# Award BIOS Setup

This chapter describes how to configure the BIOS for the system.

# Starting setup

The Award BIOS is immediately activated when you first turn on the computer. The BIOS reads system configuration information in CMOS RAM and begins the process of checking out the system and configuring it through the power-on self test (POST).

When these preliminaries are finished, the BIOS seeks an operating system on one of the data storage devices (hard drive, floppy drive, etc.). The BIOS launches the operating system and hands control of system operations to it.

During POST, you can start the Setup program in one of two ways:
1.By pressing Del immediately after switching the system on, or
2.By pressing Del or pressing Ctrl-Alt-Esc when the following message appears briefly at the bottom of the screen during POST:

TO ENTER SETUP BEFORE BOOT PRESS DEL 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 Ctr-Alt-Del. If you do not press the keys at the correct time and the system does not boot, an error message appears and you are again asked to

PRESS F1 TO CONTINUE, DEL TO ENTER SETUP

# Setup keys

These keys helps you navigate in Award BIOS:

| | |
|---|---|
| Up arrow | Move to previous item |
| Down arrow | Move to next item |
| Left arrow | Move to the item in the left hand |
| Right arrow | Move to the item in the right hand |
| Esc | Main Menu: Quit and not save changes into CMOS RAM |
| | 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 |
| 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 |
| F3 | Calendar, only for Status Page Setup Menu |
| F4 | Reserved |
| F5 | Restore the previous CMOS value from CMOS, only for Option Page Setup Menu |
| F6 | Load the default CMOS RAM value from BIOS default table, only for Option Page Setup Menu |
| F7 | Load the default |
| F8 | Reserved |
| F9 | Reserved |
| F10 | Save all the CMOS changes, only for Main Menu |

# Getting help

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 Esc or the F1 key again.

## In Case of Problems

If, after making and saving system changes with Setup, you discover that your computer no longer is able to boot, the Award-BIOS supports an override to the CMOS settings that resets your system to its default configuration.

You can invoke this override by immediately pressing Insert; when you restart your computer. You can restart by either using the ON/OFF switch, the RESET button or by pressing Ctrl-Alt-Delete.

The best advice is to alter only settings that you thoroughly understand. In particular, do not change settings in the Chipset screen without a good reason. The Chipset defaults have been carefully chosen by Award Software or your system manufacturer for the best performance and reliability. Even a seemingly small change to the Chipset setup may cause the system to become unstable.

# Main setup Menu



| | |
|---|---|
| Standard CMOS | Options in the original PC AT-compatible BIOS. |
| BIOS Features | Award Software enhanced BIOS options. |
| Chipset Features | Options specific to your system chipset. |
| Power Management | Advanced Power Management (APM) options. |
| PnP/PCI Configuration | Plug and Play standard and PCI Local Bus configuration options. |
| Integrated Peripherals | I/O subsystems that depend on the integrated peripherals controller in your system. |
| Supervisor/User Password Setting | Change, set, or disable a password. In BIOS versions that allow separate user and supervisor passwords, only the supervisor password permits access to Setup. The user password generally allows only power-on access. |
| IDE HDD Auto Detection | Automatically detect and configure IDE hard disk parameters. |

| 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. |
| Save & Exit Setup | Save settings in nonvolatile CMOS RAM and exit Setup. |
| Exit Without Save | Abandon all changes and exit Setup. |

# Standard CMOS setup



When you choose the STANDARD CMOS SETUP option from the INITIAL SETUP SCREEN menu, the screen below is displayed.

This standard setup menu allows users to configure system components such as the date, time, hard disk drive, floppy drive, display, and memory. Online help for each field can be accessed by pressing F1.

# Date and Time Configuration

The BIOS determines the day of the week from the other date information. This field is for information only.

Press the left or right arrow key to move to the desired field (date, month, year). Press the PgUp/- or PgDn/+ key to increment the setting, or type the desired value into the field.

The time format is based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00. Press the left or right arrow key to move to the desired field. Press the PgUp/- or PgDn/+ key to increment the setting, or type the desired value into the field.

# HARD DISKS

The BIOS supports up to two IDE drives. This section does not show information about other IDE devices, such as a CD-ROM drive, or about other hard drive types, such as SCSI drives.

NOTE: 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 POST, every time the system boots.

If you do not want to select drive type AUTO, other methods of

selecting the drive type are available:

1. Match the specifications of your installed IDE hard drive(s) with the preprogrammed values for drive types 1 through 45.

2. Select USER and enter values into each drive parameter field.

3. Use the IDE HDD AUTO DECTECTION function in Setup.

Here 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 precompensation 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 (approximate). 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 precompensation 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.
  - **Large**: For drives that do not support LBA and have more than 1024 cylinders.

**- LBA** (Logical Block Addressing): During drive accesses, 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 | 5-1/4 inch PC-type standard drive; 360 kilobyte capacity |
| 1.2M, 5.25 in | 5-1/4 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 mega byte capacity |
| 2.88M, 3.5 in | 3-1/2 inch double-sided drive; 2.88 mega byte capacity |

# LCD & CRT

This field may appear as an alternative to The Video field.  select your video display device:

| | |
|---|---|
| LCD | Liquid crystal display |
| CRT | Auxiliary monitor |
| Both | Display on both devices |

# Pannel:

This selection item allow user to select LCD BIOS to match the LCD types.

# Halt On

During the power-on-self-test (POST), 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. These are the selections:

- **No errors**: POST does not stop for any errors.

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

- **All, But Keyboard**: POST does not stop for a keyboard error, bus stops for all other errors.All, But DiskettePOST does not stop for diskette drive errors, but stops for all other errors.

- **All, But Disk/Key**: POST does not stop for a keyboard or disk error, but stops for all other errors.

# Memory

You cannot change any values in the Memory fields; they are only for your information. The fields show the total installed random access memory (RAM) and amounts allocated to base memory, extended memory, and other (high) memory. RAM is counted in kilobytes (KB: approximately one thousand bytes) and megabytes (MB: approximately one million bytes).

RAM is the computer's working memory, where the computer stores programs and data currently being used, so they are accessible to the CPU. Modern personal computers may contain up to 64 MB, 128 MB, or more.

## •Base Memory

Typically 640 KB. Also called conventional memory. The DOS operating system and conventional applications use this area.

## •Extended Memory

Above the 1-MB boundary. Early IBM personal computers could not use memory above 1 MB, but current PCs and their software can use extended memory.

## •Other Memory

Between 640 KB and 1 MB; often called High memory. DOS may load terminate-and-stay-resident (TSR) programs, such as device drivers, in this area, to free as much conventional memory as possible for applications. Lines in your CONFIG.SYS file that start with LOADHIGH load programs into high memory.

# BIOS features setup



By choosing the BIOS FEATURES SETUP option from the INITIAL SETUP SCREEN menu, the screen below is displayed.
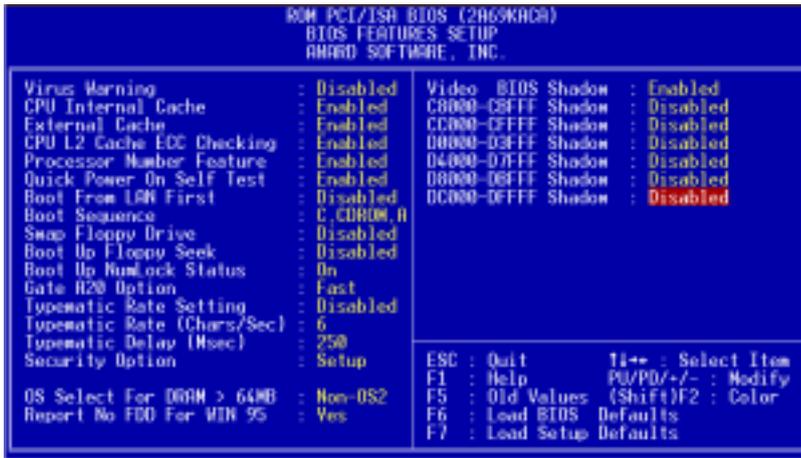
The displayed configuration is based on the manufacturer's SETUP DEFAULTS settings.

# 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

When you select Enabled, memory checking is enable when the external cache contains ECC SRAMs.

# 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 Up from LAN

When enabled, the BIOS attempts to boot from a LAN boot image
before it attempts to boot from a local storage device.
The Choice:  Disabled, Enabled

## Boot Sequence

The original IBM PCs loaded 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 many boot
sequence options.

## 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 Floppy Seek

When Enabled, the BIOS tests (seeks) floppy drives to determine
whether they have 40 or 80 tracks. Only 360-KB floppy drives
have 40 tracks; drives with 720 KB, 1.2 MB, and 1.44 MB
capacity all have 80 tracks. Because very few modern PCs have
40-track floppy drives, we recommend that you set this field to
Disabled to save time.

## Boot Up NumLock Status

Toggle between On or 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

Gate A20 refers to the way the system addresses memory above 1
MB (extended memory). When set to Fast, the system chipset
controls Gate A20. When set to Normal, a pin in the keyboard
controller controls Gate A20. Setting Gate A20 to Fast improves
system speed, particularly with OS/2 and Windows.

## Typematic Rate Setting- Key strokes repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be selected.

The choice: Enabled/Disabled

## Typematic Rate (Chars/Sec)- Sets the number of times a second to repeat a key stroke when you hold the key down.

The choice: 6, 8, 10, 12, 15, 20, 24, 30

## Typematic Dealy (Msec)- Sets the delay time after the key is held down before it begins to repeat the keystroke.

The choice: 250, 500, 750, 1000

## 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.

## OS Select For DRAM>64MB-Select the operating system that is running with greater than 64MB or RAM on the system.

The choice: Non-OS2, OS2

## Report No FDD For WIN 95- Wheather report no FDD for WIn 95 or not.

The choice: Yes, no

# Shadow

Software that resides in a read-only memory (ROM) chip on a device is called firmware. The AwardBIOS permits shadowing of firmware such as the system BIOS, video BIOS, and similar operating instructions that come with some expansion peripherals, such as, for example, a SCSI adaptor.

Shadowing copies firmware from ROM into system RAM, where the CPU can read it through the 16-bit or 32-bit DRAM bus. Firmware not shadowed must be read by the system through the 8-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.

Enable shadowing into each section of memory separately. Many system designers hardwire shadowing of the system BIOS and eliminate a System BIOS Shadow option.

Video BIOS shadows into memory area C8000-DFFFF. 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.

# CHIPSET features setup

```
                  ROM PCI/ISA BIOS (2A69KQACA)
                       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 DEFAULTS            │                                  │
├─────────────────────────────────┴─────────────────────────────────┤
│  Esc : Quit                        ↑ ↓ → ←  : Select Item          │
│  F10 : Save & Exit Setup          (Shift)F2 : Change Color         │
└────────────────────────────────────────────────────────────────────┘
```

By choosing the CHIPSET FEATURES SETUP option from the INITIAL SETUP SCREEN menu, the screen below is displayed.

```
                  ROM PCI/ISA BIOS (2A69KACA)
                     CHIPSET FEATURES SETUP
                      AWARD SOFTWARE, INC.
┌────────────────────────────────────────────────────────────────────┐
│ SDRAM RAS-to-CAS Delay    : 3     Auto Detect DIMM/PCI Clk : Enabled│
│ SDRAM RAS Precharge Time  : 3     Spread Spectrum          : Disabled│
│ SDRAM CAS latency Time    : 3     High Limit Warning Temp.  : Disabled│
│ SDRAM Precharge Control   : Disabled  Low Limit Warning Temp. : Disabled│
│ DRAM Data Integrity Mode  : Non-ECC   Current CPU Temperature  :       │
│ System BIOS Cacheable     : Disabled  Current System Temp.     :       │
│ Video  BIOS Cacheable     : Disabled  Current CPUFAN Speed     :       │
│ Video RAM Cacheable       : Disabled  Current SYSTEM Speed     :       │
│ 8 Bit I/O Recovery Time   : 1     IN0(V) :           IN1(V) :         │
│ 16 Bit I/O Recovery Time  : 1     IN2(V) :          + 5 V  :         │
│ Memory Hole At 15M-16M    : Disabled  +12 V :          -12 V  :─      │
│ Passive Release           : Enabled   - 5 V :─                       │
│ Delayed Transaction       : Disabled                                 │
│ AGP Aperture Size (MB)    : 64                                       │
│                                   ┌──────────────────────────────────┤
│                                   │ ESC : Quit      ↑↓←→ : Select Item│
│                                   │ F1  : Help      PU/PD/+/- : Modify│
│                                   │ F5  : Old Values (Shift)F2 : Color│
│                                   │ F6  : Load BIOS  Defaults         │
│                                   │ F7  : Load Setup Defaults         │
└───────────────────────────────────┴──────────────────────────────────┘
```

The displayed configuration is based on the manufacturer's SETUP DEFAULTS settings.

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as SDRAM. It also coordinates communications between the conventional ISA bus and the PCI bus. It must be stated that these items should never need to be altered. The default settings have been chosen because they provide the best operating conditions for your system. The only time you might consider making any changes would be if you discovered that data was being lost while using your system.

Because of the complexity and technical nature of some of the options, not all of the options are described here.

## SDRAM RAS-to-CAS Delay
This field lets you control the number of DCLKs between a Row Activate command and a read or write command.

## SDRAM RAS Precharge Time
The precharge time is the number of cycles it takes for the RAS to accumulate its charge before DRAM refresh. If insufficient time is allowed, refresh may be incomplete and the DRAM may fail to retain data. This field applies only if synchronous DRAM is installed in the system.

## SDRAM CAS Latency Time
When synchronous DRAM is installed, you can control the number of CLKs between when the SDRAMs sample a read command and when the contoller samples read data from the SDRAMs. Do not reset this field from the default value specified by the system designer.

# SDRAM Precharge Control

When Enabled, all CPU cycles to SDRAM result in an All Banks Precharge Command on the SDRAM interface.

# DRAM Data Integrity Mode

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

# System BIOS Cacheable

Selecting Enabled allows caching of 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 result.

# Video BIOS Cacheable

Selecting Enabled allows caching of 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 result.

# Video RAM Cacheable

Selecting Enabled allows caching of the video memory (RAM) at A0000h to AFFFFh, resulting in better video performance. However, if any program writes to this memory area, a memory access error may result.

# 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 16-bit and 8-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. The user information of peripherals that need to use this area of system memory usually discusses their memory requirements.

# Passive Release

When Enabled, CPU to PCI bus accesses are allowed during passive release. Otherwise, the arbiter only accepts another PCI master access to local DRAM.

# Delayed 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.

# Auto Detect DIMM/PCI Clk

When the Auto Detect DIMM/PCI clk enable, the Utility will automatically detect the DIMM/PCI clock in your system.

# Spread Spectrum

When the system clock generator pulses, the extreme values of the pulse generate excess EMI. Enabling pulse spectrum spread modulation changes the extreme values from spikes to flat curves, thus reducing EMI. This benefit may in some cases be outweighed by problems with timing-critical devices, such as a clock-sensitive SCSI device

# High Limit Temperature Warning

When the single board computer exceeds the high limit temperature warning level, the buzzer will sound and the LED will flash.

# Low Limit Temperature Warning

When the single board computer exceeds the low limit temperature warning level, the buzzer will sound and the LED will flash.

# IN0, IN1, IN2, +5V,-5V,+12V,-12V

These fields display the current voltage of up to seven voltage input lines, if your computer contains a monitoring system.

# Power management setup



By choosing the POWER MANAGEMENT option from the
INITIAL SETUP SCREEN menu, the screen below is displayed.

The displayed configuration is based on the manufacturer's SETUP DEFAULTS settings.

# Power Management

This option allows you to select the type (or degree) of power saving for Doze, Standby, and Suspend modes.

This table describes each power management mode:

| | |
|---|---|
| Max Saving | Maximum power savings.  Only Available for SL CPUs.  Inactivity period is 1 minute in each mode. |
| User Define | Set each mode individually.  Select time-out periods in the section for each mode, below. |
| 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, selecting Yes gives better power savings.

# Video Off Method

Determines the manner in which the monitor is blanked.

| | |
|---|---|
| V/H SYNC+Blank | System turns off vertical and horizontal synchronization ports and writes blanks to the video buffer. |
| DPMS Support | Select this option if your monitor supports the Display Power Management Signaling (DPMS) standard of the Video Electronics Standards Association (VESA).  Use the software supplied for your video subsystem to select video power management values. |
| Blank Screen | System only writes blanks to the video buffer. |

# 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

Name the interrupt request (IRQ) line assigned to the modem (if any) on your system. Activity of the selected IRQ always awakens the system.

# Doze Mode

After the selected period of system inactivity, the CPU clock throttles to a small percentage of its duty cycle     between 10 percent and 25 percent for most chipsets. All other devices still operate at full speed.

## Standby Mode

After the selected period of system inactivity, the CPU clock stops, the hard drive enters an idle state, and the L2 cache enters a power-save mode. All other devices still operate at full speed.

## Suspend Mode

After the selected period of system inactivity, the chipset enters a hardware suspend mode, stopping the CPU clock and possibly causing other system devices to enter power management modes.

## HDD Power Down

After the selected period of drive inactivity, any system IDE devices compatible with the ATA-2 specification or later power manage themselves, putting themselves into an idle state after the specified timeout and then waking themselves up when accessed.

## Throttle Duty Cycle

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

## PCI/VGA Act Minus Monitor

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

## Soft-OFF by Power Button

Pressing the power button for more than 4 seconds forces the system to enter the soft-off state when the system has "hung"

THe Choice: Delay 4 seconds, instant off

## CPU FAN off in Suspend

During the suspend mode the CPU fan can be turned off.

The Choice: Enabled, disabled

## Power on by Ring

An input signal on the serial ring indicator (in other words an incoming call on the modem) awakens the system from a soft off state.

# Wake Up On LAN

The motherboard enabled or disabled will execute a wake up process whenever LAN (Realtech 8139C) receives a wake up event such as a magic packet.

The Choice:  Disabled, Enabled

# IRQ8 Break [Event From] Suspend

You can select Enabled or Disabled for monitoring of IRQ8 (the Real Time Clock) so it does not awaken the system from Suspend mode.

# Reload Global Timer Events

When Enabled, an event occurring on each device listed below restarts the global timer for Standby mode.

IRQ3-7, 9-15, NMI

Primary IDE 0

Primary IDE 1

Floppy Disk

Serial Port

Parallel Port

# PNP/PCI configuration setup



By choosing the PNP/PCI CONFIGURATION SETUP option from the initial SETUP SCREEN menu, the screen below is displayed.

The displayed configuration is based on the manufacturer's SETUP DEFAULTS settings.

NOTE: This chapter describes all fields offered by Award Software in this screen. Your system board designer may omit or modify some fields.

# PNP OS Installed

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

# Resources Controlled By

The Plug and Play AwardBIOS 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 and the system reconfiguration has caused such a serious conflict that the operating system cannot boot.

# Assign IRQ for VGA

If you are not using your system's VGA controller, select Disabled to free the IRQ resource.

# Assign IRQ for USB

Select Enabled if your system has a USB controller and you have one or more USB devices connected. By selecting Disabled setting there is no IRQ resource for USB controller.

# Load BIOS defaults/Load setup defaults

LOAD BIOS DEFAULTS loads the default system values directly from ROM. The BIOS DEFAULTS provides the most stable settings, though they do not provide optimal performance. LOAD SETUP DEFAULTS, on the other hand, provides for maximum system performance. If the stored record created by the setup utility becomes corrupted (and therefore unusable), BIOS defaults will load automatically when you turn the system on.
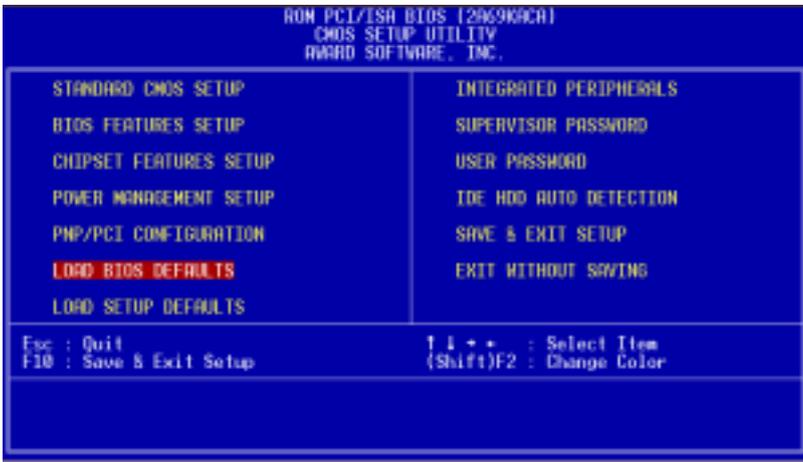
# Integrated peripherals setup



By choosing the INTEGRATED PERIPHERALS option from the
initial SETUP SCREEN menu, the screen below is displayed.

The displayed configuration is based on the manufacturer's SETUP DEFAULSTS settings.

# IDE HDD Block Mode
Select Enabled only if your hard drives support block mode.

# IDE Primary Master/Slave UDMA
UDMA (Ultra DMA) is a DMA data transfer protocol that utilizes ATA commands and the ATA bus to allow DMA commands to transfer data at a maximum burst rate of 33 MB/s. When you select Auto in the four IDE UDMA fields (for each of up to four IDE devices that the internal PCI IDE interface supports), the system automatically determines the optimal data transfer rate for each IDE device.

# On-Chip PCI IDE Primary
The system chipset contains a PCI IDE interface with support for two IDE channels. Select Enabled to activate the primary and/or secondary IDE interface. Select Disabled to deactivate this interface, if you install a primary and/or secondary add-in IDE interface.

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

# Init Display First
This item allows you to active PCI slot or onboard first.

The choice: PCI slot, onboard

# KBC input clock

The system designer must select the correct frequency for the keyboard controller input clock. Do not change this from the default value.

# 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.

# UART Mode Select

Select an operating mode for the second serial port:

| | |
|---|---|
| Normal | RS-232C serial port |
| Standard | RS-232C serial port |
| IrDA 1.0 | Infrared port compliant with IrDA 1.0 specification |
| IrDA SIR | IrDA-compliant serial infrared port |
| IrDA MIR | 1 MB/sec infrared port |
| IrDA FIR | Fast infrared standard |
| FIR | Fast infrared standard |
| MIR 0.57M | 0.57-MB/sec infrared port |
| MIR 1.15M | 1.15-MB/sec infrared port |
| Sharp IR | 4-MB/sec data transmission |
| HPSIR | IrDA-compliant serial infrared prot |
| ASK IR | Amplitude shift keyed infrared port |

# UART2 Duplex Mode

In an infrated port mode, this field appears. Full-duplex mode permits simultaneous two-direction transmission. Half-duplex mode permits transmission in one direction only at a time. Select the value required by the IR device connected to the IR port.

# Onboard Serial Ports (1, 2, 3, 4)

Normally, the main board's I/O chips will occupy a certain portion of memory space. For each I/O device the computer provides an I/O address. The more devices attached the more address needed to organize the memory storage areas. If all the I/O devices were run through the same address, your devices would come to a near halt. By providing the end user with four serial ports this allows devices to run more efficiently if needed.

Selections of logical COM port addresses are as follows. ( 3F8, 3E8H, 2F8, 2E8H)

# RxD, TxD Active

Consult your IR peripheral documentation to select the correct setting of the TxD and RxD signals.

# Parallel Port Mode

Two bi-directional parallel ports. Supports SPP, ECP, EPP, ECP + EPP.

# ECP Mode Use DMA

Select a DMA channel for the port.

# EPP Mode select

Select EPP port type 1.7 or 1.9.

# IR Transmission Delay

Disable setting will have no transmission delay when SIR is changed from RX mode to TX mode.

Enabled setting will delay transmission for 4 characters time when SIR is changed from RX mode to TX mode.

# Onboard Parallel Port

Select a logical LPT port address and corresponding interrupt for the physical parallel port

The Choice: 278H, 378, disabled

# Supervisor/User password setting

You can set either SUPERVISOR or USER PASSWORD, or both of them.  The difference between the two is that the supervisor password allows unrestricted access to enter and change the options of the setup menus, while the user password only allows entry to the program, but not modify options.
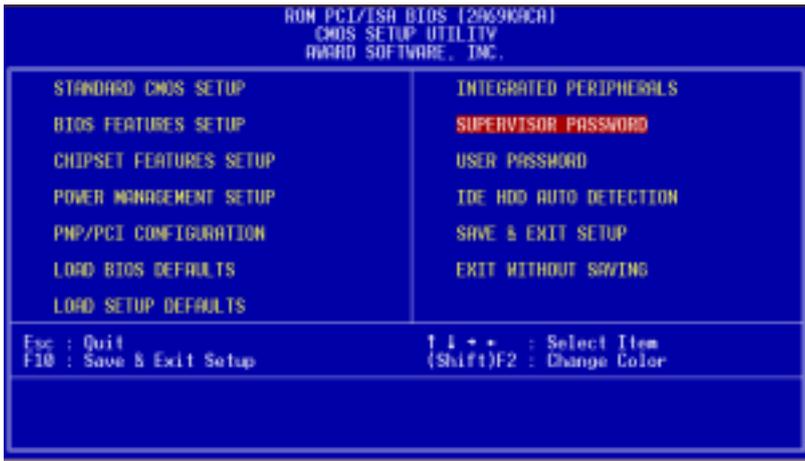
When you select this function, a message appears at the center of the screen:

Type the password, up to eight characters, and press Enter. Typing a password clears any previously entered password from CMOS memory.

Now the message changes:

Again, type the password and press Enter.

To abort the process at any time, press Esc.

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
         when ever you enter Setup.

Setup    Enter a password when ever you enter Setup.

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

# IDE HDD auto detection

The IDE HDD AUTO DETECTION utility can automatically detect the IDE hard disk installed in your system. You can use it to self-detect and/or correct the hard disk type configuration. You need to repeat the setup for each of the IDE combinations:
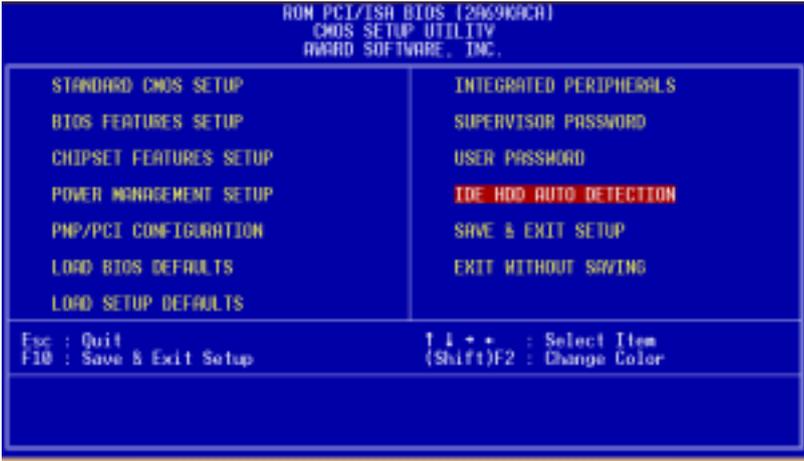
# Save & exit setup

If you select this option and press <ENTER>, the values entered in the setup utility will be recorded in the chipset's CMOS memory. The microprocessor will check this every time you turn your system on and compare this to what it finds as it checks the system. This record is required for the system to operate.

```
              ROM PCI/ISA BIOS (2A69KACA)
                   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 DEFAULTS

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