Manual of TS-AEX V1.0

Chapter 1 Hardware Setting

Please refer to Installation Guide

Chapter 2 BIOS Setup

Chapter 2 BIOS Setup

INTRODUCTION

Award BIOS has a built-in setup program that allows users to modify the basic system configuration. This information is stored in CMOS RAM; so it can retain the setup information when the power is turned off. When the battery of CMOS fails, it will cause the data loss. When it happens, you should set up your configuration parameters again after replacing the battery.

THE MAIN MENU

As you turn on (or reboot) the system, the BIOS is immediately activated. It will read the system configuration information, and check the system through PowerOn Self Test (POST). During the POST process, press the [DEL] key, and you can enter the Award BIOS configuration system. The following will appear:

ROM PCI/ISA BIOS

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 BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEAFAULTS	
ESC : Quit F10 : Save & Exit Setup	Arrow Keys : Select Item (Shift) F2 : Change Color
Time, Date, Hard Disk Type …	

In the Award BIOS System, you can use the arrow keys ($\downarrow \rightarrow \leftarrow$) to highlight the item. And press the [Enter] key to enter the sub-menu. The following keys help you navigate in Setup:

Esc	Main Menu: Quit and not save changes into CMOS SRAM. Other Pages: Exit current page and return to Main Menu.
PgUp	Increase the numeric value or make changes.
PgDn	Decrease the numeric value or make changes.
+	Increase the numeric value or make changes.
-	Decrease the numeric value or make changes.
F1	General help, only for Status Page Setup Menu and Option Page Setup Menu.
F2	Change color from total 16 colors. F2 to select color forward, Shift-F2 to select color backward.
F5	Restore the previous CMOS value from CMOS SRAM, only for Option Page Setup Menu.
F6	Load the default CMOS SRAM value from BIOS default table, only for Option Page Setup Menu.
F7	Load the default.
F10	Save all the CMOS changes, only for Main Menu

The following is a brief summary of each Setup category:

STANDARD CMOS SETUP

Options in the original PC AT-compatible BIOS.

BIOS FEATURES SETUP

Award enhanced BIOS options.

CHIPSET SETUP

Options specific to your system chipset.

POWER MANAGEMENT SETUP

Advanced Power Management (APM) options.

PnP/PCI CONFIGURATION

Plug and Play standard and PCI Local Bus configuration options.

LOAD BIOS DEFAULTS

BIOS defaults are factory settings for the most stable minimal-performance system operations.

LOAD SETUP DEFAULTS

Setup defaults are factory settings for optimal-performance system operations.

INTEGRATED PERIPHERALS

I/O sub-systems that depend on the integrated peripherals controller in your system.

SUPERVISOR/USER PASSWORD

Change, set, or disable a password. In some BIOS versions that allow separate user and supervisor passwords, only the supervisor password permits access to Setup.

IDE HDD AUTO DETECTION

Automatically detect and configure IDE hard disk parameters.

SAVE & EXIT SETUP

Save settings in nonvolatile CMOS SRAM and exit Setup.

EXIT WITHOUT SAVING

Abandon all changes and exit Setup.

2-1 STANDARD CMOS SETUP

ROM PCI/ISA BIOS

STANDARD CMOS SETUP

AWARD SOFTWARE, INC.

Date (mm:dd:yy) : Tue, Jun : 6 : 1998								
Time (hh:mm:ss) : 7 : 30 : 33								
HARD DISK	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master :	Auto	0	0	0	0	0	0	Auto
Primary Slave :	Auto	0	0	0	0	0	0	Auto
Secondary Master :	Auto	0	0	0	0	0	0	Auto
Secondary Slave :	Auto	0	0	0	0	0	0	Auto

Drive A : 1.44M, 3.5 in.		
Drive B : None	Base Memory :	640K
	Extended Memory :	31744K
Video : EGA/VGA	Other Memory :	384K
Halt on : All Errors	Total Memory :	32768K

ESC : Quit	Arrow Keys : Select Item	PU/PD/+/- : Modify
F1 : Help	(Shift) F2 : Change Color	

Date (mm:dd:yy) / Time (hh:mm:ss)

Highlight the items and use PageUp/PageDown to change the value of Date and Time.

Primary Master/ Primary Slave/ Secondary Master/ Secondary Slave HARD DISK

This mainboard can support four IDE devices. We recommend that you select type AUTO for all drives. The BIOS can automatically detect the specifications and optimal operating mode of almost all IDE hard drives. When you select type AUTO for a hard drive, the BIOS detects its specifications during the POST process every time when the system boots. If you do not want to select AUTO for the drive type, other methods of selecting the drive type are also available:

1. Match the specifications of your installed IDE hard drive(s) with the preprogrammed values for drive type 1 through 45.
2. Select USER and enter values into each drive parameter field.
3. Use the IDE HDD AUTO DECTECTION function in BIOS Setup.

The following is a brief explanation of drive specifications:

TYPE: The BIOS contains a table of pre-defined drive types. Each defined drive type has a specified number of cylinders, number of heads, write pre-compensation factor, landing zone, and number of sectors. Drives whose specifications do not accommodate any pre-defined type are classified as Type USER.

SIZE : Disk drive capacity (approximately). Note that this size is usually slightly greater than the size of a formatted disk given by a disk-checking program.

CYLS: Number of cylinders.

HEAD: Number of heads.

PRECOMP: Write pre-compensation cylinder.

LANDZ: Landing zone.

SECTOR: Number of sectors.

MODE: AUTO, NORMAL, LARGE, or LBA.
  AUTO: The BIOS automatically determines the optimal mode.
  NORMAL: Maximum number of cylinders, heads, and sectors supported are 1024, 16, and 63, respectively.
  LARGE: For drives that do not support LBA and have more than 1024 cylinders.
  LBA(Logical Block Addressing): During drive access, the IDE controller transforms the data address described by sector, head, and cylinder number into a physical block address, significantly improving data transfer rates. For drives with greater than 1024 cylinders.

Drive A / Drive B

Select the correct specifications for the diskette drive(s) installed in the computer:
  None: No diskette drive installed.
  360K, 5.25 in : 5¼ inch PC-type standard drive; 360 kilobyte capacity.
  1.2M, 5.25 in : 5¼ inch AT-type high-density drive; 1.2 megabyte capacity.

720K, 3.5 in : 3$1/2$ inch double-sided drive; 720 kilobyte capacity.

1.44M, 3.5 in : 3$1/2$ inch double-sided drive; 1.44 megabyte capacity.

2.88M, 3.5 in : 3$1/2$ inch double-sided drive; 2.88 megabyte capacity.

Video

Select the type of primary video subsystem in your computer. The BIOS usually detects the correct video type automatically. The BIOS supports a secondary video subsystem, but do not select it in this Setup.

EGA/VGA: Enhanced Graphics Adapter/Video Graphics Array for EGA, VGA, SEGA, SVGA or PGA monitor adapters.

CGA 40: Color Graphics Adapter, powering up in 40-column mode.

CGA 80: Color Graphics Adapter, powering up in 80-column mode.

MONO: Monochrome adapter, including high-resolution monochrome adapters.

Halt On

During the POST process, the computer stops if the BIOS detects a hardware error. You can tell the BIOS to ignore certain errors during POST and continue the boot-up process. The following are the selections:

No Errors: POST does not stop for any error.

All Errors: If the BIOS detects any non-fatal error, POST stops and prompts you to take corrective action.

All, But Keyboard: If the BIOS detects any non-fatal error except keyboard, POST stops and prompts you to take corrective action.

All, But Diskette: If the BIOS detects any non-fatal error except floppy disk drive, POST stops and prompts you to take corrective action.

All, But Disk /Key: If the BIOS detects any non-fatal error except floppy disk drive or keyboard, POST stops and prompts you to take corrective action.

2-2 BIOS FEATURES SETUP

This BIOS FEATURES SETUP option allows you to improve your system performance and set up some system features according to your preference.

ROM PCI/ISA BIOS
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
CPU L2 Cache ECC Checking:	Enabled	D0000 – D3FFF Shadow:	Disabled
Quick Power On Self Test:	Enabled	D4000 – D7FFF Shadow:	Disabled
Boot Sequence:	A, C, SCSI	D8000 – DBFFF Shadow:	Disabled
Swap Floppy Drive:	Disabled	DC000 – DFFFF Shadow:	Disabled
Boot Up NumLock Status:	On		
Gate A20 Option	Fast		
Typematic Rate Setting:	Disabled		
Typematic Rate(Chars/Sec):	6		
Typematic Delay(Msec):	250	ESC: Quit	Arrow Keys: Select Item
Security Option:	Setup	F1: Help	PU/PD/+/-: Modify
PCI/VGA Palette Snoop:	Disabled	F5: Old Values	(Shift) F2: Color
OS Select for DRAM > 64MB	Non-OS2	F6: Load BIOS Defaults	
HDD S.M.A.R.T. Capability:	Enabled	F7: Load Setup Defaults	

Virus Warning

When enabled, you receive a warning message if a program (specifically a virus) attempts to write to the boot sector or the partition table of the hard disk drive. You should then run an anti-virus program. Keep in mind that this feature protects only the boot sector, not the entire hard drive.

NOTE: Many disk diagnostic programs that access the boot sector table can trigger the virus warning message. If you plan to run such a program, we recommend that you first disable the virus warning.

CPU Internal Cache / External Cache

Cache memory is additional memory that is much faster than conventional DRAM (system memory). CPUs from 486-type on up contain internal cache memory, and most, but not all, modern PCs have additional (external) cache memory. When the CPU requests data, the system transfers the requested data from the main DRAM into cache memory for even faster access by the CPU. The External Cache field may not appear if your system does not have external cache memory.

CPU L2 Cache ECC Checking

Select L2 Cache ECC Checking Enabled to make sure the data accuracy.

Quick Power On Self Test

Select Enabled to reduce the amount of time required to run the power-on self-test (POST). A quick POST skips certain steps. We recommend that you normally disable quick POST. Better to find a problem during POST than lose data during your work.

Boot Sequence

The original IBM PCs load the DOS operating system from drive A (floppy disk), so IBM PC-compatible systems are designed to search for an operating system first on drive A, and then on drive C (hard disk). However, the BIOS now offers 11 different boot sequence options. In addition to the traditional drives A and C, options include IDE hard drives D, E, and F; plus a SCSI hard drive, a LS/ZIP drive and a CD-ROM drive.

Swap Floppy Drive

This field is effective only in systems with two floppy drives. Selecting Enabled assigns physical drive B to logical drive A, and physical drive A to logical drive B.

Boot Up NumLock Status

Toggle between On and Off to control the state of the NumLock key when the system boots. When toggled On, the numeric keypad generates numbers instead of controlling cursor operations.

Gate A20 Option

Choose Fast (default) or Normal. Fast allows RAM access above 1MB using the fast gate A20 line.

Typematic Rate Setting

When Disabled, the following two items, Typematic Rate and Typematic Delay, are irrelevant. Keystrokes repeat at a rate determined by the keyboard controller in your system. When Enabled, you can select a typematic rate and typematic delay.

Typematic Rate (Chars/Sec)

When the typematic rate setting is enabled, you can select a typematic rate (the rate at which character repeats) when you hold down a key of 6, 8, 10,12, 15, 20, 24 or 30 characters per second.

Typematic Delay (MSec)

When the typematic rate setting is enabled, you can select a typematic delay (the delay before keystrokes begin to repeat) of 250, 500, 750 or 1000 milliseconds.

Security Option

If you have set a password, select whether the password is required every time the system boots, or only when you enter Setup.

PCI/VGA Palette Snoop

This function is used to prevent conflict when a MPEG card or some capture cards use the same palette address. Enable this to make the cards work normally.

OS Select for DRAM > 64MB

Select OS2 only if you are running OS/2 operating system with greater than 64 MB of RAM on your system.

HDD S.M.A.R.T Capability

S.M.A.R.T. (Self-Monitoring Analysis and Reporting) If your hard disk supports this function, select Enabled.

Video BIOS Shadow

Software that resides in a read-only memory (ROM) chip on a device is called firmware. The Award BIOS permits shadowing of firmware such as the system BIOS, video BIOS, and similar operating instructions that come with some expansion peripherals, for example, a SCSI adapter. Shadowing copies firmware from ROM into system RAM, where the CPU can read it through the 64-bit DRAM bus. Firmware not shadowed must be read by the system through the 8-bit or 16-bit X-bus. Shadowing improves the performance of the system BIOS and similar ROM firmware for

expansion peripherals, but it also reduces the amount of high memory (640 KB to 1 MB) available for loading device drivers, etc. Many system designers hardwire shadowing of the system BIOS and eliminate a System BIOS Shadow option. Video BIOS shadows into memory area C0000-C7FFF. The remaining areas shown on the BIOS Features Setup screen may be occupied by other expansion card firmware. If an expansion peripheral in your system contains ROM-based firmware, you need to know the address range the ROM occupies to shadow it into the correct area of RAM.

2-3 CHIPSET FEATURES SETUP

This option will change the values of the chipset registers and the system setting will alter. Do not change any values if you are not familiar with the chipset.

ROM PCI/ISA BIOS
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.

Auto Configuration:	Enabled	CPU Host Clock Frequency:	66MHz
EDO DRAM Speed Selection:	60 ns	CPU Warning Temperature:	Disabled
EDO CAS# MA Wait State:	Fast	Current CPU Temperature:	40°C/104°F
EDO RAS# to CAS# Delay	3	Current System Temperature:	26°C/78°F
EDO RAS# Precharge Time:	3	Current CPU FAN Speed:	3865 RPM
EDO DRAM Read Burst:	X 333	Current POWER FAN:	0 RPM
EDO DRAM Write Burst:	X 222	Current CASE FAN Speed:	0 RPM
DRAM Data Integrity Mode:	Non-ECC		
System BIOS Cacheable:	Enabled	Vcore: 2.01V VTT: 1.50V	
Video BIOS Cacheable:	Disabled	+3.3V: 3.32V +5.0V: 5.14V	
Video RAM Cacheable:	Disabled	+12V: 11.67V -12V: -11.81V	
8-Bit I/O Recovery Time:	3	-5.0V: -5.09V	
16-Bit I/O Recovery Time:	2		
Memory Hole at 15M-16M:	Disabled		
Passive Release:	Enabled		
Delayed Transaction:	Disabled	ESC: Quit	Arrow Keys: Select Item
AGP Aperture Size(MB):	64	F1: Help	PU/PD/+/-: Modify
SDRAM RAS-to-CAS Delay:	Slow	F5: Old Values	(Shift) F2: Color
SRAM RAS Precharge Time:	Slow	F6: Load BIOS Defaults	
SRAM CAS Latency Time:	3	F7: Load Setup Defaults	

Auto Configuration

Auto Configuration selects predetermined optimal values of chipset parameters. When Disabled, chipset parameters revert to setup information stored in CMOS. Many fields in this screen are not available when Auto Configuration is Enabled.

EDO DRAM Speed Selection

The value in this field depends on performance parameters of the installed EDO DRAM memory chips (DRAM). Do not change the value from the factory setting unless you install new memory that has a different performance rating than the original DRAM.

EDO CAS# MA Wait State

Select Slow for heavy loading DRAM or lower speed DRAM. The default is Fast.

EDO RAS# to CAS# Delay

Determine the number of the clocks of the RAS# to CAS# delay.

EDO RAS# Precharge Time

Determine the timing of precharge from the inactive RAS# to the next active RAS# state.

EDO DRAM Read Burst

Set the timing for reading data from EDO (Extended Data Output) memory. The smaller the timing number, the faster the system addresses memory. Selecting timing numbers lower than the number that installed DRAM is able to support can result in memory errors.

EDO DRAM Write Burst

Set the timing for writing data to memory. The smaller the timing number, the faster the system addresses memory. Selecting timing numbers lower than the number that installed DRAM is able to support can result in memory errors.

DRAM Data Integrity Mode

Non-ECC: Disable Error Checking and Correcting function.
ECC: Enable Error Checking and Correcting function.

System BIOS Cacheable

Select Enabled allows you to cache the system BIOS ROM at F0000H-FFFFFH, resulting in better system performance. However, if any program writes to this memory area, a system error may occur.

Video BIOS Cacheable

Select Enabled allows you to cache the video BIOS ROM at C0000H to C7FFFH, resulting in better video performance. However, if any program writes to this memory area, a system error

may occur.

Video RAM Cacheable

Selecting Enabled allows you to cache Video RAM at A000-B000.

8/16-Bit I/O Recovery Time

The I/O recovery mechanism adds bus clock cycles between PCI-originated I/O cycles to the ISA bus. This delay takes place because the PCI bus is so much faster than the ISA bus. These two fields let you add recovery time (in bus clock cycles) for 8-bit and 16-bit I/O.

Memory Hole at 15M-16M

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. When user information of peripherals that need to use this area of system memory, usually set Enabled for their memory requirements.

Passive Release

This item is used to meet latency of ISA bus. If you have compatibility problem with some ISA card, try to enable or disable it.

Delayed Transaction

This item is used to meet latency of PCI cycles to or from ISA bus. If you have compatibility problem with some ISA card, try to enable or disable it.

AGP Aperture Size (MB)

This item is to select the effective size of the Aperture Size.

SDRAM RAS-to-CAS Delay

Set the delay time of SDRAM signals from RAS to CAS.

SDRAM RAS Precharge Time

Set SDRAM RAS precharge time.

SDRAM CAS Latency Time

This item determines the SDRAM CAS Latency. If your SDRAM is unstable, set it to 3.

CPU Host Clock Frequency

Set the clock frequency of the CPU. The default setting is 66 or 100MHz.

CPU Warning Temperature

Enable this item to protect the CPU from overheating.

Current CPU Temperature / System Temperature

It will show the CPU and System temperatures in Centigrade and Fahrenheit.

Current CPU FAN / POWER FAN / CASE FAN Speed

This item will show the speed of the CPU FAN, POWER FAN and CASE FAN in RPM.

Vcore / VTT / + 3.3V / +5.0V / +12V / -12V / -5.0V

System voltages detected by the onboard hardware monitor.

2-4 POWER MANAGEMENT SETUP

The Power Management Setup option sets the system power saving functions.

ROM PCI/ISA BIOS
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

Power Management:	User Define	** Reload Global Timer Events **	
PM Control by APM:	No	IRQ[3-7, 9-15], NMI:	Disabled
Video OFF After:	NA	Primary IDE 0:	Disabled
MODEM Use IRQ:	NA	Primary IDE 1:	Disabled
Doze Mode:	Disabled	Secondary IDE 0:	Disabled
Standby Mode:	Disabled	Secondary IDE 1:	Disabled
Suspend Mode:	Disabled	Floppy Disk:	Disabled
HDD Power Down:	Disabled	Serial Port:	Disabled
Suspend Mode Option:	PowerOn Suspend	Parallel Port:	Disabled
Throttle Duty Cycle:	62.5%		
VGA Active Monitor:	Disabled		
Soft-Off by PWR-BTTN:	Instant-Off		
LAN Wake Up:	Disabled	ESC: Quit	Arrow Keys: Select Item
Ring Wake Up:	Disabled	F1: Help	PU/PD/+/-: Modify
Time Wake Up:	Enabled	F5: Old Values	(Shift) F2: Color
Date(of Month) Alarm:	0	F6: Load BIOS Defaults	
Time(hh:mm:ss) Alarm:	00:00:00	F7: Load Setup Defaults	

Power Management

> **Max Saving**: Maximum power savings. Inactivity period is 1 minute in each mode.

> **User Define**: Set each mode individually. Select time-out periods in the following Timer section.

> **Min Saving**: Minimum power savings. Inactivity period is 1 hour in each mode (except the hard drive).

PM Control by APM

If Advanced Power Management (APM) is installed on your system, select Yes to give your system better power savings.

Video Off After

As the system moves from lesser to greater power-saving modes, select the mode in which you want the monitor to blank.

MODEM USE IRQ

You can select one of the following: 3/4/5/7/9/11 or NA as IRQ for your modem.

The following modes are Green PC power saving functions. They are user-configurable only under User Define Power Management mode.

Doze Mode

After selecting the period of system inactivity (1 minute to 1 hour), the CPU clock runs at slower speed while all other devices still operate at full speed.

Standby Mode

After selecting the period of system inactivity (1 minute to 1 hour), the fixed disk drive and the video shut off while all other devices still operate at full speed.

Suspend Mode

After selecting the period of system inactivity (1 minute to 1 hour), all devices except the CPU shut off.

HDD Power Down

After selecting the period of drive inactivity (1 to 15 minutes), the hard disk drive powers down while all other devices remain active.

Suspend Mode Option

Two options can be chosen: PowerOn Suspend / Suspend to Disk.

Throttle Duty Cycle

When selecting the Doze mode, the CPU clock runs only part of the time. You may select the percent of time that the clock runs.

VGA Active Monitor

When Enabled, any video activity restarts the global timer for Standby Mode.

Soft-Off by PWR-BTTN

You can choose Instant-Off or Delay 4 Sec.

LAN Wake Up

Select whether the system can be waked up by LAN.

Ring Wake Up

Select whether the system can be waked up by ring.

Time Wake Up

Select whether the system can be waked up by the preset time.

Reload Global Timer Events

When Enabled, an event occurring on each device listed below restarts the global time for Standby Mode:

     IRQ[3 -7, 9-15], NMI

     Primary IDE 0

     Primary IDE 1

     Secondary IDE 0

     Secondary IDE 1

     Floppy Disk

     Serial Port

     Parallel Port

2-5 PNP/PCI CONFIGURATION

ROM PCI/ISA BIOS

PNP/PCI CONFIGURATION

AWARD SOFTWARE, INC.

PNP OS Installed:	No	PCI IDE IRQ Map to:	PCI-Auto
Resources Controlled By:	Manual	Primary IDE INT#:	A
Reset Configuration Data:	Disabled	Secondary IDE INT#:	B
IRQ-3 assigned to:	Legacy ISA	Used MEM Base Addr:	C800
IRQ-4 assigned to:	Legacy ISA	Used MEM Length:	8K
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		
DMA-1 assigned to:	PCI/ISA PnP	ESC: Quit	Arrow Keys: Select Item
DMA-3 assigned to:	PCI/ISA PnP	F1: Help	PU/PD/+/-: Modify
DMA-5 assigned to:	PCI/ISA PnP	F5: Old Values	(Shift) F2: Color
DMA-6 assigned to:	PCI/ISA PnP	F6: Load BIOS Defaults	
DMA-7 assigned to:	PCI/ISA PnP	F7: Load Setup Defaults	

PNP OS Installed

Select Yes if the system operating environment is Plug-and-Play aware (e.g., Windows 95).

Resources Controlled By

The Award Plug-and-Play BIOS can automatically configure all the boot and Plug-and-Play compatible devices. If you select Auto, all the interrupt request (IRQ) and DMA assignment fields disappear, as the BIOS automatically assigns them.

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 card and the system reconfiguration has caused such a serious conflict that the operating system cannot boot up.

IRQ n Assigned to

When resources are controlled manually, assign each system interrupt as one of the following types:

      Legacy ISA : Devices compliant with the original PC AT bus specification, requiring a specific interrupt (such as IRQ4 for serial port 1).

      PCI/ISA PnP: Devices compliant with the Plug-and-Play standard, whether designed for PCI or ISA bus architecture.

DMA n Assigned to

When resources are controlled manually, assign each system DMA channel as one of the following types:

      Legacy ISA : Devices compliant with the original PC AT bus specification, requiring a specific interrupt (such as IRQ4 for serial port 1).

      PCI/ISA PnP: Devices compliant with the Plug-and-Play standard, whether designed for PCI or ISA bus architecture.

PCI IDE IRQ Map to

This field lets you select PCI IDE IRQ mapping or PC AT (ISA) interrupts. If your system does not have one or two PCI IDE connectors on the system board, select values according to the type of IDE interface(s) installed in your system (PCI or ISA). Standard ISA interrupts for IDE channels are IRQ14 for the primary and IRQ15 for the secondary, respectively.

Primary / Secondary IDE INT#

Each PCI peripheral connector is capable of activating up to four interrupts: INT# A, INT#B, INT#C, and INT#D. By default, a PCI connection is assigned INT#A. Assigning INT#B has no meaning unless the peripheral device requires two interrupt services rather than just one. Because the PCI IDE interface in the chipset has two channels, it requires two interrupt services. The primary and secondary IDE INT# fields default to values appropriate for two PCI IDE channels, with the primary PCI IDE channel having a lower interrupt than the secondary one.

Used MEM Base Addr

Select a base address for the memory area used by any peripheral that requires high memory.

Used MEM Length

Select the memory length used from 8K~64K.

2-6 LOAD BIOS DEFAULTS

This option will load the default BIOS values. Choose this option and the following message appears at the center of the screen:

Load BIOS Defaults (Y/N)?

If you want to use the defaults, press [Y] and [Enter]. If not, press [N] and [Enter].

2-7 LOAD SETUP DEFAULTS

This option will load the default system values. Choose this option and the following message appears at the center of the screen:

Load SETUP Defaults (Y/N)?

If you want to use the defaults, press [Y] and [Enter]. If not, press [N] and [Enter].

2-8 INTEGRATED PERIPHERALS

This option will change the system control values. If you are not familiar with the functions, do not make any change to the values.

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                            ROM PCI/ISA BIOS
                         INTEGRATED PERIPHERALS
                          AWARD SOFTWARE, INC.
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IDE HDD Block Mode:	Enabled	Onboard Serial Port 2:	2F8/IRQ3
IDE Primary Master PIO:	Auto	UART Mode Select:	IrDA
IDE Primary Slave PIO:	Auto	RxD, TxD Active:	Hi, Hi
IDE Secondary Master PIO:	Auto	IR Transmission Delay:	Enabled
IDE Secondary Slave PIO:	Auto	Onboard Parallel Port:	378/IRQ7
IDE Primary Master UDMA:	Auto	Parallel Port Mode:	ECP+EPP
IDE Primary Slave UDMA:	Auto	ECP Mode Use DMA:	3
IDE Secondary Master UDMA:	Auto	EPP Mode Select:	EPP 1.7
IDE Secondary Slave UDMA:	Auto		
On-Chip Primary PCI IDE:	Enabled		
On-Chip Secondary PCI IDE:	Enabled		
USB Keyboard Support:	Disabled		
Init Display First:	AGP	ESC: Quit	Arrow Keys: Select Item
Power On Function:	Button Only	F1: Help	PU/PD/+/-: Modify
KBC Input Clock:	6 MHz	F5: Old Values	(Shift) F2: Color
Onboard FDC Controller:	Enabled	F6: Load BIOS Defaults	
Onboard Serial Port 1:	3F8/IRQ4	F7: Load Setup Defaults	

IDE HDD Block Mode

Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/write per sector the drive can support.

IDE 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. Mode 0 through 4 provide successively increasing performance. In Auto mode, the system automatically determines the best mode for

each device.

IDE 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 UDMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support UDMA / 33, select Auto.

On-Chip Primary/Secondary PCI IDE

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select Enabled to activate each channel separately.

USB Keyboard Support

Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.

Init Display First

Select AGP to boot on the AGP display card first, if you have installed an AGP card on AGP.

Power On Function

The user can select the following ways to power on the system: Button Only (which means the Power Button, the default setting), Password (after selecting the Password setting, the user is not able to power on the system by Power Button), Hot Key, Mouse Left and Mouse Right.

KBC Input Clock

Select the keyboard input clock from 6MHz, 8MHz, 12MHz or 16MHz.

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 an add-in FDC or the system has no floppy drive, select Disabled in this field.

Onboard Serial Port 1~2

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

UART Mode Select

   Normal: Normal operation

IrDA: IrDA-compliant serial infrared port

ASKIR: Amplitude shift keyed infrared port

RxD, TxD Active

Select the combination of RxD and TxD.

IR Transmission Delay

Select Enabled or Disabled to set IR transmission delay or not.

Onboard Parallel Port

Select a logical LPT port name and matching address for the physical parallel (printer) port.

Parallel Port Mode

Select an operating mode for the onboard parallel (printer) port.

ECP Mode Use DMA

Select a DMA channel for the port.

EPP Mode Select

Select EPP port type 1.7 or 1.9.

2-9 SUPERVISOR PASSWORD

This option will set the password to prevent others from making changes to your system. When you select this function, a message appears at the center of the screen:

Enter Password:

Type the password, up to eight characters, and press [Enter]. Typing a password clears any previously entered password from CMOS memory. After press [Enter], the message changes to:

Confirm Password:

Again, type the same password and press [Enter]. To abort the process at any time, leave the

field blank and press [Enter]. In the Security Option item in the BIOS Features Setup screen, select System or Setup:

System: Enter a password each time the system boots and whenever you enter Setup.

Setup: Enter a password whenever you enter Setup.

NOTE: To clear the password, simply press [Enter] when asked to enter a password. Then the password function is disabled.

2-10 USER PASSWORD

This option will also set the password to prevent others from making changes to your system. When combined with the above supervisor password, only the supervisor password can get full access to all BIOS Setup options. The operation procedure of the user password is the same as the supervisor password.

2-11 IDE HDD AUTO DETECTION

This option is to detect the type of your installed hard disk drive automatically. Press [Y] to accept, [N] to reject, and [ESC] to the next detection.

ROM PCI/ISA BIOS

CMOS SETUP UTILITY

AWARD SOFTWARE, INC.

HARD DISK		TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master :									

Select Primary Master Option (N = Skip): N

Options	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
2(Y)	1280	620	64	0	2481	63	LBA
1	1281	2482	16	65535	2481	63	NORMAL
3	1281	1241	32	65535	2481	63	LARGE

Note: Some OSes (like SCO-UNIX) must use ⬚ORMAL" for installation.

2-12 SAVE & EXIT SETUP

Select this option to save the setting and exit the BIOS Setup utility. The following message will appear at the center of the screen:

Save to CMOS and EXIT (Y/N)? N

Press [Y] to confirm the action or [N] to go back to the utility program.

2-13 EXIT WITHOUT SAVING

Select this option to abort the current setting and exit the BIOS Setup utility. The following message will appear at the center of the screen:

Quit Without Saving (Y/N)? N

Press [Y] to confirm the action or [N] to go back to the utility program.