HOT-683

PPGA Celeron processor
Based AGP MAIN BOARD

User's Manual

FCC Notice:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy. If not installed and used properly, in strict accordance with the manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/television technician for help and for additional suggestions.

The user may find the following booklet prepared by the Federal Communications Commission helpful "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office. Washington, DC 20402, Stock 004-000-00345-4

FCC Warning

The user is cautioned that changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Note : In order for an installation of this product to maintain compliance with the limits for a Class B device, shielded cables and power cord must be used.

CE Notice:

Following standards were applied to this product, in order to achieve compliance with the electromagnetic compatibility :
- Immunity in accordance with EN 50082-1: 1992
- Emissions in accordance with EN 55022: 1987 Class B.

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P PREFACE

HOT-683 is a highly integrated IBM PC/ATX compatible system board designed to meet the industry's most demanding desktop applications.

Based on the Intel 82440LX AGPset chipset which support up to 400MHz PPGA Celeron processor with MMX technology.

HOT-683 is equipped with an Accelerated Graphics Port (A.G.P.), a high-performance interconnect for graphic-intensive application, such as 3D applications. The A.G.P. is independent of the PCI bus and is designed to exclusively use with graphical-display devices. The HOT-683 supports 3.3 V A.G.P. devices with data transfer rates up to 133 MHz, allowing data throughput of 500 MB/sec.

The Intel's 82440LX AGPset chipset provides an integrated Bus Mastering IDE controller with two high performance IDE interfaces which allows up to four IDE devices connection and up to 33 MB/sec of data transfer rates.

The on-board I/O controller provides standard PC I/O functions:

floppy drive interface, two FIFO serial ports, an InDA device port and a SPP/EPP/ECP capable parallel port.

HOT-683 is built with four PCI local bus slots providing a high bandwidth data path for data-movement intensive functions such as graphics, and with three ISA slot.

HOT-683 provides the foundation for cost effective, high performance and highly expandable platforms, which delivers the latest in the Intel PPGA Celeron processor and new advanced chipset technology.

1 INTRODUCTION

The HOT-683 Mainboard is carefully designed for the demanding PC user who wants high performance and many intelligent features in a compact package:

Intel Chipset:

Features Intel's 440LX AGPset with I/O subsystems.

CPU Support:

Intel PPGA Celeron processor 300/66, 333/66, 366/66, 400/66 MHz.

Versatile Memory Supports:

Supports three banks of SDRAM or EDO DRAM maximum memory size up to 384MB. Configurable support for ECC (Error Checking and Correcting)

PCI and ISA Expansion Slots:

Provides four 32-bit PCI slots and three 16-bit ISA slot.

Onboard I/O:

Provides one Floppy port; one PS/2 mouse and one PS/2 Keyboard port connector; two high-speed UART compatible serial ports and one parallel port with ECP and EPP capabilities. Serial Port 2 can also be directed from COM2 to the Infrared Module for wireless connections.

Onboard PCI Bus Master IDE Controller:

Two Ultra DMA/33 Bus Master IDE Ports supports four IDE devices up to 33 MB/sec IDE transfers and supports Enhanced PIO Modes 3 and 4 and Bus Master IDE DMA Mode 2 devices.

Onboard 20-pin ATX Power Supply:

Provides ATX power connector onboard supports soft-on/off function.

System BIOS:

Provides licensed Award V4.51PG BIOS on Flash EEPROM.
Supports Green PC, DMI and Bundled with NCR SCSI BIOS.

ACPI:

Support ACPI (Advanced Configuration and Power Interface) function. ACPI provide more Energy Saving Features for the future operating system supporting OS Direct Power Management (OSPM) functionality.

Board Size:

MicroATX form factor 305mm x 170mm.

Advanced Features:

CPU Plug & Play -- HOT-683 featuring CPU Plug & Play function, the user needn't to adjust onboard system clock and CPU multiplier. When the system first power-on, BIOS will set CPU clock speed to 300 MHz (depend on CPU external frequency) automatically. If your CPU speed higher than 300 MHz, one thing you only have to do is entry BIOS to set CPU speed to the higher one.

Low EMI -- Spread Spectrum built in - ±0.5% or ±0.3% modulation and automatic clock shut-off of unused PCI/SDRAMS slots to reduce the EMI.

Dual Function Power Button -- The system can be one of two states, one is Suspend mode and the other is the Soft-off mode. Pushing the power button for less than 4 seconds will place the system into Suspend mode. When push the power button for more than 4 seconds, the system enters the Soft-off mode.

Wake-On-LAN -- The system will power-on automatically by activating of LAN.
(This function support Intel LAN card only).

Modem Ring Power-on -- The system will power-on automatically by activating of modem ring.

PS/2 Keyboard & Mouse Power-on -- The system will power-on automatically by stroke keyboard or double click PS/2 mouse.

Voltages Monitoring -- System voltages levels are monitored to ensure stable current to main board components.
System voltages include V_{CORE} and V_{TT} for CPU, and +5V, +12V, -5V, -12V for system.

FAN Status Monitoring -- To prevent CPU overheat, CPU fans is monitored for RPM and failure.
(CPU Cooling FAN with RPM sensor is required)

ACCESSORIES OF HOT-683

Four DIMM Connectors
FAN 1- **JP1**
CPU PGA370
PS/2 Keyboard/Mouse Connectors
K/B & PS/2 Mouse Power-on setting - **JP2**
USB Connectors
IR Connector - **J3**
Serial Port Connector (COM2)
Parallel Connector
440LX AGPset
Serial Port Connector (COM1)
FAN 4 - **J9**
I/O Controller
AGP Slot
Four PCI Slots
FAN 3 (J12)
SB-LINK - **JP9**
Hardware Monitor (optional)
Programmable Flash EEPROM
Flash EEPROM Vpp - **JP12**
Clear CMOS - **JP0**
Three ISA Slots

ATX Power Connector
FAN 2 (JP4)
One Floppy Connector
EISCA Cooler Connector - **J6**
Two IDE Connectors
System Clock - **JP5**
Wakeup-On LAN Connector

RST PW_LED SPK HDD EPMI GRN_LED PWR_ON
JP1

2 HARDWARE CONFIGURATION

The Installation PPGA Celeron Processor

HOT-683 mainboard provides a 370-pin ZIF Socket370 for Intel PPGA Celeron CPU. The CPU that came with the mainboard should have a fan attached to it to prevent overheating. If this is not the case then purchase a fan before you turn on your system.

To install a CPU, first turn off your system and remove its cover. Locate the ZIF Socket370 and open it by first pulling the lever sideways away from the socket then upwards to a 90-degree right angle. Insert the CPU with the correct orientation as shown.(Figure 2-1) Use the notched corner of the CPU as your guide. The notched corner should point towards the end of the lever. Notice that there are two blank area where one hole is missing from that corner of the square array of pin holesr. Because the CPU has a corner pin for two of the four corner, the CPU will only fit in the one orientationn, hold down on the CPU and close the socket's lever.

Figure 2-1   Blank   Lever   Blank   Notch
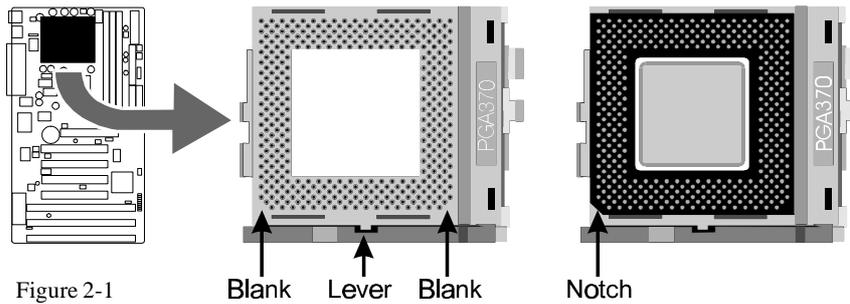
Then you should have a CPU fan that will cover the face of the CPU. Apply thermal jelly to the CPU metallic top and then install the fan onto the CPU. (Figure 2-2)
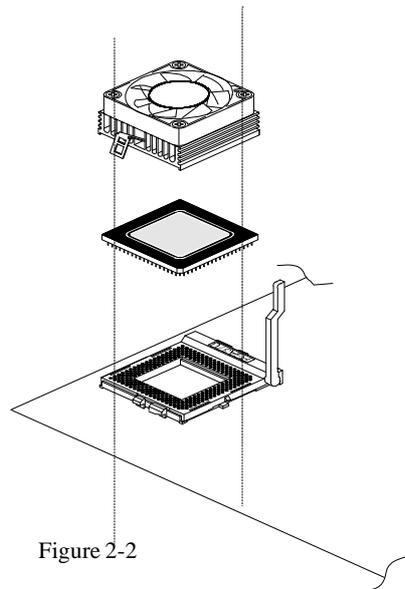
Figure 2-2

Jumpers

Several hardware settings are made through the use of jumper caps to connect jumper pins on the main board. The jumper's pin 1 on main board will be on the top or on the left when holding the main board with the keyboard connector away from yourself.

Jumpers with two pins will be shown as ▣▣ for Close (On) and ▣● for Open (Off). To connect the pins, simply place a plastic jumper cap over the two pins.

CPU Clock Speed Selection - JP5

HOT-683 featuring CPU Plug & Play function, the user needn't to adjust onboard system clock and CPU multiplier.

HOT-683 mainboard features a clock generator to provide adjustable system clock frequency. JP5 is a 6-pin jumpers which determine the system clock frequency 50 MHz to 83 MHz.

HOT-683 mainboard does not provide any jumper to figure the CPU multiplier since the multiplier adjusting function is not available on PPGA Celeron.

Figure 2-3 shows the position of JP5 on the mainboard. Table 2-1 shows adjustable System clock on jumper JP5.
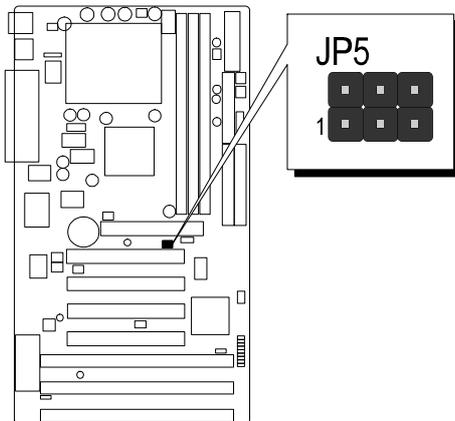
System Clock (JP5)	1-2	3-4	5-6
50 MHz	ON	ON	ON
60 MHz	ON	OFF	OFF
66 MHz	OFF	OFF	OFF
75 MHz	OFF	ON	OFF
83 MHz	ON	OFF	ON

Figure 2-3

Table 2-1

Clear CMOS - JP10

HOT-683 mainboard supports jumper **JP10** for discharging mainboard's CMOS memory.

This jumper can clear the CMOS data stored in the Giga I/O chip. To clear the CMOS data please follow listed steps:

1) Turn off the PC,
2) Remove mini jumper from JP10 pin 1-2,
3) Insert mini jumper to JP10 pin 2-3 for a brief while,
4) Remove mini jumper from JP10 in 2-3,
5) Reinsert mini jumper to JP10 pin 1-2,
6) Turn on the PC.
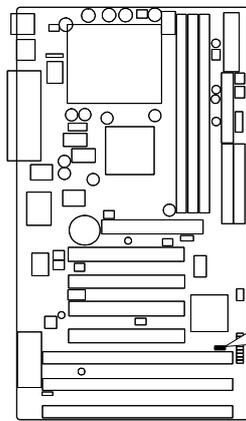
Figure 2-4
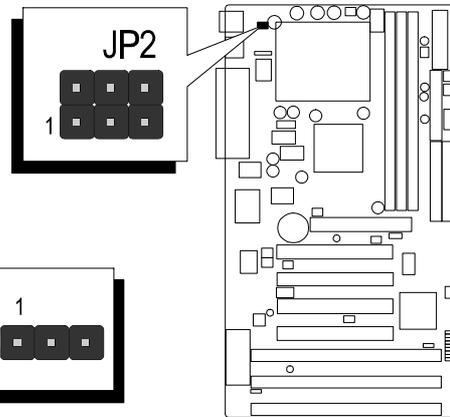
Figure 2-5

Keyboard & PS/2 Mouse Power-On Setting - JP2

HOT-683 mainboard provides an optional power-on function by stroke any key (or hot-key) on keyboard or double click on PS/2 mouse.
Note: Power-on by serial mouse is not supported

JP2 is the jumper used to set the functions of keyboard & PS/2 mouse power-on Enabled or Disabled.

When you enabled K/B & PS/2 Mouse Power-ON function, you also have to set the proper item on **POWER ON function** category of **Integrated Peripherals** of BIOS setup.

Table 2-2

Connectors

Front Panel Connectors (JP11)

Speaker Connector - SPEAKER

PC speaker connector may attach a 4-pin PC speaker cable from the case to this connector.

HDD LED Connector - IDE LED

Attach a 2-pin IDE drive LED cable to this connector. The LED lights when an IDE device is active.

ATX Power On/Off Switch Connector - PW ON

Attach a 2-pin momentary type switch to this connector for turning on or off your ATX power supply.

Hardware Reset Connector - RST

Attach 2-pin hardware reset switch to it. Closing the reset switch restarts the system.

PW-LED Connector - PW LED

Power LED connector is a 3-pin connector for attached to the case's Power LED.

EPMI Connector - EPMI

Hardware System Management Interface connector may attach a 2-pin momentary switch to it. When push it will force system get into power saving mode, and the system will resume when switch is pushed again.

GLED Connector - GREEN LED

Attach a 2-pin Green LED cable to it. The Green LED lights when the system get intopower saving mode.
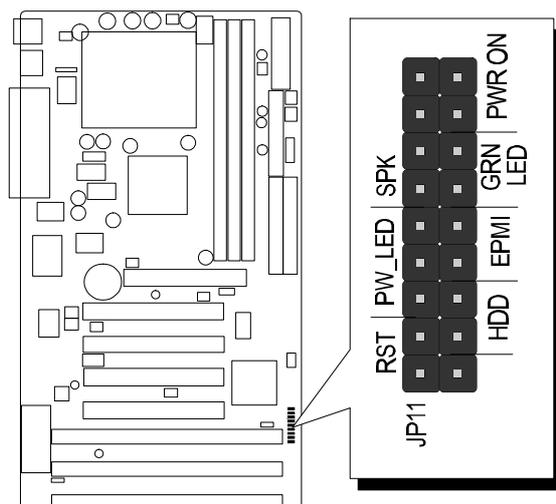
Figure 2-6

Back Panel Connectors
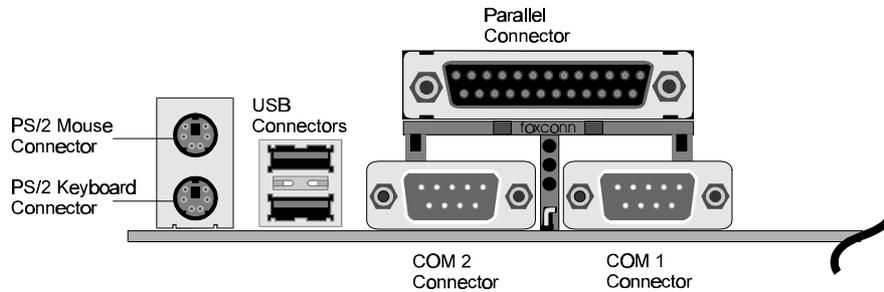
Figure 2-7

COM1/COM2 Connectors

Attach COM1/COM2 device cable to this connector.

PS/2 Keyboard & PS/2 Mouse Connector

Two 6-pin female PS/2 keyboard & Mouse Connectors is located at the rear of the main board. PS/2 Mouse on top of connector and PS/2 Keyboard on the bottom of connector. Plug the PS/2 keyboard and mouse jack into this connector.

Parallel Port Connector

A 25-pin female connector is located at the rear of the main board. Plug the parallel port device cable into this connector.

USB1/USB2 Port Connectors

Two female connectors are located at the rear of the board. Plug the USB devices jack into this connector.

Other Connectors

ATX Power Supply Connector - J4

It is a twenty-pin male header connector. Plug the connector from the power directly onto the board connector while making sure the pin 1 is in its position. The main board requires a power supply with at least 200 watts and power good signal.

Figure 2-8

IR Connector - J3

Infrared device connector may attach a 5-pin infrared device cable to this connector for enabling the infrared transfer function. This mainboard meets the specification of ASKIR and HPSIR. Figure 2-10 shows J3's pin assignment.

J3

VCC	VCC	IRRX	GND	IRTX
■	●	●	●	●
1	2	3	4	5
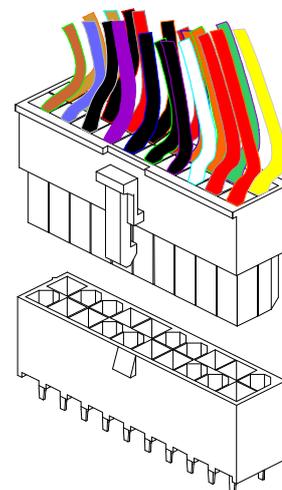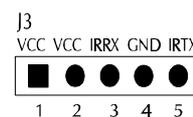
Figure 2-9

CPU, Chassis & AGP cooling Fan connectors - JP1, JP4,J12 & J9

The main board provides three onboard 12V cooling fan power connectors. Depending on the fan maker, the wiring and plug may be different. The red wire should be connected to +12V and black wire should be connected to ground (GND).

Wake-On-LAN Connector - J14

Attach a 3-pin connector from the LAN card which supports the Wake-On-LAN (WOL) function. This function lets users wake up the connected system through the LAN card.

Enhanced IDE and Floppy connectors

The main board shipped with two 40-pin ribbon cable for IDE H.D.D , one 34-pin ribbon cable for F.D.D Ribbon cables should always be connected with the red stripe on the Pin 1 side of the connector.

SB-Link connector - JP9

The main board provides a 2x3 pin SB-Link header accepts the Creative CT4600 series PCI sound cards with PCI solution to connect the legacy Sound Blaster compatible audio to the PCI bus.
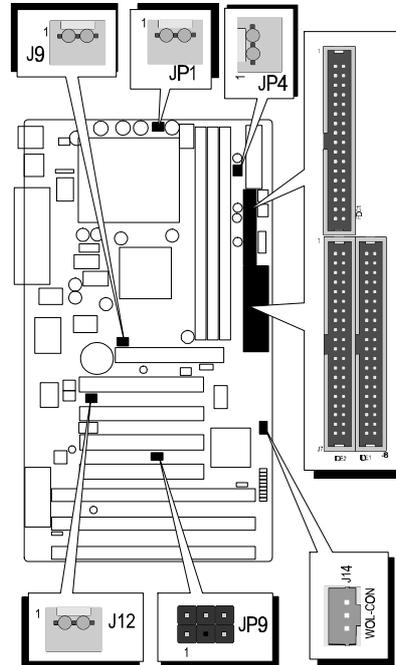
Figure 2-10

3 MEMORY CONFIGURATION

The HOT-683 mainboard provides three 168-pin DIMM sockets that make it possible to install from 8MB up to 384MB of EDO DRAM or SDRAM. The DIMM socket support 8MB, 16MB, 32MB, 64MB, and 128MB 3.3V single- or double- side DIMM.

The three DIMM sockets are arranged in three banks of one socket each, Each bank provides a 64/72-bit wide data path.

HOT-683 provides optional data integrity features including EC (Error Checking) or ECC (Error Checking and Correcting) in the memory array. EC mode provides single and multiple bit error detection. In ECC mode, during reads from the DRAM, the HOT-683 provides error checking and correction of the data.

To support ECC, you must use true (opposed to phantom parity generated by TTL chips) 72-bit parity-type DIMM for all modules.

Install memory in any or all of the banks in any combination as follows:

DIMM Socket	Memory Modules	Mudule Quantity
DIMM 0	8MB, 16MB, 32MB, 64MB, 128MB 168-pin 3.3V EDO or SDRAM DIMM	x 1
DIMM 1	8MB, 16MB, 32MB, 64MB, 128MB 168-pin 3.3V EDO or SDRAM DIMM	x 1
DIMM 2	8MB, 16MB, 32MB, 64MB, 128MB 168-pin 3.3V EDO or SDRAM DIMM	x 1

Table 3-1

4. FLASH UTILITY

This chapter briefly discusses Award Flash utility in order to guide you through updating your old BIOS. The file name we use to program here is test.bin, and the file name to save old BIOS is 683.OLD. Please note that those file names are not absolute. They are only examples to let you have a more clear understanding of the updating process.

How to Begin

1. Please type "awdflash" and press the ENTER key to begin the updating process.

2. Once you enter, you will see a main menu displaying:

3. Move the cursor to "File Name to Program: "

4. Type the program name "test.bin", and then press the ENTER key.

5. At the bottom of the menu, you will be requested to answer:

   "Do You Want to Save BIOS (Y/N)? "

The following manual is intended to guide you through the process of both "No" and "Yes" cases respectively.

If "No"

If you do not wish to save the old BIOS:

1. Please type "N", and then press the ENTER key.

2. Then you will be requested to answer:

   "Are You Sure to Program? "

3. Answer "N" if you do not want to program, and then it will exit.

If "Yes"

To save the old BIOS:

1. Please respond "Y", and then press the ENTER key.

2. Move the cursor to "File Name to Save: "

3. Type file name "TEST.BIN", and then press the ENTER key. (Your old BIOS will be saved in the file name you create. In this case, the old BIOS is saved in the file name, 683.OLD).

4. Then you will be requested to answer:

    "Are You Sure to Program (Y/N)? "

```
        FLASH  MEMORY  WRITER  v5.5
  Copyright (C) 1996-1997, Award Software, Inc.
-----------------------------------------------
   For 8-i440BX-M5135-2A69JHZDC   DATE: 04/20/19
       Flash Type - WINBOND 29EE011 /5V

 File Name to Program : test.bin

 File Name to Save    : 683.old




-----------------------------------------------
 Error Message:
```

6. When the programming is finished, the showing message will appear:

7. Once you see the showing message "Power Off or Reset System", please restart your system.

8. When you power on the computer again, you will find your old BIOS has already been successfully updated.

To view a complete usage of FLASH utility, please type "awdflash /?" and press the ENTER key.

Notes About Award Flash Utility

Please note that Award Flash Utility cannot run under **EMM386** or **QEMM**. Thus, when executing the command "awdflash", an error message will appear:

"Error Message: Fail — Due to EMM386 or QEMM !"

5 BIOS SETUP

The 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 so that it retains the Setup information when the power is turned off.

Entering Setup

Power on the computer and press <Del> immediately will allow you to enter Setup. The other way to enter Setup is to power on the computer, when the below message appear 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"

If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF the ON or pressing the "RESET" button on the system case. You may also restart by simultaneously press <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"

The Main Menu

```
                ROM PCI/ISA BIOS (2A69JH2G)
                     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
```

Standard CMOS setup

This setup page includes all items in a standard compatible BIOS.

BIOS features setup

This setup page includes all items of Award special enhanced features.

Chipset features setup

This setup page includes all items of chipset features.

Power Management Setup

This setup page includes all items of Power Management features.

PnP/PCI Configuration setup

This item specifies the value (in units of PCI bus blocks) of the latency timer for the PCI bus master and the IRQ level for PCI device. Power-on with BIOS defaults

Load BIOS Defaults

BIOS defaults loads the values required by the System for the maximum performance. However, you can change the parameter through each Setup Menu.

Load Setup Defaults

Setup defaults loads the values required by the system for the O.K. performance. However, you can change the parameter through each Setup Menu.

Integrated Peripherals

This setup page includes all items of peripheral features.

Supervisor Password

Change, set, or disable supervisor password. It allows you to limit access to the system and Setup, or just to Setup.

User Password

Change, set, or disable user password. It allows you to limit access to the system and Setup, or just to Setup.

IDE HDD auto detection

Automatically configure IDE hard disk drive parameters.

Save & Exit setup

Save CMOS value change to CMOS and exit setup

Exit without saving

Abandon all CMOS value changes and exit setup.

Standard CMOS Setup

```
              ROM PCI/ISA BIOS (2A69JH2G)
                 STANDARD CMOS SETUP
                 AWARD SOFTWARE, INC.

  Date (mm:dd:yy) : Thu, Dec  3 1998
  Time (hh:mm:ss) : 10 : 58 : 22

  HARD DISKS          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:        0K        │
  Video   : EGA/VGA             │ Extended Memory:      0K        │
  Halt On : All Errors          │    Other Memory:    512K        │
                                │                                 │
                                │    Total Memory:    512K        │
                                └─────────────────────────────────┘
  ESC : Quit          ↑ ↓ → ←  : Select Item      PU/PD/+/- : Modify
  F1  : Help         (Shift)F2 : Change Color
```

Date

The date format is <day>, <month> <date> <year>. Press <F3> to show the calendar.

Time

The time format is <hour> <minute> <second>. The time is calculated base on the 24-hour military-time clock. For example. 5 p.m. is 17:00:00.

Hard Disks Type

This item identify the types of hard disk drives that has been installed in the computer. There are 46 predefined types and a user definable type.

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 item. 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>. Those information should be provided in the documentation from your hard disk vendor or the system manufacturer.

The user may also set those items to AUTO to auto configure hard disk drives parameter when system power-on.

If a hard disk drive has not been installed select NONE and press <Enter>.

Drive A type/Drive B type

This item specifies the types of floppy disk drive A or drive B that has been installed in the system.

Video

This item selects the type of adapter used for the primary system monitor that must matches your video display card and monitor. Although secondary monitors are supported, you do not have to select the type in Setup.

Error halt

This item determines if the system will stop, when an error is detected during power up.

Memory

This item is display-only. It is automatically detected by POST (Power On Self Test) of the BIOS.

Base Memory

The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system. The value of the base memory is typically 512K for systems with 512K memory installed on the mainboard, or 640K for systems with 640K or more memory installed on the mainboard.

Extended Memory

The BIOS determines how much extended memory is present during the POST. This is the amount of memory located above 1MB in the CPU's memory address map.

BIOS Features Setup

```
                  ROM PCI/ISA BIOS (2A69JH2G)
                     BIOS FEATURES SETUP
                     AWARD SOFTWARE, INC.

Virus Warning            : Disabled    Video  BIOS Shadow  : Enabled
CPU Internal Cache       : Enabled     C8000-CBFFF Shadow  : Disabled
External Cache           : Enabled     CC000-CFFFF Shadow  : Disabled
Quick Power On Self Test : Enabled     D0000-D3FFF Shadow  : Disabled
Boot Sequence            : A,C,SCSI    D4000-D7FFF Shadow  : Disabled
Swap Floppy Drive        : Disabled    D8000-DBFFF Shadow  : Disabled
Boot Up Floppy Seek      : Disabled    DC000-DFFFF Shadow  : Disabled
Boot Up NumLock Status   : On
Gate A20 Option          : Fast
Typematic Rate Setting   : Disabled
Typematic Rate (Chars/Sec) : 6
Typematic Delay (Msec)   : 250
Security Option          : Setup
PCI/VGA Palette Snoop    : Disabled
OS Select For DRAM > 64MB : Non-OS2
Report No FDD For WIN 95 : No          ESC : Quit         ↑↓→← : Select Item
                                       F1  : Help         PU/PD/+/- : Modify
                                       F5  : Old Values   (Shift)F2 : Color
                                       F6  : Load BIOS  Defaults
                                       F7  : Load Setup Defaults
```

Virus Warning

When this item is enabled, the Award BIOS will monitor the boot sector and partition table of the hard disk drive for any attempt at modification. If an attempt it made, the BIOS will halt the system and the following error message will appear. Afterwards, if necessary, you will be able to run an anti-virus program to locate and remove the problem before any damage is done.

```
                      !WARNING!
            Disk boot sector is to be modified
        Type "Y" to accept write or "N" to abort write
                  Award Software, Inc.
```

CPU Internal Cache

This item enables CPU internal cache to speed up memory access.

External Cache

This item enables CPU secondary cache to speed up memory access.

Quick Power On Self Test

This item speeds up Power On Self Test (POST) after you power on the computer. If it is set to Enabled, BIOS will shorten or skip some check items during POST.

Boot Sequence

This item determines which drive computer searches first for the disk operating system. Default setting is A, C, SCSI.
BIOS also support system boot from CD-ROM drive or SCSI hard disk drive.

Swap Floppy Drive

When this item enables, the BIOS will swap floppy drive assignments so that Drive A: will function as Drive B: and Drive B: as Drive A:.

Boot Up Floppy Seek

When this item enables, the BIOS will swap floppy drive assignments so that Drive A: will function as Drive B: and Drive B: as Drive A:.

Boot Up NumLock Status

When this option enables, BIOS turns on *Num Lock* when system is powered on.

Gate A20 Option

This entry allows you to select how the gate A20 is handled. The gate A20 is a device used to address memory above 1 MByte. Initially, the gate A20 was handled via a pin on the keyboard. Today, while keyboards still provide this support, it is more common, and much faster, set to Fast for the system chipset to provide support for gate A20.

Typematic Rate Setting

This determines if the typematic rate is to be used. when disabled, continually holding down a key on your keyboard will generate only one instance. In other words, the BIOS will only report that the key is down. When the typematic rate is enabled, the BIOS will report as before, but it will then wait a moment, and, if the key is still down, it will begin the report that the key has been depressed repeatedly. For example, you would use such a feature to accelerate cursor movements with the arrow keys.

Typematic Rate (Chars/Sec)

When the typematic rate is enabled, this selection allows you select the rate at which the keys are accelerated.

Typematic Delay (Msec)

When the typematic rate is enabled, this selection allows you to select the delay between when the key was first depressed and when the acceleration begins

Security Option

This item allows you to limit access to the System and Setup, or just to Setup.
When *System* is selected, the System will not boot and access to Setup will be denied if the correct password is not entered at the prompt.
When *Setup* is selected, the System will boot, but access to Setup will be denied if the correct password is not entered at the prompt.

PCI/VGA Palette Snoop

This item must be set to enabled if there is a MPEG ISA card installed in the system, and disabled if there is no MPEG ISA card installed in the system.

OS Select For DRAM > 64MB

This item allows you to access the memory that over 64 MB in OS/2.

Report No FDD For WIN 95

This item enable for report No FDD for WIN95 if No FDD install.

Video BIOS Shadow

Determines whether video BIOS will be copied to RAM. However, it is optional depending on chipset design. Video Shadow will increase the video speed.

C8000-CBFFF Shadow/DC000-DFFFF Shadow

These categories determine whether option ROMs will be copied to RAM. An example of such option ROM would be support of SCSI Add-on card.

Chipset Features Setup

```
              ROM PCI/ISA BIOS (2A69JH2G)
                CHIPSET FEATURES SETUP
                 AWARD SOFTWARE, INC.

Auto Configuration      : Enabled    SDRAM CAS latency Time    : 3
DRAM Speed Selection     : 60ns       Auto Detect DIMM/PCI Clk  : Disabled
MA Wait State           : Fast       Spread Spectrum           : Disabled
EDO RAS# To CAS# Delay   : 3          CPU Warning Temperature   : Disabled
EDO RAS# Precharge Time  : 4          Current System Temp.      : XX°C/XX°F
EDO DRAM Read Burst      : x222       Current CPU1 Temperature  : XX°C/XX°F
EDO DRAM Write Burst     : x222       Current CPUFAN1 Speed     : XXXXRPM
DRAM Data Integrity Mode : Non-ECC    Current CPUFAN2 Speed     : XXXXRPM
CPU-To-PCI IDE Posting   : Enabled    Current CPUFAN3 Speed     : XXXXRPM
System BIOS Cacheable    : Disabled   IN0(V) : XX.XV    IN1(V) : XX.XV
Video  BIOS Cacheable    : Disabled   IN2(V) : XX.XV     + 5 V : XX.XV
Video RAM Cacheable      : Disabled   +12 V  : XX.XV     -12 V :-XX.XV
8 Bit I/O Recovery Time  : 1          - 5 V  :-XX.XV
16 Bit I/O Recovery Time : 1          Shutdown Temperature      : 60°C/140°F
Memory Hole At 15M-16M   : Disabled
Passive Release          : Disabled   ESC : Quit        ↑↓→← : Select Item
Delayed Transaction      : Disabled   F1  : Help        PU/PD/+/- : Modify
AGP Aperture Size (MB)   : 64         F5  : Old Values  (Shift)F2 : Color
SDRAM RAS-to-CAS Delay   : Slow       F6  : Load BIOS  Defaults
SDRAM RAS Precharge Time : Slow       F7  : Load Setup Defaults
```

Auto Configuration

The default setting of the optimal timings for items 3 through 7 for 60ns EDO DRAM modules.

DRAM Speed Selection

This item set the EDO DRAM Read/Write timings that the system uses. When item of "Auto Configuration" is disabled, this item will not show up.

MA Wait State

When enabled, one additinal wait state is inserted before the assertion of the first memory address line MA and CAS/RAS assertion during DRAM read or write leadoff cycles.

EDO RAS# To CAS# Delay

When EDO DRAM is refreshed, both rows and columns are address separately. This setup item allows you to determine the timing of the transition from Row Address Strobe (RAS) to Column Address Strobe (CAS). The options are 3 and 2.

EDO RAS# Precharge Time

DRAM must continually be refreshed or it will lose its data. Normally, DRAM is refreshed entirely as the result of a single request. This option allows you to determine the number of CPU clocks allocated for Row Address Strobe to accumulate its charge before the DRAM is refreshed. If insufficient time is allowed, refresh may be incomplete and data lost.

This item sets the DRAM RAS Precharge Timing. The options are 4 and 3 CLKs.

EDO DRAM Read Burst

This item set the EDO DRAM Read Burst Timing. The timing used depends on the type of DRAM (EDO burst mode or standard fast page mode) on a per-bank basis. The options are 222 and 333.

EDO DRAM Write Burst

This item set the EDO DRAM Write Burst timing for accessing DRAM. The options are 222 and 333.

DRAM Data Integrity Mode

This item allows the user to set DRAM data integrity mode to *Non-ECC* or *ECC*. Non-ECC has byte-wide write capability but no provision for protecting data integrity in the DRAM array. ECC allows a detection of single-bit and multiple-bit errors and recovery of single-bit errors.

CPU-To-PCI IDE Posting

When disabled, the CPU to PCI DIE posting cycles are treated as normal I/O write transactions. When enabled will have the I/O write cycles posted.

System BIOS Cacheable

This item allows the user to set whether the system BIOS F000~FFFF areas are cacheable or non-cacheable.

Video BIOS Cacheable

This item allows the user to set whether the video BIOS C000~C7FF areas are cacheable or non-cacheable.

Video RAM Cacheable

This is a new cache technology for the video memory of the processor. It can greatly improve the display speed by caching the display data. You must leave this on the default setting of *Disabled* if your display card cannot support this feature or else your system may not boot.

8 Bit I/O Recovery Time

The recovery time is the length of time, measured in CPU clocks, which the system will delay after the completion of an input/output request. This delay takes place because the CPU is operating so much after than the input/output bus that the CPU must be delayed to allow for the completion of the I/O.

This item allows you to determine the recovery time allowed for 8 bit I/O. Choices are from NA, 1 to 8 CPU clocks.

16-Bit I/O Recovery Time

This item allows you to determine the recovery time allowed for 16 bit I/O. Choices are from NA, 1 to 4 CPU clocks.

Memory Hole At 15M-16M

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.

Passive Release

When enabled, the chipset provides a programmable passive release mechanism to meet the required ISA master latencies.

Delayed Transaction

Since the 2.1 revision of the PCI specification requires much tighter controls on target and master latency. PCI cycles to or from ISA typically take longer. When enabled, the chipset provides a programmable delayed completion mechanism to meet the required target latencies.

AGP Aperture Size (MB)

This item allows the user to set memory-mapped, graphics data structures can reside in Graphics Aperture.

SDRAM RAS-to-CAS Delay

When SDRAM is refreshed, both rows and columns are address separately. This setup item allows you to determine the timing of the transition from Row Address Strobe (RAS) to Column Address Strobe (CAS). The options are *Slow* for *3* and *Fast* for 2 CLKs.

SDRAM RAS Precharge Time

SDRAM must continually be refreshed or it will lose its data. Normally, DRAM is refreshed entirely as the result of a single request. This option allows you to determine the number of CPU clocks allocated for Row Address Strobe to accumulate its charge before the DRAM is refreshed. If insufficient time is allowed, refresh may be incomplete and data lost. The options are *Slow* for *3* and *Fast* for 2 CLKs.

SDRAM CAS Latency Time

This item defines the CAS Latency timing parameter of the SDRAM expressed in 66MHz clocks. The options are *2* and *3* CLKs.

Auto Detect DIMM/PCI Clock

Enabling this item allows system auto detect and close clock signal to empty DIMM/PCI slot to reduce EMI.

Spread Spectrum

This item allows the user to enable Spread Spectrum Modulated to reduce the EMI.

CPU Warning Temperature

Since the mainboard support CPU temperature monitoring and overhear alert. This item allows the user to set the threshold of CPU warning temperature. When CPU temperature over the threshold, system will slow down clock to prevent CPU damage.

Current System Temp

Since the mainboard support System temperature monitoring and overheat alert. This item indicate the current main board temperature.

Current CPU Temperature

Since the mainboard support CPU temperature monitoring and overheat alert.
This item indicate the current Processor temperature.

Current CPUFAN1/2/3 Speed

The mainboard can detect three fans rotation speed for CPU cooler and system.

IN0(V) ~ IN2(V), +5V ~ -5V

The mainboard support CPU and mainboard voltages monitoring. The onboard hardware monitor
is able to detect the voltages output of the voltage regulators and power supply.

Shutdown Temperature

Select the combination of lower and upper limits for the system shutdown temperature, if your
computer contains an environmental monitoring system. If the temperature extends beyound either
limit, the system shuts down.

Power Management Setup

```
                    ROM PCI/ISA BIOS (2A69JH2G)
                       POWER MANAGEMENT SETUP
                        AWARD SOFTWARE, INC.

 Power Management    : Disabled    ** Reload Global Timer Events **
 PM Control by APM   : Yes         IRQ[3-7,9-15],NMI    : Disabled
 Video Off Method    : V/H SYNC+Blank  Primary IDE 0    : Disabled
 Video Off After     : Standby     Primary IDE 1        : Disabled
 MODEM Use IRQ       : 3           Secondary IDE 0      : Disabled
 Doze Mode           : Disabled    Secondary IDE 1      : Disabled
 Standby Mode        : Disabled    Floppy Disk          : Disabled
 Suspend Mode        : Disabled    Serial Port          : Enabled
 HDD Power Down      : Disabled    Parallel Port        : Disabled
 Suspend Mode Option : PowerOn Suspend  Resume by LAN    : Disabled
 Throttle Duty Cycle : 62.5%
 PCI/VGA Act-Monitor : Disabled
 Soft-Off by PWR-BTTN: Instant-Off
 CPUFAN Off In Suspend: Enabled
 Power On on PCI card : Disabled
 PowerOn by Ring     : Disabled    ESC : Quit         ↑↓→← : Select Item
 Resume by Alarm     : Disabled    F1  : Help         PU/PD/+/- : Modify
                                   F5  : Old Values   (Shift)F2 : Color
 IRQ 8 Break Suspend  : Disabled   F6  : Load BIOS  Defaults
                                   F7  : Load Setup Defaults
```

Power Management

This item determines the options of the power management function. *Max Saving* puts the system into power saving mode after a brief period of system inactivity; *Min Saving* is the same as *Max Saving* except the time of the system inactivity period is longer; *Disabled* disables the power saving feature; *User Defined* allows you to set power saving options according to your preference.

PM Control by APM

If this item set to *No*, system BIOS will be ignored and APM calls the power to manage the system.
If this item setup to *Yes*, system BIOS will wait for APM's prompt before it enter any PM mode e.g. *DOZE, STANDBY* or *SUSPEND*.

Video Off Method

This item define the video off features -*V/H SYNC + Blank, DPMS*, and *Blank Only*. The first option, which is the default setting, blanks the screen and turns off vertical and horizontal scanning; *DPMS* allows the BIOS to control the video display card if it supports the *DPMS* feature; *Blank Screen* only blanks the screen.

Video Off After

This item define when to activate the video off feature for monitor power management. The settings are N/A, Doze, Standby and Suspend.

MODEM Use IRQ

This item determines the IRQ in which the MODEM can use.
The choice: 1, 3, 4, 5, 7, 9, 10, 11, N/A.

Doze Mode

When enabled and after the set time of system inactivity, the CPU clock will run at slower speed while all other devices still operate at full speed.

Standby Mode

When enabled and after the set time of system inactivity, the fixed disk drive and the video would be shut off while all other devices still operate at full speed.

Suspend Mode

When enabled and after the set time of system inactivity, all devices except the CPU will be shut off.

HDD Power Down

This item defines the continuous HDD idle time before the HDD enters power saving mode (motor off). The options are from 1 min to 15 min and *Disabled*.

Suspend Mode Option

When enabled and after the set time of system inactivity, all devices except the CPU will be shut off.

Throttle Duty Cycle

This item determines the duty cycle for the clock control thermal throttling mode. The duty cycle indicates the percentage of time while in the thermal throttle mode. The settings between 12.5% and 87.5%.

PCI/VGA Act-Monitor

If this item is set to Enabled, the VGA activity event will be monitored to reload global timer.

Soft-Off by PWR-BTTN

The setting of **Instant-Off** allows the ATX switch to function as a normal system power off button when pressed for less than 4 seconds. The setting of **Delay 4 Sec.** allows the button to have a dual function where to press the button for less than 4 seconds will place the system in suspend mode, and pressing the button for more than 4 seconds will shut place the system off.

CPUFAN OFF In Suspend

This item determineCPU fan status when the system enters suspend mode.
The options Enabled and Disabled.

Power On on PCI card

This item determine the system will power-on by activity of PCI card which with "PME" signal.

PowerOn by Ring

This item determine the system will resume by activating of modem ring.

Resume by Alarm

This item determine the system will resume by activity of R.T.C. If enabled this feature and enter resume date and time. When date and time expire, system will power-on itself from power off.

IRQ 8 Break Suspend

You can turn On or Off monitoring of IRQ8 (the Real Time Clock) so it does not awaken the system from Suspend mode.

** Reload Global Timer Events **

If any of these items is set to Disabled, that system activity event will not be monitored to reload global timer.

If these items is set to Enabled, that system activity event will be monitored to reload global timer.

These items include IRQ[3-7, 9-15], NMI, Primary IDE0/1, Secondary IDE 0/1, Floppy Disk, Serial Port and Parallel Port.

Resume by LAN (Wake-ON-LAN)

This item determine the system will resume by activity of LAN. If enabled this feature system will power-on itself from power off when the activity of LAN.
Note : HOT-683 support Wake-ON-LAN function with Intel LAN card only.

PCI Configuration Setup

```
                 ROM PCI/ISA BIOS (2A69JH2G)
                    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 : PCI/ISA PnP   Used MEM base addr   : N/A
 IRQ-4  assigned to : PCI/ISA PnP
 IRQ-5  assigned to : PCI/ISA PnP   Assign IRQ For USB   : Enabled
 IRQ-7  assigned to : PCI/ISA PnP
 IRQ-9  assigned to : PCI/ISA PnP   PCI Latency Timer(CLK):  64
 IRQ-10 assigned to : PCI/ISA PnP   MS IRQ Routing Table : Disabled
 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   ESC : Quit        ↑↓→← : 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

When this item is set to Yes, it will allow the PnP OS(Windows 95) control the system resources except PCI devices and PnP boot devices.
Default setting is *No*.

Resources Controlled By

The Award Plug and Play BIOS has the capability to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system as Windows 95.

Reset Configuration Data

This item allows you to determine whether to reset the configuration data or not.

IRQ 3/4/5/7/9/10/11/12/14/15, assigned to

These items allow you to determine the IRQ assigned to the ISA bus and is not available for PCI slot. Choices are *Legarcy ISA* and *PCI/ISA PnP*.

DMA 0/1/3/5/6/7 assigned to

These items allow you to determine the DMA assigned to the ISA bus and is not available for PCI slot. Choices are *Legacy ISA* and *PCI/ISA PnP*.

PCI IDE IRQ Map to

This items allows you to configure your system to the type of IDE disk controller in use. By default, Setup assumes that your controller is an ISA device rather than a PCI controller.

If you have equipped your system with a PCI controller, changing this allows you to specify which slot has the controller and which PCI interrupt (A, B, C or D) is associated with the connected hard drives.

Remember that this setting refers to the hard disk drive itself, rather than individual partitions. Since each IDE controller supports two separate hard disk drives, you can select the INT# for each. Again, you will note that the primary has a lower interrupt than the secondary as described in "*Slot x Using INT#*" above.

Selecting "*PCI Auto*" allows the system to automatically determine how your IDE disk system is configured.

Used MEM base addr

This item is used to select a base address for the memory area used by any peripheral that requires high memory.
The choices are *C800, CC00, D000, D400, D800, DC00* and *N/A*.

Assign IRQ for USB

This item allows the user to assign IRQ to on-board USB controller or not.
Since on-board controller is enabled always, if none of IRQ is assigned to it, there will be a question mark report on system device under windows 95.

PCI Latency Timer

The number of clocks programed in the PCI Latency Timer represents the guaranteed time slice allocated to the 440LX, after which it must complete the current data transfer phase and surrender the bus as soon as its bus grant is removed.

The PCI Latency Timer is used to guarantee to the PCI agents a minimum amount of the system resource.

The default setting is 64 PCI clocks.

MS IRQ Routing Table

This item allows the user to set BIOS IRQ Routing Table Enabled or Disabled.

Integrated Peripherals

```
                    ROM PCI/ISA BIOS (2A69JH2G)
                       INTEGRATED PERIPHERALS
                       AWARD SOFTWARE, INC.
┌──────────────────────────────────────────────────────────────────────┐
│ IDE HDD Block Mode      : Enabled   Onboard Serial Port 2    : Auto    │
│ IDE Primary Master PIO  : Auto      UART Mode Select         : Standard│
│ IDE Primary Slave  PIO  : Auto      RxD , TxD Active         : Hi,Lo   │
│ IDE Secondary Master PIO : Auto      IR Transmittiion delay  : Enabled │
│ IDE Secondary Slave  PIO : Auto     Onboard Parallel Port    : 378/IRQ7│
│ IDE Primary Master UDMA  : Auto     Parallel Port Mode       : SPP     │
│ IDE Primary Slave  UDMA  : Auto     ECP Mode Use DMA         : 3       │
│ IDE Secondary Master UDMA: Auto     EPP Mode Select          : EPP1.9  │
│ IDE Secondary Slave  UDMA: Auto                                        │
│ On-Chip Primary   PCI IDE: Enabled                                     │
│ On-Chip Secondary PCI IDE: Enabled                                     │
│ USB Keyboard Support     : Disabled                                    │
│ Init Display First       : PCI Slot                                    │
│                                                                        │
│ POWER ON Function        : BUTTON ONLY                                 │
│ KB Power ON Password     : Enter    ESC : Quit       ↑↓→← : Select Item│
│ Hot Key Power ON         : Ctrl-F1  F1  : Help       PU/PD/+/- : Modify│
│ KBC input clock          : 8 MHz    F5  : Old Values  (Shift)F2 : Color│
│ Onboard FDC Controller   : Enabled  F6  : Load BIOS  Defaults          │
│ Onboard Serial Port 1    : Auto     F7  : Load Setup Defaults          │
└──────────────────────────────────────────────────────────────────────┘
```

IDE HDD Block Mode

This item is used to set IDE HDD Block Mode. If your IDE Hard Disk supports block mode, then you can enable this function to speed up the HDD access time. If not, please disable this function to avoid HDD access error.

IDE Primary Master PIO

In this items, there are five modes defined in manual mode and one automatic mode. There are *0, 1, 2, 3, 4,* and *AUTO* is the default settings for on board Primary Master PIO timing.

IDE Primary Slave PIO

In this items, there are five modes defined in manual mode and one automatic mode. There are *0, 1, 2, 3, 4,* and *AUTO* is the default settings for on board Primary Slave PIO timing.

IDE Secondary Master PIO

In this items, there are five modes defined in manual mode and one automatic mode. There are *0, 1, 2, 3, 4,* and *AUTO* is the default settings for on board Secondary Master PIO timing.

IDE Secondary Slave PIO

In this items, there are five modes defined in manual mode and one automatic mode. There are *0, 1, 2, 3, 4,* and *AUTO* is the default settings for on board Secondary Slave PIO timing.

IDE Primary Master UDMA

On this mainboard, Intel PIIX4 improves IDE transfer rate using Bus Master UltraDMA/ 33 IDE which can handle data transfer up to 33MB/sec. The options are *Disabled, Enabled and Auto, Auto* is the default settings for on board Primary Master *UltraDMA33*. **Note : Your hard drive must also support UDMA for this feature to work.**

IDE Primary Slave UDMA

On this mainboard, Intel PIIX4 improves IDE transfer rate using Bus Master UltraDMA/ 33 IDE which can handle data transfer up to 33MB/sec. The options are *Disabled, Enabled and Auto, Auto* is the default settings for on board Primary Slave *UltraDMA33*. **Note : Your hard drive must also support UDMA for this feature to work.**

IDE Secondary Master UDMA

On this mainboard, Intel PIIX4 improves IDE transfer rate using Bus Master UltraDMA/ 33 IDE which can handle data transfer up to 33MB/sec. The options are *Disabled, Enabled and Auto, Auto* is the default settings for on board Secondary Master *UltraDMA33*. **Note : Your hard drive must also support UDMA for this feature to work.**

IDE Secondary Slave UDMA

On this mainboard, Intel PIIX4 improves IDE transfer rate using Bus Master UltraDMA/ 33 IDE which can handle data transfer up to 33MB/sec. The options are *Disabled, Enabled and Auto, Auto* is the default settings for on board Secondary Slave *UltraDMA33*. **Note : Your hard drive must also support UDMA for this feature to work.**

On-Chip Primary PCI IDE

As stated above, your system includes two built-in IDE controllers, both of which operate on the PCI bus. This setup item allows you either to enable or disable the primary controller. You might choose to disable the controller if you were to add a higher performance or specialized controller.

On-Chip Secondary PCI IDE

As above for the Primary controller, this setup item you either to enable or disable the secondary controller. You might choose to disable the controller if you were to add a higher performance or specialized controller

USB Keyboard Support

This item is used to defined USB Keyboard is *Enabled* or *Disabled*.

Init Display First

This item is used to determine initial device when system power on. The options are *PCI* and *AGP*.

POWER ON Function

This item is used to defined Keyboard & PS/2 mouse power-on function enabled or disabled. The options are **Button Only**, **HOT-Key** and **PS/2 Mouse**. Button Only - Only soft-on/off button on the front panel is available.

KB Power ON Password

This item set the keyboard power-on password. When using keyboard to power on , just Enter the password.

Hot Key Power ON

Power-on by soft-on/off button and keyboard are available. The user may set power-on hot-key from <Ctrl><F1> to <Ctrl><F12>.

KBC input clock

This item to set the input clock to onboard keyboard controller. The options are 8MHz, 12MHz and 16MHz.

Onboard FDC Controller

This item specifies onboard floppy disk drive controller. This setting allows you to connect your floppy disk drives to the onboard floppy connector. Choose the "*Disabled*" settings if you have a separate control card.

Onboard Serial Port 1

This item is used to define onboard serial port 1 to *3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Auto* or *Disabled*.

Onboard Serial Port 2

This item is used to define onboard serial port 2 to *3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Auto* or *Disabled*.

UART Mode Select

The main board support IrDA(HPSIR) and Amplitudes Shift Keyed IR(ASKIR) infrared through COM 2 port. This item specifies onboard Infra Red mode to *IrDA 1.0, ASKIR, MIR 0.57M, MIR 1.15M, FIR* or *Standard (Disabled).*
Note : FIR is not available currently.

RxD , TxD Active

This item specifies the Active level for RxD & TxD signal.

IR Transmittion delay

This item enable/disable the delay of the IR state change from Rx to Tx mode or Tx to Rx mode.

Onboard Parallel Port

This item specifies onboard parallel port address to *378H, 278H, 3BCH* or *Disabled.*

Parallel Port Mode

This item specifies onboard parallel port mode. The options are *SPP* (Standard Parallel Port), *EPP*(Enhanced Parallel Port), *ECP* (Extended Capabilities Port), and *EPP+ECP.*

ECP Mode Use DMA

This item specifies *DMA* (Direct Memory Access) channel when ECP device is in use. The options are *DMA 1* and *DMA 3.* This item will not show up when SPP and EPP printer mode is selected.

EPP Mode Select

This item select the EPP Mode, EPP 1.9 or EPP 1.7.

Password Setting

This section describes the two access modes that can be set using the options found on the Supervisor Password and User Password.

```
                        ROM PCI/ISA BIOS (2A69JH2G)
                            CMOS SETUP UTILITY
                          AWARD SOFTWARE, INC.

     STANDARD CMOS SETUP              INTEGRATED PERIPHERALS

     BIOS FEATURES SETUP             IDE HDD AUTO DETECTION

     CHIPSET FEATURES SETUP          SUPERVISOR PASSWORD

     POWER MANAGEMENT SETUP          USER PASSWORD

     PNP/PCI CONFIGURATION           SAVE & EXIT SETUP

     LOAD BIOS DEFAULTS     Enter Password:            UT SAVING

     LOAD SETUP DEFAULTS

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

                        Change/Set/Disable Password
```

Supervisor Password and User Password

The options on the Password screen menu make it possible to restrict access to the Setup program by enabling you to set passwords for two different access modes: Supervisor mode and User mode.

In general, Supervisor mode has full access to the Setup options, whereas User mode has restricted access to the options. By setting separate Supervisor and User password, a system supervisor can limit who can change critical Setup values.

Enter Password

Type the password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable password, just press <Enter> when you are prompted to enter password. A message will confirm the password being disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

Password Disable

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

Warning : Retain a record of your password in a safe place. If you forget the password, the only way to access the system is to clear CMOS memory, please refer to page 13 "Clear CMOS".