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 <Del> 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 <Del> key or simultaneously press <Ctrl>, <Alt>, and <Esc> keys.

PRESS <DEL> TO ENTER SETUP, <ESC> TO SKIP MEMORY TEST

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, <DEL> TO ENTER SETUP

3.2 Getting Help

Main Menu

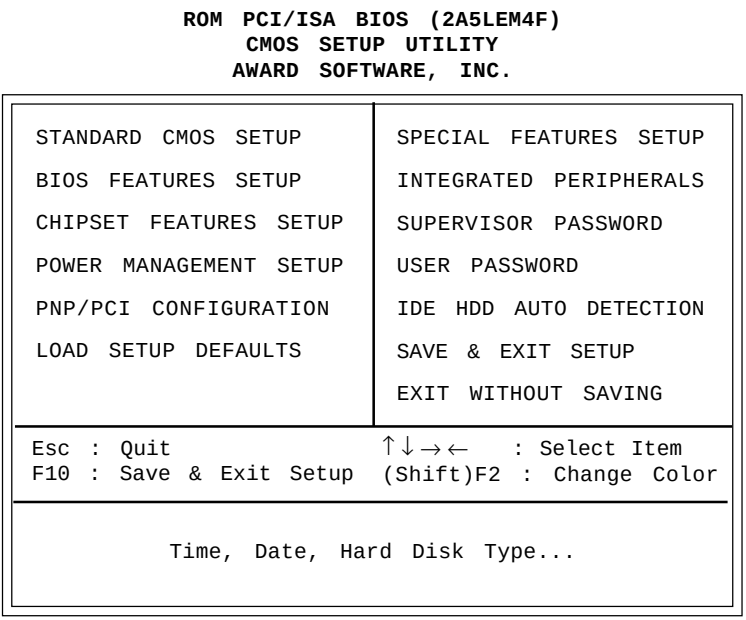
The on-line description of the highlighted setup function is displayed at the bottom of the screen.

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.



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.

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.

Special Features Setup

This function is reserved for System Hardware Monitor.

Integrated Peripherals

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

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

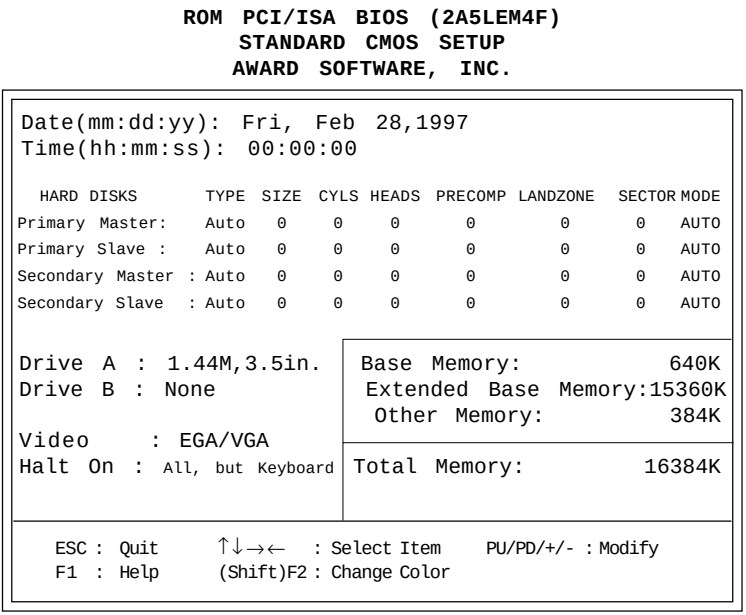
Save CMOS value changes to CMOS and exit setup.

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.



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 (2A5LEM4F)
BIOS FEATURES SETUP
AWARD SOFTWARE, INC.

Anti-Virus Protection	: 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 Floppy Seek	: Enabled	DC000-DFFFF Shadow	:Disabled
Boot up NumLock status	: On		
Gate A20 Option	: Fast		
Memory Parity/ECC Check	: Enabled		
Security Option	: Setup		
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

Anti-Virus Protection

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. The settings are Enabled or Disabled.

!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.

CPU 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 (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 only, LS/ZIP,C. 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 720K, 1.2M, and 1.44M are all 80 tracks.

Enabled(default)	BIOS searches for floppy disk drive to determine if it is 40 or 80 tracks. Take note that BIOS can not tell from 720K, 1.2M , or 1.44M drive type as they are all 80 tracks.
Disabled	BIOS will not search for the type of floppy disk drive by track number. There will be no warning message if the drive installed is 360K.

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.

Memory Parity/ECC Check

Set this option to Enabled, to use the Parity/ECC function. This is used with DIMM module. The default setting is Disabled.

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(2A5LEM4F**)**
CMOS SETUP UTILITY
CHIPSET FEATURES SETUP

Bank 0/1 DRAM Timing	:FP/EDO70ns	Auto Detect DIMM/PCI Clk	:Enabled
Bank 2/3 DRAM Timing	:FP/EDO70ns	Spread Spectrum	:Disabled
Bank 4/5 DRAM Timing	:FP/EDP70ns		
SDRAM Cycle Length	:3		
DRAM Read Pipeline	:Enabled		
Cache Rd+CPU WtPipeline	:Enabled		
Cache Timing	:Fast		
Video BIOS Cacheable	:Enabled		
System BIOS Cacheable	:Enabled		
Memory Hole at 15MB Addr	:Disabled		
AGP Aperture Size	:64M		
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.

Bank 0/1 DRAM Timing
Bank 2/3 DRAM Timing
Bank 4/5 DRAM Timing

The DRAM timing is controlled by the DRAM Timing Registers. The Timings programmed into this register are dependent on the system design. Slower rates may be required in certain system designs to support loose layouts or slower memory.

SDRAM Cycle Length

This item allows you to select the SDRAM cycle length. The settings are 2 or 3.

DRAM Read Pipeline

This item sets the timing for pipeline burst mode read from DRAM. The default setting is Enabled.

Cache Rd+CPU wt Pipeline

This item can enabled the pipelining of Cache read and CPU write cycle. The default setting is Enabled.

Cache Timing

This field allows you to determine the Cache burst mode timing.

Fast	Cache burst mode timing are 31112111.
Fastest	Cache burst mode timing are 31111111.

Video BIOS Cacheable

Select Enabled allows caching of the system BIOS ROM at C0000h-F7FFFh, resulting in better video performance. However, if any program writes to this memory area, a system error may result.

Enabled	Video BIOS access cached
Disabled	Video BIOS access not cached

System BIOS Cacheable

Select Enabled allows caching of the system BIOS ROM at F000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

Enabled	BIOS access cached
Disabled	BIOS access not cached

Memory Hole At 15Mb Addr

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

Enabled	Memory hole supported.
Disabled	Memory hole not supported.

AGP Aperture Size (MB)

Select the size of the 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.

Onchip USB

Set this option to Enable or Disable the onchip USB controller. The default setting is Enabled.

USB Keyboard Support

Set this option to Enable or Disable the USB keyboard/mouse support. The default setting is Enabled.

Auto Detect DIMM/PCI Clk

This item allows the clock generator to auto-detect the interface of DIMM/PCI. If there's no DIMM/PCI card present, then the clock will be shut down. The default setting is Enabled.

Spread Spectrum

This item allows you to select the clock generator Spread Spectrum function. When overclocking the processor, always set this item to Disabled. The default is enabled.

3.7 Power Management Setup

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

```
ROM PCI/ISA BIOS (2A5LEM4F)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.
```

ACPI Function	:Enabled	Primary INTR	:ON
Power Management	:User Define	IRQ3(COM2)	:Primary
PM Control by APM	:Yes	IRQ4(COM1)	:Primary
Video Off Option	:Suspend>Off	IRQ5(LPT2)	:Primary
Video Off Method	:V/H SYNC+blank	IRQ6(Floppy Disk)	:Disabled
Soft-Off by PWR-BTTN	:Delay 4sec	IRQ7(LPT1)	:Primary
		IRQ8(RTC Alarm)	:Disabled
PM Timers		IRQ9(IRQ2 Redir)	:Primary
HDD Power Down	:Disabled	IRQ10(reserved)	:Primary
Doze Mode	:Disabled	Reserved	:Primary
Suspend Mode	:Disabled	IRQ12(PS/2 mouse)	:Primary
		IRQ13(Coprocessor)	:Primary
PM Events		IRQ14(Hard Disk)	:Primary
VGA	:OFF	IRQ15(Reserved)	:Disabled
LPT&COM	:LPT/COM		
HDD&FDD	:OFF		
DMA/master	:OFF		
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 Disable. The following pages tell you the options of each item & describe the meanings of each options.

ACPI Function

During Enabled, this will support ACPI function.

Power Management

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® 95/98, Windows® NT, etc.

Video Off Option

This option allows you to determine when to activate the video off feature to monitor the power management. The settings are Video Off after Suspend/All modes/Always On.

Video Off Method

Blank Screen	The system BIOS will only blank off the screen when disabling video.
V/H SYN C+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.

Soft-off by PWRBTN

This field is for the soft-off function setting. When the board utilizes an ATX power supply, two types of settings are offered: Delay 4 sec. and Instant-off. When the setting is Delay 4 sec., users can power off the system by pressing POWER-ON button for 4 seconds. However, if users press POWER-ON button for less than 4 seconds, the system will enter suspend mode only. When the setting is Instant-off, pressing the POWER-ON button once will power off the system, and pressing again will power on the system.

HDD Power Down

Disable	HDD's motor will not shut off.
1 Min/2 Min/ 3 Min/4 Min/ 5 Min/6 Min/ 7 Min/8 Min/ 9 Min/10 Min/ 11 Min/12 Min/ 13 Min/14 Min/ 15 Min	Defines the continuous HDD idle time before the HDD enters the power saving mode (motor off). BIOS will turn off the HDD's motor when time is out.

Doze Mode

Disable	System will never enter DOZE mode.
10/20/30/40sec/ 1 Min/2 Min/ 4 Min/8 Min/ 12 Min/20 Min/ 30 Min/40 Min/ 1 Hr	Defines the continuous idle time before the system enters DOZE mode. If any item defined in the options of "Power Down and Resume events" is enabled & active, DOZE timer will be reloaded. When the system have entered Doze mode, any of the items enabled in "Wake Up Events in Doze and Standby" will trigger the system to wake up.

Suspend Mode

Disable	System will never enter SUSPEND mode.
10/20/30/40sec/ 1 Min/2 Min/ 4 Min/6 Min/ 8 Min/10 Min/ 20 Min/30 Min/ 40 Min/1 Hr	Defines the continuous idle time before the system enters SUSPEND mode. 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.

PM Events

Award BIOS defines 7 PM events in the power management mode (Doze &suspend). The user can initialize any PM Events to be Enable or Disable. When the system detects all of the enabled events do not have any activity, it will start the system Doze timer first if the Power Management is not Disabled. Once the system Doze timer is timed out, it will process doze power saving procedure by starting the system suspend timer. When the suspend timer times out, all of the CPU clock will stop by dropping system clock down to zero and remains this way until any one of the enabled events occurrs.

VGA	**ON/OFF**
LPT &COM	**NONE/LPT/COM/LPT&COM**
HDD & FDD	**ON/OFF**
DMA/Master	**ON/OFF**

Modem Ring Resume

During Disabled, the system will ignore any incoming call from the modem or LAN. During Enabled, the system will boot up if there's an incoming call from the modem or LAN.

Note: If you have change the setting, you must let the system boot up until it goes to the operating system, before this function will work.

RTC Alarm Resume

This function is for setting date and time for your computer to boot up. During Disabled, you cannot use this function. During Enabled, choose the Date and Time Alarm:

Date(of month) Alarm	You can choose which day of the month the system will boot up. Set to 0, to boot every day.
Time(hh:mm:ss) Alarm	You can choose what hour, minute and second the system will boot up.

Note: If you have change the setting, you must let the system boot up until it goes to the operating system, before this function will work.

3.8 PNP/PCI Configuration

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 (2A5LEM4F)
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
ACPI I/O Device Mode :Enabled	PCI Delay Transaction :Enabled
	PCI Master Read Prefetch :Enabled
IRQ-3 assigned to :Legacy ISA	PCI#2 Access#1 Retry :Enabled
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 Actived By :Level
IRQ-10assigned to :PCI/ISA PnP	Assign IRQ for USB :Enabled
IRQ-11assigned to :PCI/ISA PnP	Assign IRQ for VGA :Enabled
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
DMA-1assigned to :PCI/ISA PnP	F1 : Help PU/PD/+/- : modify
DMA-3assigned to :PCI/ISA PnP	F5 : Old Value(Shift) F2 : Color
DMA-5assigned to :PCI/ISA PnP	F7 : Load Setup Defaults
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 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

The system BIOS supports the PnP feature 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 : Legacy ISA
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 : 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.

CPU to PCI Write Buffer

This item allows you to Enabled or Disabled the CPU to PCI Write Buffer. The default setting is Enabled.

PCI Dynamic Bursting

This setting allows you to Enabled or Disabled PCI Dynamic Bursting function. The default setting is Enabled.

PCI Master 0 WS Write

Enabled zero wait state response.
Disabled one wait state response.
The default setting is Enabled.

PCI Delay Transaction

This item allows you to Enabled to Disabled the PCI Delay Transaction.

PCI Master Read Prefetch

This item allows you to Enabled or Disabled the PCI Master Read Prefetch.

PCI#2 Access #1 Retry

Enabled PCI#2 will be disconnected, if max retries are attempted without success.

Disabled PCI#2 will not be disconnected until access is finish.

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 or edge.

Assign IRQ for USB

Set to Enabled when USB port will be used. Set to Disable if the USB port will not be used.

Assign IRQ for VGA

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

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:

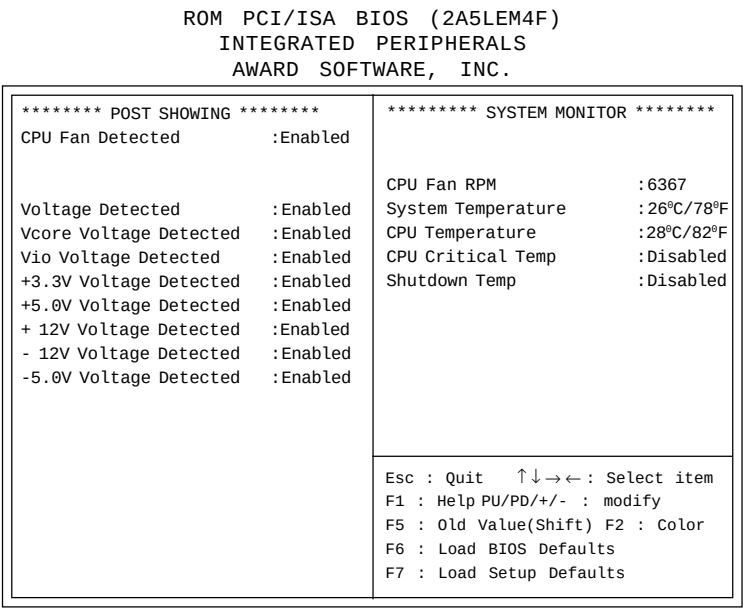
" Load Setup Defaults (Y / N) ? N "

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.



CPU Fan Detected/Voltage Detected/Vcore Voltage Detected/ Vio 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.

CPU Fan RPM

During Enabled, this will monitor the RPM of your CPU 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 (2A5LEM4F)
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.

Onchip IDE First Channel	:Enabled	Onboard Parallel Mode	:378/IRQ7
Onchip IDE Second Channel	:Enabled	Parallel Port Mode	:ECP/EPP
IDE Prefetch Mode	:Enabled	ECP Mode Use DMA	:3
IDE HDD Block Mode	:Enabled	EPP Mode Select	:EPP1.9
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		
Init Display First	:PCI Slot		
Onboard FDD controller	:Enabled		
Onboard Serial Port 1	:Auto	Esc : Quit ↑↓→← : Select item	
Onboard Serial Port 2	:Auto	F1 : Help PU/PD/+/- : modify	
UART2 Mode	:Standard	F5 : Old Value(Shift) F2 : Color	
		F7 : Load Setup Defaults	

Onchip IDE First Channel

Enabled/Disabled

Onchip IDE Second Channel

Enabled/Disabled The system provides for a 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 install 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 Prefetch Mode
Enabled/Disabled

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

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 can not 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).

Init Display First

This item allows you to determine whether AGP or PCI slot will show display first. This option is only used with Windows® 98 support for multiple displays.

Onboard FDD 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 IRQ4

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.

UART2 Mode

This item allow you to determine which Infra Red (IR) function of onboard I/O chip. If you choose IR function, the COM 2 will not function.

Onboard Parallel Port

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

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/IRQ7	Line Printer port 1

Onboard Parallel Mode

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

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.

3.12 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.