# HOW TO USE THIS MANUAL

**This manual is written in a user-friendly style. It would be advisable for users to read it in an orderly sequence :**

**1. For Hardware Information:**
Read **COMPONENT LOCATION DIAGRAM, Page A: QUICK JUMPER & CONNECTOR SETTING**, **Page B: Slot 1 and CPU Installation, Page C: CONNECTORS AND JUMPERS DESCRIPTION and Page D:List of Packaging.**

**2. For Mainboard and System Features:**
Read "**Chapter 1 System Features**" , and you will find helpful information on mainboard and system features. Especially, when you want to do some feature setup, detailed instructions are provided therein to help you through.

**3. For CPU, Memory and Drivers Installation:**
Read "**Chapter 2 Installation**" for your CPU, memory and application drivers installation. Detailed instructions are provided to guide all kinds of users.

**4. For BIOS Update and Setup:**
Read **"Chapter 3 Award BIOS Setup"** for updating your mainboard BIOS and setting up your BIOS Configuration.

**5. For other Technical Support:**
Read **"APPENDIX A"**, fill and send the Request Form to your dealer for other technical support.

The default settings on a mainboard is not necessarily what user expects. A user-friendly manual would be the handiest assistant to help change the on-board configuration or default setting. In case this manual cannot solve all your problems, please ask your dealer for help and be sure the warranty on your system is still valid.

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# Appendix A    Technical Support Request Form

# CHAPTER 1
# System Features

## 1-1  Introduction

**6430M mainboard is designed to run with Intel 810 chipset to enhance the performance and extraordinary value of the Intel Celeron$^{TM}$ processor-powered PC. On the other hand, it is mounted with both Slot 1 and Socket 370 connector for users to make their CPU choice. It supports 66MHz, 100MHz and 133MHz Host Bus Intel PPGA Celeron$^{TM}$ CPUs.  To enhance its peripheral support, 5 PCI slots are mounted on board, with an optional ISA slot to meet some exceptional users' requirements. In addition to the incorporated VGA in Intel 810, its wide and inclusive add-on features are described one by one in later part of this chapter. Before that, let us see some architectural features of Intel 810.**

| Chipset Combination | FW82810DC100 / FW82810E + FW82801AA |
|---|---|
| **With 4MB Display cache** | **Yes** |
| **Supporting UDMA 66** | **Yes** |
| **Shared Memory After installing VGA driver** | **7MB** |

**Users should check with your dealer for the right chipset type on your mainboard.**

# 1-2 System Specifications of 6430M Mainboard

- ▣ **CPU Support:**
  - ◆ Single CPU, with both Slot 1 and PPGA Socket 370 on board for choice.
  - ◆ Supports CPU Clock 66MHz, 100MHz and 133MHz (**133MHz support "Slot 1" socket only**). CPU Clock Ratios from 3.0x to 8.0x (step 0.5x).
  - ◆ Supports CPUs : Pentium II 233MHz~450MHz, Celeron 300MHz~500MHz, and Pentium III 450MHz~650MHz.
  - ◆ CPU Core Voltage 1.30V~2.05V (step 0.05V), and 2.1V~3.5V (Step 0.1V); CPU~I/O Voltage 3.3V.
  - ◆ Built-in Switching Voltage Regulator, supporting Vcore autodetection.

- ▣ **Memory Support:**
  - ◆ Two DIMM sockets on board supporting up to 512MB SDRAM.
  - ◆ PC-66 / PC-100 compatible.

- ▣ **I/O System**
  - ◆ On-board Intel 810 Chipset for I/O Control: FW82810DC100 / FW82810E + FW82801AA.
  - ◆ Bus Frequency 66MHz/100MHz
  - ◆ 5 PCI slots on board, compliant with version 2.2 PCI Local Bus spec.
  - ◆ One Optional ISA slot.
  - ◆ One AMR (Audio, Modem Riser) slot on board.
  - ◆ Dual Master IDE connectors, supporting UDMA33/66 for 4 IDE devices such as high capacity HDD, CD-ROM, LS-120 and tape backup etc.
  - ◆ Two USB connectors in stack supporting up to 127 USB devices.
  - ◆ PS/2 Keyboard and PS/2 Mouse connectors.
  - ◆ One Infrared (IrDA TX/DX) connector.
  - ◆ One FDD port supporting two Floppy drives of : 1.2MB / 1.44MB / 2.88MB.
  - ◆ One parallel port for SSP/EPP/ECP mode printer.
  - ◆ Two 16550A Fast UART compatible connectors for serial and VGA port.
  - ◆ One Game /Midi port and 3 Audio Jacks for Speak-out, Line-in and Microphone-in.
  - ◆ One SB-Link Connector for Sound Card and PCI connection.

## 🖥 **BIOS Support:**

◆ Built-in VGA BIOS in Intel 810; and built-in Keyboard BIOS;.

◆ AWARD BIOS in Intel 810, providing **CMOS Setup Utilities**:

- **Standard CMOS Features Setup** for Date, Drives and VGA ;

- **Advanced BIOS Features Setup** for CPU Cache, Self Test, Boot Device, Typematic Rate , and Security Options etc.;

- **Advanced Chipset Features Setup** for SDRAM CAS, RAS, System BIOS Cacheable, and Video BIOS Cacheable etc.;

- **Integrated Peripherals** Setup for IDE Mode, USB, Audio, and Modem etc.;

- **Power Management Setup** on Video, HDD, CPU etc.;

- **PnP/PCI Configurations Setup** for PnP, Reset, Resources etc.;

- **PC Health Status Control** and Setup;

- **Frequency / Voltage Control** on CPU, SDRAM, PCI & SSC etc.;

- **Load Fail-Safe Defaults**;

- **Load Optimized Defaults**;

- **Set Supervisor/User Password**;

🖥 Board Dimension :308mm x 202mm, in ATX form Factor. with one ATX Power Connector.

# 1-3  Features Highlight

## 1-3-1  Add-on Features for VGA in Intel 810:

🖳 Integrated Graphics Controller
- 3D Hyper Pipelined Architecture.
- Full 2D H/W Acceleration.
- Motion Video Acceleration.

🖳 3D Graphics Visual Enhancements
- Flat & Gouraud Shading.
- Mip Maps with Bilinear and Anisotropic Filtering.
- Fogging Atmospheric Effects.
- Z Buffering.
- 3D Pipe 2D Clipping.
- Backface Culling.

🖳 3D Graphics Texturing Enhancements
- Per Pixel Perspective Correction Texture Mapping.
- Texture Compositing.
- Texture Color Keying/Chroma Keying.
- Integrated 24-bit 230MHz RAMDAC.

🖳 2D Graphics
- Up to 1600 x 1200 in 8-bit Color at 85 Hz Refresh.
- Hardware Accelerated Functions.

🖳 H/W Motion Compensation Assistance for S/W MPEG2 Decode
- Software DVD at 30fps.
- H/W Overlay Engine with Bilinear Filtering.

## 1-3-2  Add-on Features for Audio:

🖳 Intel 810 ICH with built-in AC'97 controller.

🖳 Supporting HRTF-based 3D positional audio, A3D, Q3D, wavetable, and 3D surround sound.

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**Note:** If you want to enable the onboard AC'97 CODEC, you need to set JP9 pin 2-3 closed. But in this way, the **AMR** slot will only accept a riser board with Modem CODEC and cannot accept another Audio Riser.

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# 1-3-3 AMR and AC'97 CODEC Controller

AMR slot and AC'97 CODEC are integrated into the Mainboard to enable audio and modem playback.

AMR (Audio/Modem Riser) slot is mounted on board to connect riser board with Audio and/or Modem CODEC (AMC/AC/MC Adapters). The AMR specification developed by Intel provides a mechanism for AC'97 codes to be on a riser card.

To enable the onboard AC'97 CODEC, set JP9 pin 2-3 closed. And in such way, you can further plug a riser board with Modem CODEC to the AMR slot. Otherwise, disabling onboard AC'97 CODEC by setting JP9 1-2 closed, you can plug a riser board with Audio/Modem CODEC to the AMR slot.

**See Page A for AMR location on 6430M Mainboard.**

## 1-3-4 Software Power Off Control

This mainboard supports Software Power Off Control feature through the SMM code in the BIOS under Windows 95/98, and MS-DOS operation system environment.

First, you should connect the power switch cable to the connector "PS-ON" on the mainboard. In the BIOS screen of POWER MANAGEMENT SETUP', choose "User Define" (or "Min. Power Saving" or "Max. Power Saving") in 'Power Management'.

In Windows 95/98, if you want to power off the system, you just need to choose "shutdown the computer?" in the "Shut Down Windows" of Windows 95/98. Then the system power will be off directly, and stay at the stand-by status. If you want to restart the system, just press the power switch button..

**Note : If you are going to leave your system idle for several days, we suggest you use hardware power off to shut down your system.**

| Status | Power LED Light | Turbo LED Light |
|---|---|---|
| Software power off control | Light off | Light off |
| APM mode | Light on | Light on |
| System running | Light on | Light on |

To locate "PS-ON" header, please see "Page A Quick Jumper & Connector Setting".

## 1-3-5 Modem Ring On

With Modem Ring On function, the computer can wake up by remote signal through a connected modem. This function enables users to access their computer data from anywhere in the world. Users have to enable "Power On by Ring" in "Power Management Setup" of the AWARD BIOS setup screens.

## 1-3-6 SB-Link Sideband Signals

In order to migrate the legacy Sound Blaster compatible audio to the PCI bus, EMU8008 incorporates a pair of SB-Link request/grant sideband signals (PCPCIR EQN and PCPCIGNTN) to interface to the PCI bus. SB-Link is a mechanism that was defined and developed by Intel as a docking solution which allows ISA slots to exist in docking stations connected to desktop PC PCI bus.

**SB-Link** 2x3 sideband header, sound will also has a 2x3 header and a cable.
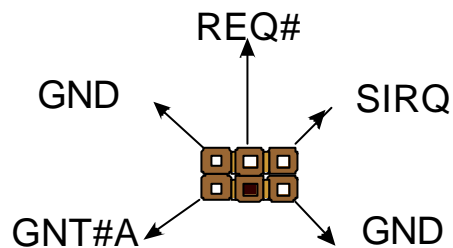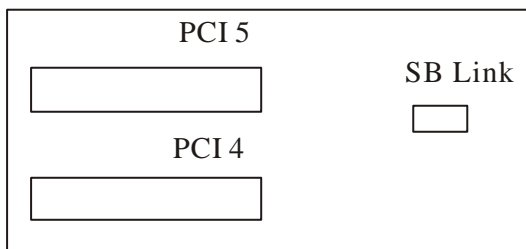
## 1-3-7  Ultra DMA 66 Cable (optional)

Ultra DMA 66 cable (40-pin connector & 80-line cable) is packaged while utilizing FW82801AA chip which supports both UDMA 33 & UDMA 66 on the mainboard. In other words, Ultra DMA 33 cable is only used with FW82801AB chip   And the Ultra DMA 66 color coded connectors   are shown as bellow:

```
Blue to Mainboard    Grey to Slave       Black to
                     IDE Peripheral      Master
                                         IDE Peripheral
```
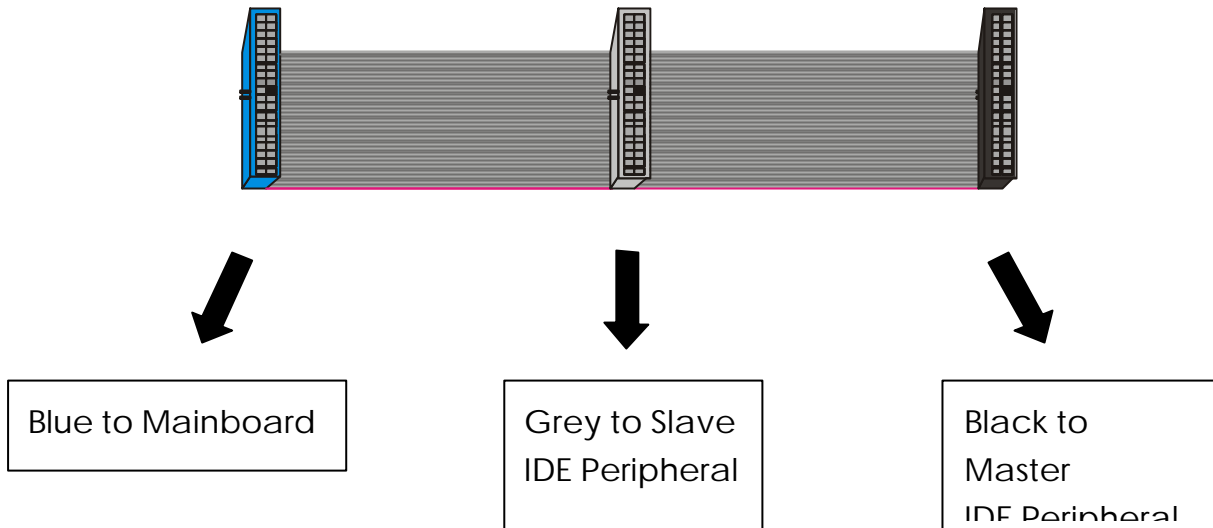
## 1-3-8  Wake-On-LAN

The remote Wake-On-LAN (WOL) mode of operation is a mechanism that uses Advanced Micro Device Magic Packet technology to power on a sleeping workstation on the network. This mechanism is accomplished when the LAN card receives a specific packet of information, called a Magic Packet, addressed to the node on the network. For additional protection, Secure ON is an optional security feature that can be added to the Magic Packet that requires a password to power on the sleeping workstation. When LAN card is in remote Wake-On-LAN mode, main system power can be shut down leaving power only for the LAN card and auxiliary power recondition.

The LAN card performs no network activities while in the remote Wake-On-LAN mode of operation. It only monitors the network for receipt of a Magic Packet. If a Magic Packet is addressed to the LAN card on the network, the LAN card wake up the system. If the Secure ON feature has been enabled, the password added to the Magic Packet is also verified prior to waking up the system.

You should select two kinds of PCI Ethernet cards with WOL function. One is Intel and the other is with PME signal supporting. And you can set "PCI PME#

Function" enabled through " Power Management Setup" from the BIOS setup screen.

Caution: For Wake-On-LAN, the +5V standby line for the power supply should be capable of delivering +5V $\pm$ 5% at 720mA. Failure to provide adequate standby current when implementing Wake-On-LAN will damage the power supply.

WOL connector
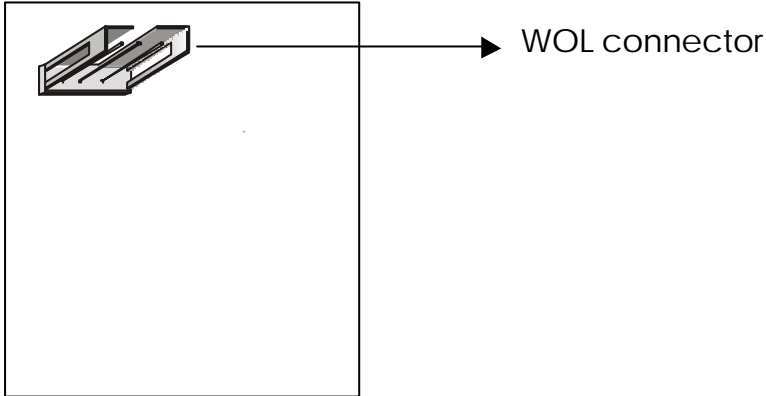
# CHAPTER 2
# INSTALLATION

## 2-1 INSTALLATION PROCEDURE

Before installing the computer, please prepare all components such as CPU, DRAM; peripherals such as hard drive, keyboard, CD-ROM and accessories such as cables. Then, install the system as following:

- Put CPU / heat sink (refer to Celeron$^{TM}$ CPU installation guide or see the following setup chapter), and DRAM modules on the mainboard.
- Plug add-on cards into PCI slots, if needed.
- Connect cables to peripheral devices, especially for COM2 connector.
- Make sure all components and devices are well connected, turn on the power and setup System BIOS based on your configuration.
- Install peripheral devices, add-on card drivers and test them.
- If all of above procedures are running successfully, turn the power off and screw the chassis cover to the chassis.

# 2-2 CPU INSTALLATION

## This mainboard supports PPGA Socket 370 and Slot 1 processors.

The 6430M mainboard has built-in Switching Voltage Regulator to support CPU Vcore autodetection. That is, It is smart enough to detect and recognize the CPU voltage, clock, ratio and enables users to set up the CPU frequency from the BIOS Setup Screen. Users can adjust the frequency through "Frequency / Voltage Control" of the BIOS Setup Screen.

A. How to install CPUs for Socket 370:

1. Insert CPU Pin 1 to Pin 1 corner of Socket 370 and lock it.
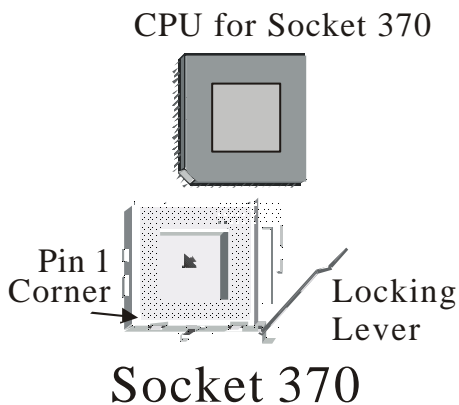
2. Insert Slot 1"Terminator Kit" to Slot 1.

CPU for Socket 370



Pin 1 Corner

Locking Lever

Socket 370
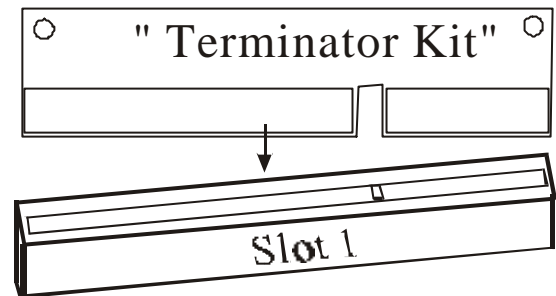


B. How to install CPU for Slot 1:

For Slot 1 CPU installation, please refer to "Page B Slot 1 installation" of this manual.

# 2-3 SYSTEM MEMORY INSTALLATION

6430M mainboard provides two 3.3V 168-pin DIMM sockets for system memory expansion from 8MB to 512MB SDRAM. These two DIMMs are arranged to two banks, please refer to page A.

| Bank/DIMM | PC-100 Memory Module | Total Memory |
|:---:|:---:|:---:|
| Bank0/DIMM1 | 8/16/32/64/128/256MB | 8MB~256MB |
| Bank1/DIMM2 | 8/16/32/64/128/256MB | 8MB~256MB |
| Total System Memory | | 8MB~512MB |

**DIMM type, Size, parity supported:**

- &#9746; PC-66/100 or higher performance memory module.
- &#9746; Both parity or non-parity are available.
- &#9746; 3.3V, single/double-side.
- &#9746; 8/16/32/64/128/256Mbytes.

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◆ *For either 66MHz, 100MHz and 133MHz host bus CPUs, please use 10ns or faster and PC-100 compliant modules .*

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# 2-4 INTEL 810 DRIVER INSTALLATION

## ➢ INF Files for Windows 95/98 :

1. Start Windows 95/98.

2. Put the All-In-One CD into your CD-ROM drive.

3. Choose **Intel 810/820 Inf Files** on the Autorun main menu.

4. Then follow the instruction on the screen.
   (INF Files that enable the Intel 810/820 Chipsets to be recognized by listed operating systems.)

# 2-5 VGA DRIVER INSTALLATION

## Install Intel 810 AGP Driver For Win95/98/NT

1. Start Windows 95/98/NT.

2. Put the All-In-One CD into your CD-ROM drive.

3. Choose **Intel 810 AGP Driver** on the Autorun main menu.

4. Press **Next** to install the driver.

5. Follow the instructions on the screen to complete the installation.

# 2-6 SOUND DRIVER INSTALLATION

## Install Sound Driver For Win95/98/NT

1. Start Windows 95/98/NT.

2. Put the All-In-One CD into your CD-ROM drive.

3. Choose **Audio Device Driver** on the Autorun main menu.

4. Follow the instructions on the screen to finish the installation.
   (Please refer to readme.doc file to get more detailed information.)

## Install YAMAHA Software Synthesizer For Win95/98/NT

1. Start Windows 95/98/NT.

2. Put the All-In-One CD into your CD-ROM drive.

3. Choose **YAMAHA Software Synthesizer** on the Autorun main menu.

4. Follow the instructions on the screen to finish the installation.
   (Please refer to readme.doc file to get more detailed information.)

**Note : the sound driver is not supported under DOS operating system.**

# CHAPTER 3
# AWARD BIOS SETUP

Award BIOS manufacturer provides access to the system BIOS through the hardware and software on mainboard. The hardware consists of a Flash ROM (4MB in 6430M mainboard) and the software is a group of programs that are installed in the ROMBIOS along with all the other data that should be included into the BIOS.

After the BIOS is updated, if you want to clear the old setup data stored in the CMOS, then you can reset CMOS as follow.

**NOTE : In case CMOS should be reset, first unplug the power cord, then set Jumper 8 2-3 closed for at least 5 seconds, reset JP8 1-2 closed so as to return to normal position and plug the power cord again.**

|            | JP8 |
|------------|-----|
| Normal     | 1-2 |
| Reset CMOS | 2-3 |
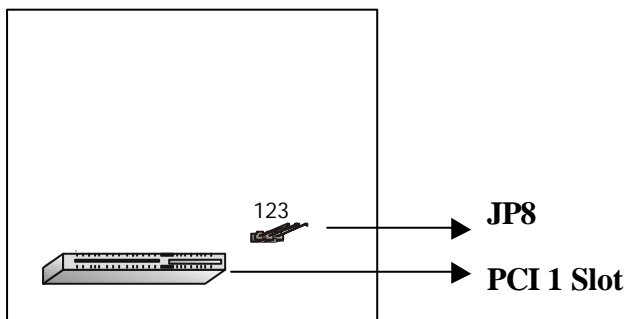
# 3-1 UPDATE BIOS PROCEDURE

## 3-1-1 BIOS Update:
If the BIOS needs to be updated, you can get a CD with the updated BIOS utility in the package. The CD includes :
   "awdflash.exe"   --   BIOS update utility program
   "awdflash.doc"

The update procedure is as following:

1. Boot the system to DOS mode in a normal manner.
2. Insert the updated CD to drive D (or E).
3. Change working directory to CD-ROM drive, D or E, which contains the update BIOS CD. -- Type "d:\" or "e: \", then press "ENTER".
4. Type "cd flash", then press "ENTER".
5. Type "awdflash", then press "ENTER"-- for running the BIOS update utility.
6. Type "(update BIOS file name with version number).bin", ENTER.
7. If you do not want to save the old BIOS, type "N" when the screen displays the message : " Do you want to save BIOS (Y/N) ?".
8. Type "Y" when the screen shows the message : " Are you sure to program (Y/N) ?".
9. Follow instructions displayed on the screen. DO NOT remove the update BIOS CD from the CD-ROM drive nor turn the system power off until the BIOS update is completed.
10. Turn the power off. Clear the data in CMOS according to the procedure described in the previous page.
11. Turn the system power on and test that your system is working properly.

## 3-1-2  UPDATE MICROCODE API

Intel also provides MICROCODE API (Applications Programming Interface) for mainboard user to update data block in BIOS quickly and easily. (You can find this utility in the All-In-One CD in the mainboard package).

The BIOS code on the mainboards contains data that is specific to each silicon stepping of the processor. Integrators must ensure that this BIOS stepping data matches the used processor stepping. When the BIOS does not contain stepping data that matches the processor stepping, integrators must update the data in the BIOS before shipping the system. Historically, the systems have been updated by replacing the entire BIOS with a new revision of BIOS that contains the correct stepping data.

Intel's BIOS update API allows just the stepping data within the BIOS to be updated as needed. Mainboards that contain a BIOS with the Intel-defined BIOS update API can be quickly and easily updated, if required, without obtaining a complete BIOS upgrade. Using this utility, integrators can easily verify that the correct stepping data is present in all mainboards. However, if the stepping data requires to be updated, the mainboard BIOS must contain the Intel-defined BIOS update API, otherwise a complete BIOS upgrade is required from the mainboard vendor.

Since API program can only be executed **under DOS Real Mode**, you must **enter Real Mode** first and load the API program to Drive C.
To load the program to C by following steps:
(1) Type " md c:\ api " and press Enter. Directory "api" is made in Drive C now.
(2) Insert the Driver/Utility CD into CD ROM Drive E.
(3) Then type " copy e:\api\*.* c:\api " and press Enter.
   (API program is loaded to Drive C now.)
(4) Type " C:\ api \checkup " to execute this program.

The main menu should now be displayed with the following four options :
1) Check and load update
2) Specify stepping data file [current : pep.pdb]
3) Help
4) Quit without loading update

Select 1 to know the stepping filename, select 2 to load right patch code, then select 1 to update proper patch code. Now, the screen will show the message "please remove the CD from CD-ROM drive". Then cold boot (mechanical power off) system to continue. For more information, please refer to "CHECKUP.HLP" file.

# 3-2  SYSTEM BIOS CONFIGURATION SETUP

The following pages explain how to set up  the BIOS configuration under the Award BIOS. The SETUP program is stored in the Read-Only-Memory (ROM) on the mainboard. To do the SETUP procedure, press the <Del> key when the system is booting up. The following main menu will appear. Please select " STANDARD CMOS FEATURE" to enter the next screen.

CMOS Setup Utility - Copyright ( C )  1984-1998

| | |
|---|---|
| **Standard CMOS Feature** | **Frequency/Voltage Control** |
| **Advanced BIOS Feature** | **Load Fail-Safe Defaults** |
| **Advanced Chipset Feature** | **Load Optimized Defaults** |
| **Integrated Peripherals** | **Set Supervisor Password** |
| **Power Management Setup** | **Set User Password** |
| **PnP/PCI Configurations** | **Save & Exit Setup** |
| **PC Health Status** | **Exit Without Saving** |

**Esc : Quit**                              **-  ¯  ¬  ® : Select Item**

**F10 : Save & Exit Setup**

**Time, Date, Hard Disk Type….**

The section at the bottom of the main menu explains how to control this screen.    The upper section displays the items highlighted in the list.

# Control Key Description

| | | |
|---|---|---|
| UP ARROW | | Move to the previous item |
| DOWN ARROW | | Move to the next item |
| LEFT ARROW | | Move to the item on the left |
| RIGHT ARROW | | Move to the item on the right |
| Esc KEY | Esc | Main Menu : Quit without saving changes Setup menu : Exit current page and return to main menu |
| PgUp KEY | | Increase the numeric value or make changes |
| PgDn KEY | | Decrease the numeric value or make changes |
| F1 KEY | Help | General help |
| F5 KEY | Old Value | Restore the pervious CMOS value from CMOS |
| F6 KEY | Load Fail-Safe Defaults | Load the fail-safe default CMOS value from BIOS default table |
| F7 KEY | Load Optimized Defaults | Load the optimized default |
| F10 KEY | Save & Exit Setup | Save all the CMOS changes and Exit setup, only for Main Menu |

## 3-2-1 STANDARD CMOS FEATURES This screen records some basic hardware

**information, and sets the system clock and error handling. These records can be lost or corrupted if the on-board battery has failed or is weak.**

**CMOS Setup Utility – Copyright © 1984-1998  Award Software**

**Standard CMOS Features**

```
   Date:                  Mon, Apr 26 1999        Item Help
   Time:                  16:19:20          _____

 ➢ IDE Primary Master    Press Enter None
 ➢ IDE Primary Slave     Press Enter None   Menu Level    ➢
 ➢ IDE Secondary Master Press Enter None
 ➢ IDE Secondary Slave   Press Enter None   Change the day, month,
                                            year and century
   Drive A                    1.44M,3.5in.
   Drive B                None
   Floppy 3 mode support Disabled

   Video                     EGA/VGA
   Halt On                   All Errors

   Based Memory               640K
   Extended Memory          64512K
   Total Memory             65536K
```

↑↓←→Move  Enter: Select  +/-/PU/PD: Value  F10:Save  ESC: Exit  F1:General Help
   F5:Previous Values      F6:Fail-safe defaults      F7:Optimized Defaults

___

*Date*    . Allows user to change the day, month, year and century, **with Y2K support.**

| day | The day, from Sun to Sat, automatically changes when you set the date. |
|------|------------------------------------------------------|
| date | The date, from 1 to 31 |
| month | The month, Jan. through Dec. |
| year | The year, from 1900 to 2099 |

*Time* The time format is <hour><minute><second>. , allowing user to set the internal clock.

### IDE Primary Master; Primary Slave Secondary Master; Secondary Slave

Press Enter to enter next page for detailed hard drive settings:

**CMOS Setup Utility – Copyright © 1984-1998  Award Software**

**IDE Primary Master**

```
IDE HDD Auto-Detection      Press Enter       Item Help

                                             Menu Level    ➤➤

IDE Primary Master          Auto
Capacity                    2557 MB           To auto-detect the
Access Mode                 Auto              HDD size, head..
Cylinder                    4956              on this channel
Head                        16
Precomp                     0
Landing Zone                4955
Sector                      63
```

↑↓←→Move  Enter: Select   +/-/PU/PD: Value  F10:Save  ESC: Exit  F1:General Help

F5:Previous  Values        F6:Fail-safe  defaults         F7:Optimized  Defaults

*IDE HDD Auto-Detection*   Press Enter to auto-detect the HDD. If detection is successful, it fills the remaining fields on this menu.

*IDE Primary Master*   If you select **'Auto',** the BIOS will detect the HDD & CD-ROM Drive automatically at the POST stage and show the IDE for HDD & CD-ROM Drive. If you select **'manual'**, please contact your hard disk vendor or dealer to get the information listed below. Then enter the figure directly and press <Enter>.

*The following options are selectable only if the IDE Primary Master item is set to "Manual".*

| Cylinder | number of cylinders |
|----------|---------------------|
| Head | number of read/write heads |
| Precomp | write precomp |
| Landing Zone | landing zone |
| Sector | number of sectors per track |

*Capacity*   Displays your disk drive size.

*Access Mode*   Choose the access mode for the hard disk. The choices: Normal, LBA, Large, Auto.

***Drive A, Drive B***  This category identifies the types of floppy disk drive A or drive B that have been installed in the computer.

| None | No floppy drive installed |
|------|---------------------------|
| 360K, 5.25 in | 5.25" PC-type 360KB capacity |
| 1.2M, 5.25 in | 5.25" AT-type 1.2MB capacity |
| 720K, 3.5 in | 3.5" double-side 720KB capacity |
| 1.44M, 3.5 in | 3.5" double-side 1.44MB capacity |
| 2.88M, 3.5 in | 3.5" double-side 2.88MB capacity |

***Floppy 3 Mode Support***  This is the Japanese standard floppy drive. This standard stores 1.2MB in a 3.5" diskette.

***Video***    To selects the type of primary video adapter used for the system monitor.

| EGA/VGA | Enhanced Graphics Adapter/Video Graphics Array. For EGA, VGA, SEGA, SVGA or PGA monitor adapters |
|---------|--------------------------------------------------------------------------------------------------|
| CGA 40 | Color Graphics Adapters, power up in 40 column mode |
| CGA 80 | Color Graphics Adapters, power up in 80 column mode |
| MONO | Monochrome adapter, includes high resolution monochrome adapters |

***Halt On***    This category determines whether the computer will stop if an error is detected during power up.

| No errors | The system boot will not be stopped for any error that may be detected. |
|-----------|-------------------------------------------------------------------------|
| All errors | When the BIOS detects a non-fatal error, the system will be stopped and you will be prompted. |
| All, But Keyboard | The system boot will not stop for a keyboard error. It will stop for all other errors. |
| All, But Diskette | The system boot will not stop for a floppy drive error. It will stop for all other errors. |
| All, But Disk/Key | The system boot will not stop for a floppy drive or keyboard error. It will stop for all other errors. |

***Memory***    To display what is detected by POST (Power On Self Test) of the BIOS.

**Base Memory**  The POST will determine the amount of base (or conventional) memory installed in the system. The value of the base memory is typically 512K or 640K based on the memory installed on the motherboard.

**Extended Memory**  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.

**Total Memory**  Displays the total memory available in the system.

# 3-2-2 ADVANCED BIOS FEATURES     **This screen is a list of system configuration**

**options. Some of them are defaults required by the mainboard's design, others depend on the features of your system.**

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**Advanced BIOS Features**

```
 Virus Warning               Disabled        |        Item Help
 CPU L1 Cache                 Enabled         | _____
 CPU L2 Cache                  Enabled        | _
 CPU L2 Cache ECC Checking   Enabled          |
xProcessor Number Feature       N/A           | Menu Level    ➢
 Quick Power On Self Test    Enabled          | Allows you to choose the
 First Boot device           Floppy           | VIRUS warning feature
 Second Boot device           HDD-0           | for IDE Hard Disk boot
 Third Boot device           SCSI             | sector protection.  If
 Boot other device           Enabled          | this function is enabled
 Swap Floppy Drive           Disabled         | and someone attempt to
 Boot Up Floppy Seek         Enabled          | write data into this
 Boot Up NumLock Status        On             | area, BIOS will show a
 Gate A20 Option              Fast            | warning message on
 Typematic Rate Setting      Disabled         | screen and alarm beep
xTypematic Rate (Chars/Sec)  6               |
xTypematic Delay (Msec)       250             |
 Security Option              Setup           |
 OS Select For DRAM > 64MB   Non-OS2          |
 HDD S.M.A.R.T. Capability   Disabled         |
 Report No FDD for Win 95     No              |
```

↑↓←→Move    Enter: Select    +/-/PU/PD: Value    F10:Save  ESC: Exit  F1:General Help
         F5:Previous Values      F6:Fail-safe defaults      F7:Optimized Defaults

*__Virus Warning__*    Allows user to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempts to write data into this area, BIOS will show a warning message on screen and alarm beep.

```
                    ! WARNING !


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

*__CPU L1 Cache, L2 Cache__*    These two categories speed up memory access. However, it depends on CPU design. The default value is 'Enabled'.

*CPU L2 Cache ECC Checking*    If Enabled, this function will do ECC check to CPU L2 Cache automatically.

*Quick Power On Self Test*    This category speeds up Power On Self Test while booting. If "Enabled", BIOS will skip some items under check by POST.

*First Boot Device, Second Boot Device, Third Boot Device, Boot Other Device*    Allows user to select the Boot Device Priority. The choices: Floppy, LS/ZIP/, HDD, SCSI, CDROM, Disabled.

*Swap Floppy Drive*    If the system has two floppy drives, choose "Enabled" to assign the physical drive B to logical drive A and vice-versa.

*Boot Up Floppy Seek*    "Enabled" will test floppy drives and determine whether they have 40 or 80 tracks.

*Boot Up NumLock Status*    This allows you to determine the default state of the numeric keypad. By default, the system boots up with NumLock on.

| On | Keypad is for numeric keys |
|----|----------------------------|
| Off | Keypad is for arrow keys |

*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 MB. If "Normal",  keyboard is controlled by a pin in keyboard controller. If "Fast", it is controlled by chipset.

*Typematic Rate Setting*    Keystrokes repeat at a rate determined by the keyboard controller.   When "Enabled", the typematic rate and typematic delay can be selected.

*Typematic Rate (Chars/Sec)*    When the typematic rate is enabled, this item will appear to allow you to select the key repeat rate. 6 means 6 characters per second.

*Typematic Delay (Msec)*    When the typematic rate is enabled, this item will appear to allow you to set the delay time before key strokes begin to repeat. 250: 250 msec (500,750,1000)

*Security Option*    This category allows you to limit access to the system and Setup, or just to Setup.    Options:

| System | Password is then required every time the system boots. |
|--------|--------------------------------------------------------|
| Setup | The system will boot without password, but access to Setup requires correct password. |

*OS Select for DRAM > 64MB*    This item allows you to access the memory that is over 64MB in OS/2. The choice : Non-OS2, OS2

*HDD  S.M.A.R.T.  Capability*    Select  Enabled  if  your  Hard  disk  supports S.M.A.R.T.(Safe-Monitoring Analysis and Reporting Technology) function.

*Report No FDD For WIN 95*    Set this item to Yes, BIOS will report FDD to Win95. If in standard CMOS setup, set Drive A to none and set this item to "Yes", inside Win95, My Computer and File manager Disk(A:) will show Removable Disk (A:).

# 3-2-3 ADVANCED CHIPSET FEATURES  This screen controls the setting for the

chipset on the mainboard. This chipset manages bus speeds and access to system memory resources.

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**Advanced Chipset Features**

```
 SDRAM CAS Latency Time         3        │      Item Help
 SDRAM Cycle Time Tras/Trc    6/8        │ _____
 SDRAM RAS-to-CAS Delay         3        │
 SDRAM RAS Precharge Time     3          │ _
 System BIOS Cacheable     Enabled       │ Menu Level    ➢
 Video BIOS Cacheable      Enabled       │
 Memory Hole At 15M-16M                  │
 Disabled                                │
 Delay Transaction         Enabled       │
 On-Chip Video Window Size    64MB       │
 * Onboard Display Cache Setting *       │
   CAS# Latency              3           │
   Paging Mode Control       Close       │
   RAS-to-CAS Override        By CAS#    │
 LT                                      │
   RAS# Timing              Slow         │
   RAS# Precharge Timing    Slow         │
────────────────────────────────────────┴────────────────────
 ↑↓←→Move   Enter: Select  +/-/PU/PD: Value  F10:Save  ESC: Exit  F1:General Help
        F5:Previous Values      F6:Fail-safe defaults      F7:Optimized Defaults
```

*SDRAM CAS Latency Time*    When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. The choices: 2,3. "2" gives faster performance and "3" gives more stable performance.

*SDRAM Cycle Time Tras/Trc*    Select the number of SCLKs for an access cycle. "5/7" gives faster performance and "6/8" gives more stable performance.

*SDRAM RAS-to-CAS Delay*    This field lets you insert a timing delay between the CAS and RAS strobe signals, used when DRAM is written to, read from, or refreshed. "2" gives faster performance and "3" gives more stable performance. This field applies only when synchronous DRAM is installed in the system.

*SDRAM RAS Prechage Time*    If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain data. This field applies only when synchronous DRAM is installed in the system.

*System BIOS Cacheable*    Selecting Enabled allows the caching of the system BIOS ROM area, 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 the caching of the video BIOS ROM area, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

*Memory Hole At 15M-16M*    Certain space in memory can be reserved for ICH/ICH0.

*Delay Transaction*    This 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. The choice : Enabled, disabled space

*On-chip Video Window Size*    Determine the size of memory space that can be allocated for on-chip graphics device.

## The following items are optional for onboard display cache setting:

*CAS# Latency*    The number of clock cycles of CAS latency depends on the Display Cache timing. The choices: 2,3. "2" gives faster performance and "3" gives more stable performance.

*Paging Mode Control*    Close: the GMCH will precharge all during the service of a

page miss. Open: it will precharge bank during the service of a page miss.

***RAS-to-CAS Override***    By CAS# LT: the RAS-to-CAS delay timing will be the same as item of *CAS# Latency*. Override: the value will be fixed in 2.

***RAS# Timing***    This item controls the active time of RAS# and bank cycle time. "Fast" gives faster performance and "Slow" gives more stable performance.

***RAS# Precharge Timing***    If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain data. "Fast" gives faster performance and "Slow" gives more stable performance.

## 3-2-4  INTEGRATED PERIPHERALS  **This section page includes all the items of**

**IDE hard drive and Programmed Input/Output features. See also Section "Chipset Features Setup".**

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**Integrated Peripherals**

```
  OnChip Primary  PCI IDE      Enabled         Item Help
  OnChip Secondary PCI IDE     Enabled    _____
  IDE Primary Master PIO          Auto    _
  IDE Primary Slave  PIO          Auto
  IDE Secondary Master PIO     Auto       Menu Level      ➢
  IDE Secondary Slave  PIO     Auto       If your IDE hard drive
  IDE Primary Master UDMA      Auto       supports block mode
  IDE Primary Slave UDMA          Auto    select Enabled for
  IDE Secondary Master UDMA    Auto       automatic detection of
  IDE Secondary Slave  UDMA       Auto    the optimal number of
  USB Controller               Enabled    block read/write per
  USB Keyboard Support         Disabled   sector the drive can
  Init Display First              PCI Slot support
  AC97 Audio                   Auto
  AC97 Modem                   Auto
  IDE HDD Block Mode              Enabled
  Power On Function            Button Only
xKB Power On Password           Enter
xHot Key Power On               Ctrl-F1
  Onboard FDC Controller          Enabled
  Onboard Serial Port 1        3F8/IRQ4
  Onboard Serial Port 2        2F8/IRQ3
  UART Mode Select                Normal
xUART Duplex Mode               Half
  Onboard Parallel Port         378/IRQ7
  Parallel Port Mode            ECP
  ECP Mode Use DMA              3
  PWRON After PWR-Fail          Off
  Game Port Address             201
  Midi Port Address            Disabled
xMidi Port IRQ                  7
  CIR Port Address             Disabled

xCIR Port IRQ                   11
```

↑↓←→ Move  Enter: Select  +/-/PU/PD: Value  F10:Save  ESC: Exit  F1:General Help
  F5:Previous Values  F6:Fail-safe defaults   F7:Optimized Defaults

*On-Chip Primary PCI IDE; On-Chip Secondary PCI IDE* This setup item allows you to either enable or disable the primary/secondary controller. You might choose to disable the controller if you want to add higher performance or specialized controller.

*IDE Primary Master/Slave PIO IDE; Secondary Master/Slave PIO*
PIO - Programmed Input/Output, it allows the BIOS to tell the controller what it wants and then let the controller and the CPU to complete the task by themselves. This is

simpler and faster. Your system supports five modes, 0 - 4, which primarily differ in timing. When **Auto** is selected, the BIOS will select the best available mode.

***IDE Primary Master/Slave UDMA; IDE Secondary Master/Slave UDMA***  Auto, will support the Ultra DMA function. Disabled, will not support the Ultra DMA function.

***USB Controller***  This item allows you to decide to enable/disable the USB controller.

***USB Keyboard Support***  Enabled will support USB keyboard in Win95 2.1 and NT 5.0 or above operating system.

***Init Display First***  This item allows you to decide to activate PCI VGA or on-chip VGA first. The choice: PCI Slot, Onboard.

***AC97 Audio; AC 97 Modem***  This item allows you to decide to enable/disable the i810 chipset family to support AC97 Audio/Modem.

***IDE HDD Block Mode***  This allows your HD controller to use the fast block mode to transfer data to and from your HD drive.

| Enabled | IDE controller uses block mode |
| Disabled | IDE controller uses standard mode |

***Power On Function***  This function supports 7 "Power On " modes : **Password, Hot Key, Mouse Move, Mouse Click, Any Key, Button Only, and Keyboard 98.** Default is "Button Only". If "Password" is chosen, the item "KB Power On Password" will appear to ask you to enter password.  If "Hot Key" is chosen, the item "Hot Key Power On" will appear to ask you to pick the Hot Key.

***On Board FDC Controller***  This item will enable or disable the floppy disk controller.

***On Board Serial Port 1***  User can select serial port IRQ. If set to Auto, system will assign an IRQ for it. Note : set to Auto is not recommended.

***On Board Serial Port 2***  User can select serial port IRQ. If set to Auto, system will assign an IRQ for it. Note : set to Auto is not recommended.

<u>*UART Mode Select*</u>     This lets you select the Infrared mode. Choices are **IrDA, ASKIR, Normal, and SCR**. Only when you choose IrDA or ASKIR , the screen will then show "UART2 Duplex Mode' for you to choose "Full" or "Half"..

<u>*On Board Parallel Port*</u>     Let user select IRQ for parallel port   When Disabled, the parallel port will be disabled.

<u>*Parallel Port Mode*</u>     Let user select Parallel Port : SPP, EPP, ECP, ECP+EPP
<u>*ECP Mode Use DMA*</u>     Select a DMA channel for the port. Choices are 3, 1.

<u>*PWRON After PWR-Fail*</u>     Allows you to choose "Off", On, former-Status".

<u>*Game Port Address*</u>; <u>*Midi Port Address*</u>     The IO address of Game Port/Midi Port. If Midi Port is fixed,    the item "Midi Port IRQ" will appear for setting.

<u>*CIR Port Address*</u>     Allows you to fix the Consumer Infrared Device Port Address. If fixed, the item "CIR Port IRQ" will appear for setting.

**3-2-5  POWER MANAGEMENT SETUP**  This screen controls the 'green' features of this mainboard.

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**Power Management Setup**

```
 ACPI function            Enabled        │    Item Help
 Power Management         User Define     │ _____
 Video Off Method         DPMS            │
 Video Off In Suspend     Yes             │ Menu Level   ➢
 Suspend Type                Stop Grant   │
 MODEM Use IRQ            3               │
 Suspend Mode             Disabled        │
 HDD Power Down           Disabled        │
 Soft-Off by PWRBTN          Instant Off  │
 PCI PME# Function        Disabled        │
 Power On by Ring         Enabled         │
 CPU Thermal-Throttling   50.0%           │
 Resume by Alarm          Disabled        │
                                          │
                                          │
  **  Reload Global Timer Events  **      │
 Primary IDE 0            Disabled        │
 Primary IDE 1            Disabled        │
 Secondary  IDE 0         Disabled        │
 Secondary  IDE 1         Disabled        │
 FDD, COM, LPT Port          Disabled     │
 PCI PIRQ [A-D]#             Disabled     │
```

↑↓←→Move  Enter: Select  +/-/PU/PD: Value  F10:Save  ESC: Exit  F1:General Help
F5:Previous Values     F6:Fail-safe defaults     F7:Optimized Defaults

*ACPI function*    This item is to set the ACPI ( Advanced Configuration Power Interface ) function enabled or disabled.

*Power Management*    This category allows you to select the type (or degree) of power saving and is directly related to the following modes **: Suspend; HDD Power Down.**

| Disabled | No power management. It means all 4 modes are disabled. |
|---|---|
| Min. Power Saving | Minimum power management. Doze =1hr.; Standby=1hr.; Suspend=1hr.; HDD Power Down=15min |
| Max. Power Saving | Maximum power management  Doze=1min.; Standby=1min.; Suspend=1min.;HDD Power Down=1min |
| User Define | Allows you to set each mode individually. When not disabled, each of the ranges are from 1min. to 1hr. except for HDD Power Down which ranges from 1 to 15min. and disable |

***Video Off Method***    This determines the manner in which the monitor is blanked.

| V/H SYNC + Blank | This selection will cause the system to turn off the vertical and horizontal sync. ports and write blanks to the video buffer. |
|---|---|
| Blank Screen | This option only writes blanks to the video buffer. |
| DPMS | Initial of "Display Power Management Signaling". |

***Video off In Suspend***   This determines the manner in which the monitor is blanked.

***Suspend Type***   Select the suspend type.

| Stop Grant | Only CPU enters sleeping mode |
|---|---|
| Full on Suspend | Both CPU and chipset enter sleeping mode |

***MODEM Use IRQ***  This item determines the IRQ in which the MODEM can be used. The choice : 3,4,5,7,9,10,11,NA.

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

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

***Soft-Off by PWR-BTTN***   *Instant-off :* When push the power button, the system power will be off immediately. *Delay 4 sec :* when push the power button, it will enter suspend mode. We need to push the power button and hold it for 4 seconds to turn off the power.

***PCI PME# Function***   With PCI card supporting PCI Power Management capability and this item setting to Enabled, the system can be waked up by PCI card.

***PowerOn by Ring***   Enabled: when system is in suspend mode, it can be waked up by modem. Disabled: it cannot be waked up by modem.

***Resume by Alarm***   When Enabled, two additional lines will be added to the screen :Date (of Month) Alarm; Time (hh:mm:ss) Alarm to let user set the desired date and time. After power off, the system will automatically power on at the specified date and time.

***Reload Global Timer Events***   When enabled, an event occurring on each device listed below restarts the global time for Standby mode. IRQ [3-7, 9-15], NMI; Primary IDE 0; Primary IDE 1; Secondary IDE0; Secondary IDE1; Floppy Disk; Serial Port; Parallel Port.

## 3-2-6 PNP/PCI CONFIGURATION    **This screen configures the PCI Bus slots.**

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**PnP/PCI Configurations**

```
   PNP OS Installed              No              │    Item Help
                                                 │ --------------------
    Reset Configuration Data   Disabled          │ Menu Level    ➢
                                                 │
    Resources Controlled By  Auto                │ Select "Yes" if you are
 ➢  IRQ Resources                Press Enter     │ using a Plug and Play OS.
 ➢  DMA Resources                Press Enter     │ Select NO if you need the
 ➢  Memory Resources               Press         │ BIOS to confirm
    Enter                                         │ non-boot device.
                                                 │
    PCI/VGA Palette Snoop     Disabled           │
```

↑↓←→Move  Enter: Select  +/-/PU/PD: Value  F10:Save  ESC: Exit  F1:General Help
         F5:Previous Values    F6:Fail-safe defaults      F7:Optimized Defaults

*PNP OS Installed*    Select "Yes" if you are using a Plug nad Play OS. Select "No" if you need the BIOS to confirm non-boot device.

*Reset Configuration Data* This item allows you to determine whether to reset the configuration data or not.

*Resource Controlled by*    The Award Plug and Play BIOS has the capability to automatically configure all of the boot and Plug & Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play OS such as Windows 95. Choices are Auto and Manual.

*IRQ Resources; DMA Resources*    When resources are controlled manually, assign each system interrupt/DMA channel a type, depending on the type of device using the interrupt/DMA channel.

*IRQ3/4/5/7/9/1011/12/14/15, DMA0/1/3/5/6/7 Assign to*    This item allows you to determine the IRQ/DMA assigned to the ISA bus and is not available to any PCI slot. Choices are Legacy ISA and PCI/ISA PnP.

*Memory Resources*    "Memory Resources" has two events:
   Resources Memory Base            N/A

Memory Resources     Length       8K

**_PCI/VGA Snoop_**   It determines whether the MPEG ISA/VGA cards can work with PCI/VGA or not.

| Enabled | When PCI/VGA working with MPEG ISA/VGA Card |
|---------|---------------------------------------------|
| Disabled | When PCI/VGA not working with MPEG ISA/VGA Card |

### 3-2-7  PC Health Status  **This screen shows your in-use PC Health Condition:**

**CMOS Setup Utility – Copyright © 1984-1998 Award Software**

**PC Health Status**

```
┌─────────────────────────────────────────────┬───────────────────────────┐
│  Vcore                                        │          Item Help        │
│  +2.5V                                        │  ------------------------ │
│  +3.3V                                        │  -                        │
│  +5V                                          │  Menu Level        ➢      │
│  +12V                                         │                           │
│  -12V                                         │                           │
│  +1.8V                                        │                           │
│  VTT(V)                                       │                           │
│  Voltage Battery                              │                           │
│  CPU Temperature                              │                           │
│  System Temperature                           │                           │
│  CPU Fan Speed                                │                           │
│  Chassis Fan Speed                            │                           │
│  CPU Warning Temperature     70⁰C/158⁰F       │                           │
│  Shutdown Temperature        90⁰C/194⁰F       │                           │
│                                               │                           │
├─────────────────────────────────────────────┴───────────────────────────┤
│  ↑↓←→ Move  Enter: Select  +/-/PU/PD: Value  F10:Save  ESC: Exit  F1:General Help │
│      F5:Previous Values    F6:Fail-safe defaults    F7:Optimized Defaults │
└───────────────────────────────────────────────────────────────────────────┘
```

In the table, the temperatures read:

CPU Warning Temperature $70^0$C/$158^0$F

Shutdown Temperature $90^0$C/$194^0$F

*Vcore---Chassis Fan Speed*    These items are to show the in-use PC conditions.

*CPU Warning Temperature*    Default temperature is $70^0$C/$158^0$F.

*Shutdown Temperature*    Default temperature is $90^0$C/$194^0$F.

# 3-2-8 FREQUENCY / VOLTAGE CONTROL    This screen controls the 'green'

**features of this mainboard.**

**CMOS Setup Utility – Copyright © 1984-1998 Award Software**

**Frequency/Voltage Control**

```
┌──────────────────────────────────────────┬────────────────────────┐
│  Auto Detect DIMM/PCI CLK  Disabled       │      Item Help         │
│  CPU/SDRAM/PCI Clock  & SSC  Default       │  ------------------    │
│  CPU Ratio                 X 3            │  -                     │
│                                            │  Menu Level      ➢     │
│                                            │                        │
│                                            │                        │
│                                            │                        │
│                                            │                        │
│                                            │                        │
│                                            │                        │
├──────────────────────────────────────────┴────────────────────────┤
│ ↑↓←→ Move  Enter: Select  +/-/PU/PD: Value  F10:Save  ESC: Exit  F1:General Help │
│      F5:Previous Values    F6:Fail-safe defaults    F7:Optimized Defaults      │
└────────────────────────────────────────────────────────────────────┘
```

*Auto Detect DIMM/PCI ClK*    If this item is enabled, the unused DIMM and PCI slot clock will be disabled. If this item is disabled the unused DIMM and PCI slot will still get the active clock signal.

*CPU/SDRAM/PCI Clock & SSC*   Use this item to set CPU base clock frequency and Spread Spectrum clocking function..

The optimized range of combinations are :

| CPU | SDRAM | PCI | SSC |
|-----|-------|-----|-----|
| 66~155MHz | 100~155MHz | 33~38MHz | On/Off |

**After you change the CPU Clock Frequency and the system can not start, please do the following procedures:**

**1. Turn the system off firstly.**

**2. Turn on the system. Then press and hold the " Insert " key at boot.**

**3. Select the proper figure in the item of *CPU/SDRAM/PCI Clock*.**

**Save and Exit Setup.**

*CPU Ratio*    Use this item to set CPU ratio which includes x 3   x 3.5   x 4   x 4.5 x 5   x 5.5   x 6   x 6.5   x 7   x 7.5 and x 8.

**3-2-9** *LOAD FAIL-SAFE DEFAULTS*　　When your mainboard has problems and needs to trouble shoot the system, you can use this function. The default values loaded only affect the BIOS Features Setup, Chipset Features Setup, Power Management Setup and PNP/PCI Configuration Setup. There is no effect on the Standard CMOS Setup. To use this function, select it from main menu and press <Enter>. A line will appear on the screen asking if you want to load the fail-safe default values. Press <Yes> and <Enter> then the BIOS default values will be loaded.

**3-2-10** *LOAD OPTIMIZED DEFAULTS*　　This allows you to load optimal settings which are stored in the BIOS ROM. The default values loaded only affect the BIOS Features Setup, Chipset Features Setup, Power Management Setup and PNP/PCI Configuration Setup. There is no effect on the Standard CMOS Setup. To use this function, select it from main menu and press <Enter>. A line will appear on the screen asking if you want to load the optimized default values. Press <Yes> and <Enter> then the Setup default values will be loaded.

**3-2-11** *SUPERVISOR PASSWORD / USER PASSWORD*　　This allows you to set the password. The mainboard defaults with password disabled. If you set both supervisor and user passwords, only the supervisor password allows you to enter the BIOS SETUP program.

**Enter/Change password :** Enter the current password. And at the prompt, key-in your new password (up to eight alphanumeric characters), then press <Enter>. At the next prompt, confirm the new password by typing it again and press <Enter>.

**Disable password :** Press the <Enter> key instead of entering a new password when the 'Enter Password' dialog box appears. A message will appear for confirming that the password is disabled.

**CAUTION:** If you forget your password, you must clear CMOS first and restart system so as to set up password again. See "Reset CMOS" on Page 12.

**3-2-12** *SAVE & EXIT SETUP*　　This allows you to save the new setting values in the CMOS memory and continue with the booting process. If you select this item and press 'Y', then these records will be saved in the CMOS memory on the mainboard. It will be checked every time you turn your computer on.

**3-2-13** *EXIT WITHOUT SAVING*　　This allows you to exit the BIOS setup utility without recording any new values or changing old ones.