directly from the keyboard and press <**Enter**>:

If an additional ESDI HDD Controller interface is ESDI, on-chip Primary and/or Secondary has to be disabled. If the controller of HDD interface is SCSI, the type should be set as “Auto” whatever the HDD interfaces is.

CYLS	number of cylinders	HEAD	number of heads
PRECOMP	write precom	LANDZ	landing zone
SECTOR	number of sectors	MODE	HDD access mode

Video

This category selects the type of video adapter used for the primary system monitor. Although secondary monitors are supported, you do not have to select the type in Setup.

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.

Error Halt

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

No errors	The system boot will not stop for any error 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 the other errors.
All, But Diskette	The system boot will not stop for a disk error; but it will stop for all the other errors.
All, But Disk/Key	The system boot will not stop for a keyboard or disk error, but it will stop for all the other errors.

Memory

This category display-only what is determined by POST (Power On Self Test) in the BIOS.

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Base Memory	The POST in 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 present during the POST.
Other Memory	This is the memory that can be used for different applications. Shadow RAM is mostly use in this area.
Total Memory	Total memory of the system is the sum of the above memory.

BIOS Features Setup

ROM PCI/ISA BIOS (2A59IQ1F) 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	: A,C, SCSI	D4000–D7FFF Shadow	: Disabled
Swap Floppy Drive	: Disabled	D8000–DBFFF Shadow	: Disabled
Boot Up Floppy Seek	: Disabled	DC000–DFFFF Shadow	: Disabled
Boot Up Numlock Status	: On	Delay for HDD (Secs)	: 0
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay(Msec)	: 250		
Security Option	: Setup	ESC: Quit	↑↓→← : Select Item
PCI/VGA Palette Snoop	: Disabled	F1 : Help	PU/PD/+/- : Modify
OS Select For DRAM>64MB	: Non-OS2	F5 : Old Values (Shift)F2: Color	
Report No FDD For WIN95	: Yes	F7 : Load Setup Defaults	

Figure-3 BIOS Features Setup

The following pages indicate the options of each item and describe their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Virus Warning	<i>Enabled</i>	Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.
	<i>Disabled</i>	No warning message appears when anything
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attempts to access the boot sector or hard disk partition table.

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

• CPU Internal Cache	<i>Enabled</i>	Enables CPU internal cache.
	<i>Disabled</i>	Disables CPU internal cache.
• External Cache	<i>Enabled</i>	Enables external cache.
	<i>Disabled</i>	Disables external cache.
• Quick Power On Self Test	<i>Enabled</i>	Enables quick POST. BIOS will shorten or skip some check items during POST to speed up POST after you power on the computer. Normal POST.
	<i>Disabled</i>	Any search sequence can be choosen for bootup.
• Boot Sequence	<i>C, CD-ROM, A ... SCSI, C ,A</i>	Exchanges the assignment of A&B floppy drives.
• Swap Floppy Drive	<i>Enabled</i>	The assignment of A&B floppy drives are normal.
	<i>Disabled</i>	BIOS searches for floppy disk drive to determine if drive is ready for diskette read/write during booting.
• Boot Up Floppy Seek	<i>Enabled</i>	SkipS drive seeking to speed up system booting.
	<i>Disabled</i>	Keypad is used as number keys.
• Boot Up Numlock Status	<i>On</i>	Keypad is used as arrow keys.
	<i>Off</i>	Enables typematic rate and typematic delay programming.
• Typematic Rate Setting	<i>Enabled</i>	DisableS typematic rate and typematic delay programming. The system BIOS will use the default value of these two items.
	<i>Disabled</i>	Sets the speed of the typematic rate (characters per second).
• Typematic Rate Chars/Sec	<i>6 ~ 30</i>	Set the time of the typematic delay.
• Typematic Delay (Msec)	<i>250 ~ 1000</i>	
• Security Option	<i>System</i>	The system will not boot and access to Setup will be denied if the correct password is not entered when prompted.
	<i>Setup</i>	The system will boot up, but access to Setup will be denied if the correct password is not entered when prompting.
		**Note: To disable security, select Password Setting in Main Menu, you will
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AWARD BIOS Description

be asked to enter the password. Do not type anything, just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you are able to enter Setup freely.

• PCI/VGA Palette Snoop	<i>Enabled</i> <i>Disabled</i>	Enables PCI/VGA palette snoop. Disables PCI/VGA palette snoop.
• OS Select For DRAM>64MB	<i>Non-OS2</i> <i>OS2</i>	If your operating system is not OS/2, please select this item. If system DRAM is more than 64MB and operating system is OS/2, please select this item.
• Report No FDD For WIN95	<i>Yes</i> <i>No</i>	Releases IRQ6 to WIN95 if no FDD are in the connection. Does not release IRQ6 to WIN95.
• Video BIOS Shadow	<i>Enabled</i> <i>Disabled</i>	Video BIOS will be copied to RAM. Video Shadow will increase the video speed. Video shadow is disabled.
• C8000~CBFFF Shadow ... DC000-DFFFF Shadow:	<i>Enabled</i> <i>Disabled</i>	Optional ROM will be copied to RAM by 16K bytes per unit. The shadow function is disabled.
• Delay For HDD (Secs)	<i>0 ~ 15</i>	This item allows you to set additional delay time (0~15seconds) for HDD detection. If you encounter any HDD detection problems, delay time can be added.

Chipset Features Setup


ROM PCI/ISA BIOS (2A59IQ1F) CHIPSET FEATURES SETUP AWARD SOFTWARE, INC.			
Auto Configuration	:Enabled	Pipeline Cache Timing	: Faster
DRAM Timing	:60ns	Chipset NA# Asserted	:Enabled
DRAM Lead off Timing	:10/6/3	Mem Drive Str. (MA/RAS)	:Auto
DRAM Read Burst (EDO/FP)	:x444/x444	DRAM Refresh Rate	:15.6us
DRAM Write Burst Timing	:x222		
Fast EDO Leadoff	:Disabled		
Refresh RAS# Assertion	:4 Clks		
Fast RAS To CAS Delay	:3		
DRAM Page Idle Timer	:2 Clks		
DRAM Enhanced Paging	:Enabled		
Fast MA to RAS# Delay	:2 Clks		
SDRAM(CAS Lat/RAS-to-CAS)	:3/3		
SDRAM Speculative Read	:Disabled		
System BIOS Cacheable	:Disabled		
Video BIOS Cacheable	:Disabled		
8 Bit I/O Recovery Time	:2	ESC : Quit	↑↓→← : Select Item
16 Bit I/O Recovery Time	:1	F1 : Help	PU/PD/+/- : Modify
Memory Hole At 15M-16M	:Disabled	F5 : Old Values	(Shift)F2: Color
PCI 2.1 Compliance	:Enabled	F7 : Load Setup Defaults	

Figure-4 Chipset Features Setup Menu

The following pages indicates the options of each item and describe their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Auto Configuration	Enabled Disabled	Enables auto configuration of DRAM timing Manually set DRAM timing.
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 **Warning: Do not set DRAM timing too fast this may affect the stability of your system.**

• DRAM Timing	60ns, 70ns	This item is of selected DRAM read/write timing. You must ensure that your SIMMs are as fast as 60ns, otherwise you have to select 70ns.
• DRAM Leadoff Timing... Fast MA to RAS# Delay		These items are concerning DRAM Timing configuration.
• SDRAM (CAS Lat/RAS-to-CAS) & SDRAM Speculative Read		These items are concerning SDRAM Timing configuration.
• System BIOS Cacheable	Enabled	Other than conventional memory, the system BIOS area is also cacheable.
	Disabled	The system BIOS area is not cacheable.
• Video BIOS Cacheable	Enabled	Other than conventional memory, video BIOS area is also cacheable.
	Disabled	Video BIOS area is not cacheable.
• 8 Bit I / O Recovery Time	1~4	This is the ISA Bus 8 bit I/O operating recovery time.
	NA	8 bit I/O recovery time does not exist.
• 16 Bit I / O Recovery Time	1~4	This is the ISA Bus 16 bit I/O operating recovery time.
	NA	16 bit I/O recovery time is not exist.
• Memory Hole At 15M-16M	Enabled	Memory Hole at 15-16M is reserved for expanded PCI card.
	Disabled	Do not set this memory hole
• Pipeline Cache Tim-Fastening	Fastest	This item allows you to select two timing of pipeline cache, faster and fastest.
• Chipset NA# Asserted	Enabled	This item allows you to select between two methods of chipset NA# asserted during CPU with cycles/CPU line fills Enabled or Disabled.
	Disabled	This item allows you select memory drive Str. If high loading SIMM RAM is used (the number of memory chips exceed 64), select 16mA/16mA..
• Mem Drive Str. (MA/RAS)		For SDRAM and/or EDO/FPM memory sub-system..
• DRAM Refresh Rate	15.6us	For EDO/FPM only memory sub-system
	31.2us	
	64.4us	
	125us	
	256us	
	Disabled	Refresh disabled

Power Management Setup

ROM PCI/ISA BIOS (2A59IQ1F) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.		
Power Management	:Disabled	** Reload Global Timer Events **
PM Control by APM	:Yes	IRQ [3-7, 9-15], NMI :Enabled
Video Off Method	:V/H SYNC+Blank	Primary IDE 0 :Disabled
Video Off After	:N/A	Primary IDE 1 :Disabled
		Secondary IDE 0 :Disabled
Doze Mode	:Disabled	Secondary IDE 1 :Disabled
Standby Mode	:Disabled	Floppy Disk :Disabled
Suspend Mode	:Disabled	Serial Port :Enabled
HDD Power Down	:Disabled	Parallel Port :Disabled
Throttle Duty Cycle	:62.5%	
VGA Active Monitor	:Disabled	Thermal Duty Cycle :Disabled
		CPU Warning Temperature :80°C
		ESC : Quit ↑↓→← : Select Item
		F1 : Help PU/PD/+/- : Modify
		F5 : Old Values (Shift)F2: Color
		F7 : Load Setup Defaults
IRQ 8 Clock Event	:Disabled	

Figure-5 Power Management Setup Menu

The following pages indicates the options of each item and describe their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• 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 so that all timers are in their MAX values
	<i>Max Saving</i>	Pre - defined timer values are used such that all timers are in their MIN value
• PM Control by APM	<i>No</i>	System BIOS will ignore APM when Power Management is enabled.
	<i>Yes</i>	System BIOS will wait for APM's prompt before

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it enters any PM mode e.g. Standby or Suspend.

		<p>**Note: If APM is installed (choose "Yes"), if there is a task running, even the timer is set as time out, the APM will not prompt the BIOS to put the system into any power saving mode. But if APM is not installed (choose "No"), this option has no effect.</p>
• Video Off Method	<p><i>Blank Screen</i> <i>V / H SYNC + Blank</i> <i>DPMS</i></p>	<p>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 cards to monitor. This function is enabled only for the VGA card supporting DPMS.</p> <p>**Note:When the Green monitor detects the V/H-SYNC signal, the electron gun will be turned off.</p>
• Video Off After	<p><i>N/A</i> <i>Suspend</i> <i>Standby</i></p>	<p>System BIOS will never turn off the screen. Screen is off when the system is in Suspend mode. Screen is off when the system is in Standby mode.</p>
• Doze mode	<p><i>Doze</i> <i>Disabled</i> <i>1Min ~ 1 Hr</i></p>	<p>Screen is off when the system is in Doze mode. The system will never enter Doze mode. Defines the continuous idle time before the system enters Doze mode. If any item defined in "Wake Up Events In Doze & Suspend" is On and activated, the system will be waken up.</p>
• Standby Mode	<p><i>Disabled</i> <i>1 Min ~ 1Hr</i></p>	<p>The system will never enter Standby mode. Defines the continuous idle time before the system enters Standby mode. If any item defined in "Wake Up Events In Doze & Suspend" is On and activated, the system will be waken up.</p>
• Suspend Mode	<p><i>Disabled</i> <i>1 Min ~ 1Hr</i></p>	<p>The system will never enter Suspend mode. Defines the continuous idle time before the system enters Suspend mode. If any item defined in "Wake Up Events In Suspend" is On and activated, the system will be waken up.</p>
• HDD Power Down	<p><i>Disabled</i> <i>1Min~15 Min</i></p>	<p>HDD's motor will not be off. Defines the continuous HDD idle time before the HDD entering power saving mode (motor off).</p>
• Throttle Duty	<p><i>Enabled</i></p>	<p>Enables clock throttling.</p>
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Cycle	<i>Disabled</i>	Disables clock throttling.
• IRQ8 Clock	<i>Enabled</i>	Generates a clock event.
Event	<i>Disabled</i>	Does not generate a clock event.
• IRQ(3~7, 9~15), NMI... Parallel Port	<i>Enabled</i>	Reloads global timer.
• Thermal Duty Cycle	<i>Disabled</i>	Does not influence global timer.
	<i>Disabled</i>	Disables thermal control function and speaker alarm function when CPU is overheated.
	25 %	CPU speed will fall 25 percent when CPU is overheated.
	50 %	CPU speed will fall 50 percent when CPU is overheated.
	75 %	CPU speed will fall 75 percent when CPU is overheated.
• CPU Warning Temperature	65°C	Speaker alarms when CPU boundary temperature is over 65°C.
	70°C	Speaker alarms when CPU boundary temperature is over 70°C.
	75°C	Speaker alarms when CPU boundary temperature is over 75°C.
	80°C	Speaker alarms when CPU boundary temperature is over 80°C.

PNP/PCI Configuration Setup

ROM PCI/ISA BIOS (2A59IQ1F) PNP/PCI CONFIGURATION SETUP AWARD SOFTWARE, INC.		
PNP OS Installed	: No	PCI IDE IRQ Map To : PCI-AUTO
Resources Controlled By	: Manual	Primary IDE INT# : A
Force Update ESCD	: Disabled	Secondary IDE INT# : B
IRQ-3 assigned to	: Legacy ISA	Used MEM base addr : N/A
IRQ-4 assigned to	: Legacy ISA	
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	: Legacy ISA	
IRQ-15 assigned to	: Legacy ISA	
DMA-0 assigned to	: PCI/ISA PnP	ESC: Quit ↑↓→← :Select Item F1 : Help PU/PD/+/ - : Modify F5 : Old Values (Shift)F2 : Color F7 : Load Setup Defaults
DMA-1 assigned to	: PCI/ISA PnP	
DMA-3 assigned to	: PCI/ISA PnP	
DMA-4 assigned to	: PCI/ISA PnP	
DMA-5 assigned to	: PCI/ISA PnP	
DMA-6 assigned to	: PCI/ISA PnP	
DMA-7 assigned to	: PCI/ISA PnP	

Figure-6 PNP/PCI Configuration Setup

The following pages indicates the options of each item and describe their meaning.

Item	Option	Description
• Resources Controlled By	Manual	Assigns system resources (IRQ and DMA) manually by user.
	Auto	Assigns system resources (IRQ and DMA) automatically by BIOS.
• Force Updating ESCD	Enabled	The system BIOS forces updating ESCD once, then automatically sets this item as Disable.

	<i>Disabled</i>	Disable forces the update of ESCD function.
• IRQ-3 ~ IRQ-15 assigned to	<i>Legacy ISA</i>	The specified IRQ-x will be assigned to ISA only.
	<i>PCI/ISA PnP</i>	The specified IRQ-x will be assigned to ISA or PCI.
• DMA-0 ~ DMA-7 assigned to	<i>Legacy ISA</i>	The specified DMA-x will be assigned to ISA only.
	<i>PCI/ISA PnP</i>	The specified DMA-x will be assigned to ISA or PCI.
• PCI IDE IRQ Map To	<i>PCI-AUTO</i>	The BIOS will scan for PCI IDE devices and determine the location of the PCI IDE device.
	<i>PCI - SLOTS~1</i>	The BIOS will scan IRQ14 for primary IDE INT# and IRQ15 for secondary IDE INT# at the specified slot.
	<i>ISA</i>	The BIOS will not assign any IRQs even if PCI IDE card is found, because some IDE cards connects the IRQ14&15 directly from ISA slot through a card.
• Primary IDE INT#	<i>A ~ D</i>	Indicates which INT# the PCI IDE card uses for its interrupting the 1st IDE channel.
• Secondary IDE INT#	<i>A ~ D</i>	Indicates which INT# the PCI IDE card uses for its interrupting the 2nd IDE channel.

Load Setup Defaults

The Setup Defaults settings are common and efficient.

Integrated Peripherals

ROM PCI/ISA BIOS (2A59IQ1F) INTEGRATED PERIPHERALS AWARD SOFTWARE, INC.		
IDE HDD Block Mode	: Enabled	Onboard Parallel Port : 378H/IRQ7 Parallel Port Mode : SPP
IDE Primary Master PIO	: Auto	
IDE Primary Slave PIO	: Auto	
IDE Secondary Master PIO	: Auto	
IDE Secondary Slave PIO	: Auto	
IDE Primary Master UDMA	: Auto	
IDE Primary Slave UDMA	: Auto	
IDE Secondary Master UDMA	: Auto	
IDE Secondary Slave UDMA	: Auto	
On-Chip Primary PCI IDE	: Enabled	
On-Chip Secondary PCI IDE	: Enabled	
USB Keyboard Support	: Disabled	
Onboard FDC Controller	: Enabled	ESC: Quit ↑↓→← : Select Item F1 : Help PU/PD/+/-: Modify F5 : Old Values (Shift) F2 : Color F7 : Load Setup Defaults
Onboard Serial Port 1	: Auto	
Onboard Serial Port 2	: Auto	
Onboard IR Controller	: Disabled	

Figure 7 Integrated Peripherals

The following pages indicates the options of each item and describe their meaning.

Item	Option	Description
• IDE HDD Block Mode	Enabled	Allows IDE HDD to read/write several sectors once.
	Disabled	IDE HDD only reads/writes a sector once.
	Mode 0-4	Defines the IDE primary/secondary master/slave PIO mode.
• IDE Primary/Secondary Master/Slave PIO	Auto	The IDE PIO mode is defined according to auto - detect.
	Enabled	On-chip primary/secondary PCI IDE port is enabled.
	Disabled	On-chip primary/secondary PCI IDE port is
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<ul style="list-style-type: none">• Onboard FDC Controller• Onboard Serial Port 1/2	<div><i>Enabled</i> <i>Disabled</i> <i>Auto</i> <i>COM1/3F8,</i> <i>COM2/2F8,</i> <i>COM3/3E8,</i> <i>COM4/2E8,</i> <i>Disabled,</i> <i>Disabled</i> <i>Enabled</i> <i>378/IRQ7,</i> <i>3BC/IRQ7,</i> <i>278/IRQ5,</i> <i>378/IRQ5,</i> <i>Disabled</i> <i>SPP</i> <i>EPP1.7</i> <i>EPP1.9</i> <i>ECP</i> <i>ECP+EPP</i></div>	<p>disabled.</p> <p>Onboard floppy disk controller is enabled.</p> <p>Onboard floppy disk controller is disabled.</p> <p>Sets the address and interrupts the number automatically.</p> <p>Defines the onboard serial port address.</p> <p>Onboard serial port is disabled.</p> <p>Disables onboard IR function.</p> <p>Enables and configures IR mode.</p> <p>Defines onboard parallel port address and IRQ channel.</p> <p>Onboard parallel port is disabled.</p> <p>Defines the parallel port mode as Standard Parallel Port (SPP), Enhanced Parallel Port (EPP), or Extended Capabilities Port (ECP).</p>
<ul style="list-style-type: none">• Onboard IR controller• Onboard Parallel Port		
<ul style="list-style-type: none">• Parallel Port mode		

Password Setting

When selecting this function, 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>.

To disable the password, 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 allowing you to enter Setup freely.

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PASSWORD DISABLED

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

If you select “**Setup**” at “Security Option” of the “BIOS Features Setup” Menu, you will be prompted for the password only when you try to enter “CMOS Setup”.

IDE HDD Auto Detection

The Enhanced IDE features are included in all Award BIOS. Below is a brief description of these features.

ROM/PCI/ISA BIOS (2A59IQ1F) IDE HDD AUTO DETECTION AWARD SOFTWARE, INC.							
HARD DISKS TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE							
Primary Master:							
Select Primary Master Option (N=Skip): N							
Option	Size	Cyls	Heads	Precomp	Landzone	Sectors	Mode
2(Y)	541	525	32	0	1049	67	LBA
1	541	1050	16	65535	1049	63	NORMAL
3	541	525	32	65536	1049	63	LARGE
Note: Some OSes (like SCO-UNIX) must use “NORMAL” for installation							

Figure-9 IDE HDD Auto Detection

1. Setup Changes

With auto-detection

- BIOS setup will display all possible modes supported by the HDD including NORMAL, LBA and LARGE.
- If HDD does not support LBA modes, no “LBA” option will be shown.
- If the number of physical cylinders are less than or equal to 1024, “LARGE” option may not be shown.

- Users can select their appropriate mode.

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MODE	CYLS	HEADS	PRECOMP	LAND	SECTOR ZONE
Drive C: User (516MB)	1120	16	65535	1119	59
Normal					
Drive D: None(203MB)	684	16	65535	685	38
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When HDD is set as “user” type, the “MODE” option will be opened for users to select their own HDD mode.

2. HDD Modes

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

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 the 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 in supporting these kinds of HDD.

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

Auto detect

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

3. Remark

To support LBA or LARGE mode of HDDs, there must be some software 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.

Power - On Boot

If you have made all the changes to the CMOS values and the system can not boot with the CMOS values selected in Setup, restart the system by turning it OFF then ON or by pressing the "RESET" button on the system case. You may also restart the system by simultaneously pressing the <Ctrl>, <Alt> and keys.