

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 immediately to allow you to enter Setup. The other way to enter Setup is to power on the computer. When the below message appears briefly at the bottom of the screen during the POST (Power On Self Test), press key or simultaneously press <Ctrl>, <Alt>, and <Esc> keys.

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 eleven 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 (2A6LGM4E)
 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, and 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 10 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 (2A6LGM4E)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Date(mm:dd:yy): Fri, Feb 28,1997							
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.			Base Memory: 640K			
Drive B :	None			Extended Base Memory:15360K			
Video :	EGA/VGA			Other Memory: 384K			
Halt On :	All, but Keyboard			Total Memory: 16384K			
ESC : Quit ↑↓→← : Select Item PU/PD/+- : Modify F1 : Help (Shift)F2 : Change Color							

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

CPU Internal Cache

The default value is Enabled.

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.

CPU L2 Cache ECC Checking

Choose Enabled or Disabled. This option enables the level 2 cache memory ECC(error check correction).

Processor Number Feature

This option is for Pentium III processor. During Enabled, this will check the CPU Serial number. Disable this option if you don't want the system to know the Serial number.

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 From LAN First

During Enabled, if there's a LAN card onboard, the priority from booting will be from the LAN.

Boot Sequence

This category determines which drive the computer searches first for the disk operating system (i.e., DOS). The settings are A,C,SCSI/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,LS/ZIP,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 Floppy Seek

During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360K type is 40 tracks while 760K, 1.2M and 1.44M are all 80 tracks.

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.

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

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(2A69KM4J)
CMOS SETUP UTILITY
CHIPSET FEATURES SETUP

SDRAM Cycle Length	:3	Auto Detect DIMM/PCI Clk	:Enabled
DRAM Data Integrity Mode	:Non-ECC	Spread Spectrum	:Disabled
DRAM Clock	:Host Clk	CPU Host Clock(CPU/PCI)	:Default
Memory Hole	:Disabled		
Read Around Write	:Disabled		
Concurrent PCI/Host	:Disabled		
Video RAM Cacheable	:Disabled		
AGP Aperture Size (MB)	:64M		
AGP -2X Mode	:Enabled		
OnChip USB	:Enabled		
USB Keyboard Support	:Disabled		
		Esc : Quit ↑↓→← : Select item	
		F1 : Help PU/PD/+/- : modify	
		F5 : Old Value(Shift) F2 : Color	
		F7 : Load Setup Defaults	

Note: Change these settings only if you are familiar with the chipset.

SDRAM Cycle Length

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. Do not reset this field from the default value specified by the system designer. The settings are 2 or 3.

Memory Hole

In order to improve performance, certain space in memory is reserved for ISA cards. This memory must be mapped into the memory space below 16MB. The default setting is Disabled.

DRAM Data Integrity Mode

Select Non-ECC or ECC (error-correcting code), according to the type of installed DRAM. The settings are Non-ECC (default) or ECC.

DRAM Clock

The default value for this item is Host Clk.

Host Clk	DRAM Clock equals to host (system clock).
HCLK-33M	DRAM Clock equals to host clock minus 33MHz.
HCLK+33M	DRAM Clock equals to host clock plus 33MHz.

Read Around Write

DRAM optimization feature: If a memory read is addressed to a location whose latest write is being held in a buffer before being written to memory, the read is satisfied through the buffer contents, and the read is not sent to the DRAM. The default setting is Disabled.

Concurrent PCI/Host

When disabled, CPU bus will be occupied during the entire PCI operation period. The settings are Enabled or Disabled.

Video RAM Cacheable

Select Enabled allows the caching of the video RAM, resulting in better system performance. However, if any program writes to this memory area, a system error may result. The settings are Enabled or Disabled.

AGP Aperture Size

Select the size Accelerated Graphics Port (AGP aperture). The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation. The settings are 64M, 32M, 16M, 8M, 4M, 128M.

AGP -2X Mode

This item allows you to Enable/Disable the AGP -2X (Clock 133MHz) Mode. The default setting is Enabled.

OnChip USB

This should be Enabled if your system has a USB installed on the system board and you wish to use it. Even when so equipped, if you add a higher performance controller, you will have to disabled this feature. The default setting is Enabled.

USB Keyboard Support

Select Enabled if your system contains Universal Serial Bus (USB) controller and you have a USB keyboard. The default setting is Disabled

Auto Detect DIMM/PCI Clk

This item allows you to select the DIMM/PCI clock. The other sockets will not generate when DIMM/PCI cards are not installed. The setting should be set to enabled which works better for EMI.

Spread Spectrum Modulated

This item allows you to select the clock generator Spread Spectrum function. The default is enabled. This item should always be set to Disabled, if you over-clock the processor.

CPU Host Clock (CPU/PCI)

This item automatically detects the CPU speed and sets to default value. The settings are 66/33MHz, 75/37MHz, 83/41MHz, 100/33MHz, 103/34MHz, 112/37MHz, 124/41MHz, 133/44MHz, 105/35MHz, 110/36MHz, 115/38MHz, 120/40MHz, 124/31MHz, 133/33MHz, 140/35MHz, and 150/37MHz.

**WARNING!**

We provide CPU Bus Frequency setting for over 100MHz. But we do not guarantee that the Motherboard or other components will work properly after overclocking.

3.7 Power Management Setup

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

ROM PCI/ISA BIOS (2A6LGM4E)
POWER MANAGEMENT SETUP
 AWARD SOFTWARE, INC.

Power Management	:User Define	IRQ3 (COM 2)	: Primary
PM Control by APM	:Yes	IRQ4 (COM 1)	: Primary
Video Off Option	:Suspend->Off	IRQ5 (LPT 2)	: Primary
Video Off Method	:DPMS Support	IRQ6 (Floppy Disk)	: Primary
Modem Use IRQ	:3	IRQ7 (LPT1)	: Primary
Reserve IRQ9	:Yes	IRQ8 (RTC Alarm)	: Disabled
Soft-Off by PWRBTN	:Instant-Off	IRQ9 (IRQ2 Redir)	: Secondary
** PM Timers **		IRQ10 (Reserved)	: Secondary
HDD Power Down	:Disable	IRQ11 (Reserved)	: Secondary
Doze Mode	:Disable	IRQ12 (PS/2 Mouse)	: Primary
Suspend Mode	:Disable	IRQ13 (Coprocessor)	: Primary
** PM Events **		IRQ14 (Hard Disk)	: Primary
VGA	:OFF	IRQ15 (Reserved)	: Disabled
LPT & COM	:LPT/COM		
HDD & FDD	:ON		
Wake Up On LAN	:Disabled		
Modem Ring Resume	:Disabled		
RTC Alarm Resume	: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 user define. The following pages tell you the options of each item & describe the meanings 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.

Video Off Option

When Enabled, this feature allows the VGA adapter to operate in a power saving mode.

Always On	Monitor will remain on during power saving modes.
Suspend --> Off	Monitor blanked when the systems enters the Suspend mode.
Suspend/Standby --> Off	Monitor blanked when the system enters either Suspend or Standby modes.
All Modes --> Off	Monitor blanked when the system enters any power saving mode.

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.

MODEM Use IRQ

Name the interrupt request (IRQ) line assigned to the modem (if any) on your system. Activity of the selected IRQ always awakens the system. The settings are NA, 3, 4, 5, 7, 9, 10, or 11.

Reserve IRQ 9

This item is reserved for Windows® 98 ACPI mode. Choose yes, if you use Windows® 98 ACPI mode. Otherwise, set to no.

Soft-Off by PWRBTN

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has “hung.” The settings are Delay 4 Sec, Instant-Off.

PM Timers

The following four modes are Green PC power saving functions which are only user configurable when User Defined Power Management has been selected.

HDD Power Down

When Enabled and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.

Doze Mode

When Enabled and after the set time of system inactivity, the CPU clock will run at slower speed while all other devices still operate at full speed. The settings are Disabled, 10sec, 20sec, 30sec, 40sec, 1min, 2min, 4min, 6min, 8min.

Suspend Mode

When Enabled and after the set time of system inactivity, all devices except the CPU will be shut off. The settings are Disabled, 10min, 20min, 30min, 40min, 1hour.

PM Events

PM events are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such a mode. In effect, the system remains alert for anything which occurs to a device which is configured as On, even when the system is in a power down mode.

VGA

When Enabled, you can set the LAN to awaken the system.

LPT & COM

When On of LPT & COM, any activity from one of the listed system peripheral devices or IRQs wakes up the system

HDD & FDD

When On of LPT & COM, any activity from one of the listed system peripheral devices or IRQs wakes up the system

Wake Up On LAN

To use this function, you need a LAN add-on card which support power on functions. It should also support the wake-up on LAN jumper (JWOL1).

Enabled	Wake up on LAN supported.
Disabled	Wake up on LAN not supported.

Modem Ring Resume

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.

RTC Alarm Resume

When Enabled, you can set the date and time at which the RTC (real-time clock) alarm awakens the system from Suspend mode.

IRQ3/IRQ4/IRQ5/IRQ6/IRQ7/IRQ8/IRQ9/IRQ10/IRQ11/ IRQ12/IRQ13/IRQ14/IRQ15

The following is a list of IRQ's, Interrupt ReQuests, which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service.

When set On, activity will neither prevent the system from going into a power management mode nor awaken it.

- **IRQ3 (COM 2)**
- **IRQ4 (COM 1)**
- **IRQ5 (LPT 2)**
- **IRQ6 (Floppy Disk)**
- **IRQ7 (LPT 1)**
- **IRQ8 (RTC Alarm)**
- **IRQ9 (IRQ2 Redir)**
- **IRQ10 (Reserved)**
- **IRQ11 (Reserved)**
- **IRQ12 (PS / 2 Mouse)**
- **IRQ13 (Coprocessor)**
- **IRQ14 (Hard Disk)**
- **IRQ15 (Reserved)**

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 meanings of each options.

ROM PCI/ISA BIOS (2A6LGM4E)
PNP/PCI CONFIGURATION SETUP
AWARD SOFTWARE, INC.

PnP OS Installed	:No	CPU to PCI Write Buffer:Enabled
Resources Controlled By	:Manual	PCI Dynamic Bursting :Enabled
Reset Configuration Data	:Disabled	PCI Master 0 WS Write :Enabled
		PCI Delay Transaction :Enabled
IRQ-3 assigned to	:Legacy ISA	PCI#2 Access #1 Retry :Disabled
IRQ-4 assigned to	:Legacy ISA	AGP Master 1 WS Write :Enabled
IRQ-5 assigned to	:PCI/ISA PnP	AGP Master 1 WS Read :Disabled
IRQ-7 assigned to	:PCI/ISA PnP	
IRQ-9 assigned to	:PCI/ISA PnP	PCI IRQ Activated By :Level
IRQ-10 assigned to	:PCI/ISA PnP	Assign IRQ For VGA :Enabled
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	Esc : Quit ↑↓→←: Select item
DMA-6 assigned to	:PCI/ISA PnP	F1 : Help PU/PD/+/- : modify
DMA-7 assigned to	:PCI/ISA PnP	F5 : Old Value(Shift) F2 : Color
		F7 : Load Setup Defaults

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 or 98. 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 resource 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

Normally, you leave this field 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 such a serious conflict that the operating system cannot boot. The settings are Enabled or Disabled.

IRQ3/IRQ4/IRQ5/IRQ7/IRQ9/IRQ10/IRQ11/IRQ12/IRQ14/IRQ15

When resources are controlled manually, assign each system interrupt as one of the following types, depending on the type of device using the interrupt:

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. The settings are Legacy ISA, PCI/ISA PnP.

DMA0/1/3/5/6/7 assigned to

When resources are controlled manually, assign each system DMA channel as one of the following types, depending on the type of device using the interrupt:

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. The settings are Legacy ISA, PCI/ISA PnP.

CPU to PCI Write Buffer

When this field is Enabled, writes from the CPU to the PCI bus are buffered, to compensate for the speed differences between the CPU and the PCI bus. When Disabled, the writes are not buffered and the CPU must wait until the write is complete before starting another write cycle. The settings are Enabled or Disabled.

PCI Dynamic Bursting

When Enabled, every write transaction goes to the write buffer. The default setting is Disabled.

PCI Master 0 WS Write

When Enabled, writes to the PCI bus are executed with zero wait states.

PCI Delay Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select Enabled to support compliance with PCI specification version 2.1.

PCI#2 Access #1 Retry

When PCI#2 (AGP bus) access to PCI#1 (PCI bus) has a error occurred. The default setting is Disabled.

AGP Master 1 WS Write

When Enabled, writes to the AGP (Accelerated Graphics Port) are executed with one wait states. The default setting is Disabled.

AGP Master 1 WS Read

When Enabled, read to the AGP (Accelerated Graphics Port) are executed with one wait states. The default setting is 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.

Assign IRQ For VGA

Enabled or Disabled to assign IRQ for VGA

3.9 Load Setup Defaults

This Main Menu item loads the default system values. If the CMOS is corrupted, the defaults are loaded automatically. Choose this item and the following message appears:

“ Load Setup Defaults (Y / N) ? N “

To use the Setup defaults, change the prompt to “Y” and press < Enter >

Note: The Setup defaults can be customized to increase performance. However the BIOS defaults can always be used as a back up if there is some problem with the mainboard operation.

3.10 Special Features Setup (optional)

This Special Features Setup is used by System Hardware Monitor chipset. You can manually change the value of each option.

**ROM PCI/ISA BIOS (2A69KM4J)
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.**

<pre>***** POST SHOWING ***** Chassis Fan Detected :Disabled Power Fan Detected :Disabled CPU Fan Detected :Enabled Chassis Intrusion Detect :Disabled Voltage Detected :Enabled Vcore Voltage Detected :Enabled +1.5V Voltage Detected :Enabled +3.3V Voltage Detected :Enabled +5.0V Voltage Detected :Enabled +12V Voltage Detected :Enabled -12V Voltage Detected :Enabled -5.0V Voltage Detected :Enabled</pre>	<pre>***** SYSTEM MONITOR ***** Chassis FAN RPM :0 Power FAN RPM :0 CPU Fan RPM :6367 System Temperature :26°C/78°F CPU Temperature :28°C/82°F CPU Critical Temp :Disabled Shutdown Temp :Disabled</pre> <hr/> <pre>Esc : Quit ↑↓→← : Select item F1 : Help PU/PD/+/- : modify F5 : Old Value(Shift) F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults</pre>
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Chassis Fan Detected/Power Fan Detected/CPU Fan Detected/Voltage Detected/Vcore Voltage Detected/+1.5V Voltage Detected/+3.3V Voltage Detected/+5.0 Voltage Detected/+12V Voltage Detected/-12V Voltage Detected/-5.0 Voltage Detected

During Enabled, this will show the CPU/FAN voltage chart during system boot up. During Disabled, this will not show.

Chassis Intrusion Detect

Set this option to Enabled, Reset, or Disabled the chassis intrusion detector. During Enabled, any intrusion on the system chassis will be recorded. The next time you turn on the system, it will show a warning message. To be able to clear those warning, choose Reset. After clearing the message, it will go back to Enabled.

Chassis/Power/CPU Fan RPM

During Enabled, this will monitor the RPM of your CPU/Chassis/Power fan.

System Temperature/CPU Temperature

This will show the System and CPU temperature.

CPU Critical Temp

This option is for setting the critical temperature level for the processor. When the processor reach the temperature you set, this will reduce the load on the processor.

Shutdown Temp

This option is for setting the Shutdown temperature level for the processor. When the processor reach the temperature you set, this will shutdown the system. This function only works with Windows® 95 operating system.

3.11 Integrated Peripherals

**ROM PCI/ISA BIOS (2A6LGM4E)
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.**

OnChip IDE Channel0	:Enabled	Onboard FDC Contreoller	:Enabled
OnChip IDE Channel1	:Enabled	Onboard Serial Port 1	:3F8/IRQ4
IDE Prefetch Mode	:Enabled	Onboard Serial Port 2	:2F8/IRQ3
IDE HDD Block Mode	:Enabled	UART Mode Select	:Normal
CDROM Set PIO Mode	:Enabled		
Primary Master PIO	:Auto		
Primary Slave PIO	:Auto	Onboard Parallel Port	:378/IRQ7
Secondary Master PIO	:Auto	Parallel Port Mode	:SPP
Secondary Slave PIO	:Auto		
Primary Master UDMA	:Auto		
Primary Slave UDMA	:Auto	PWRON After PWR-Fail	:Off
Secondary Master UDMA	:Auto	Power Status Led	:Single
Secondary Slave UDMA	:Auto		
Init Display First	:PCI Slot		
Onboard Sound	:Enabled		
POWER ON Function	:BUTTON ONLY	Esc : Quit	↑↓→← : Select item
		F1 : Help PU/PD/+/-	: modify
		F5 : Old Value(Shift)	F2 : Color
		F7 : Load Setup Defaults	

Onchip IDE Channel 0

The chipset contains a PCI IDE interface with support for two IDE channels. Select Enabled to activate the primary IDE interface. Select Disabled to deactivate this interface. The settings are Enabled or Disabled.

Onchip IDE Channel 1

The chipset contains a PCI IDE interface with support for two IDE channels. Select Enabled to activate the secondary IDE interface. Select Disabled to deactivate this interface. The settings are Enabled or Disabled.

IDE Prefetch Mode

The onboard IDE drive interfaces supports IDE prefetching, for faster drive accesses. If you install a primary and /or secondary add-in IDE interface, set this field to Disabled if the interface does not support prefetching. The default setting is Enabled.

IDE HDD Block Mode

When Enabled, this item allows the Block mode access for the IDE HDD. The default setting is Enabled.

CDROM Set PIO Mode

When Enabled, this item allows the CDROM to set the PIO mode.

Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports.

Modes 0 through 4 provide successively increase performance. In Auto mode, the system automatically determines the best mode for each device. The settings are Auto, Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

Primary/Secondary Master/Slave UDMA

Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If you hard drive and your system software both support Ultra DMA/33, select Auto to enable BIOS support. The settings are Auto, Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

Init Display First

This item allows you to decide to active whether PCI Slot or AGP first. The settings are PCI Slot or AGP.

Onboard Sound

Enabled or Disabled the onboard sound chip. The default setting is Enabled.

Power On Function

This function allows you to select the item to power on the system. The settings are: Button Only, Mouse Left, Mouse Right, Password, hotkey, Keyboard 98

Onboard FDC Controller

Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install and-in FDC or the system has no floppy drive, select Disabled in this field.

Onboard Serial Port 1/Port 2

Select an address and corresponding interrupt for the first and second serial ports.

UART Mode Select

This item allows you to determine which Infra Red (IR) function of onboard I/O chip. The settings are IrDA 1.0, Standard, ASKIR, HPSIR.

Onboard Parallel Port

This item allows you to determine access onboard parallel port controller with which I/O address.

Parallel Port Mode

Select an operating mode for the onboard parallel (printer) port. Select Normal unless your hardware and software require one of the other modes offered in this field.

PWRON After PWR-Fail

This option will determine how the system will power on after a power failure.

Power Status LED

This item determines which state the Power LED will use. The settings are Blinking, Dual, and Single. During blinking, the power LED will blink when the system enters the suspend mode. When the mode is in Dual, the power LED will change its color. Choose the single and the power LED will always remain lit.

3.12 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 when you turn on your machine next time.
-

3.13 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 and you may press the <Esc> after the <Enter> to skip this function and go back to the Main Menu.

**ROM PCI/ISA BIOS(2A6LGM4E)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.**

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

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]