

## **2. BIOS Setup**

### **Introduction**

This chapter discusses the Award Setup program built into the ROM BIOS. The Setup program allows the user to modify the basic system configuration. This special information is then stored in battery-backed RAM so that it retains the setup information when the power is turned off.

The Award BIOS installed in your computer system's ROM (Read Only Memory) is a custom version of an industry standard BIOS. This means that it supports Intel Celeron/ Coppermine PII/PIII Processor. The BIOS provides critical low-level support for standard devices such as disk drives and serial and parallel ports.

The rest of this manual is intended to guide you through the process of configuring your system using Setup.

### **Plug and Play Support**

This AWARD BIOS supports the Plug and Play Version 1.0A specification. ESCD(Extended System Configuration Data) write is supported.

### **EPA Green PC Support**

This AWARD BIOS supports Version 1.03 of the EPA Green PC specification.

### **PCI Bus Support**

This AWARD BIOS also supports Version 2.1 of the Intel PCI (Peripheral Component Interconnect) local bus specification.

### **APM Support**

This AWARD BIOS supports Version 1.1&1.2 of the Advanced Power Management(APM) specification. Power management features are implemented via the System Management Interrupt(SMI). Sleep and Suspend power management modes are supported. Power to the hard disk drives and video monitors can be managed by this AWARD BIOS.

### **DRAM Support**

SDRAM (Synchronous DRAM) are supported.

### **Support CPU**

This AWARD BIOS supports the Intel Celeron/Coppermine PII/PIII Processor.

### **Using Setup**

In general, you use the arrow keys to highlight items, press <Enter> to select, use the <PgUp> and <PgDn> keys to change entries, press <F1> for help and press <Esc> to quit. The following table provides more detail about how to navigate in the Setup program by using the keyboard.

#### ***Note:***

**(BIOS version 1.0 is for reference only. If there is a change in BIOS version, please use the actual version on the BIOS.)**

| <b>Keystroke</b> | <b>Function</b>  |
|------------------|--|
| Up arrow         | Move to previous item  |
| Down arrow       | Move to next item  |
| Left arrow       | Move to the item on the left(menu bar)   |
| Right arrow      | Move to the item on the right(menu bar)  |
| Esc              | Main Menu: Quit without saving changes<br>Submenus: Exit Current page to the next higher level menu  |
| Move Enter       | Move to item you desired   |
| PgUp key         | Increase the numeric value or make changes   |
| PgDn key         | Decrease the numeric value or make changes   |
| +Key             | Increase the numeric value or make changes   |
| -Key             | Decrease the numeric value or make changes   |
| Esc Key          | Main menu-Quit and not save changes into CMOS<br>Status Page Setup Menu and option Page Setup Menu-Exit Current page and return to Main Menu |
| F1 Key           | General help on Setup navigation keys.   |
| F5 Key           | Load previous values from CMOS   |
| F6 Key           | Load the fail-safe defaults from BIOS default table  |
| F7 Key           | Load the optimized defaults  |
| F10 Key          | Save all the CMOS changes and exit   |

## 2.1 Main Menu

Once you enter AWARD BIOS CMOS Set up Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup function. Use the arrow keys to select among the items and press<Enter> to accept and enter the sub-menu.

**“WARNING”**

*The information about BIOS defaults on manual (Figure 1,2,3,4,5,6,7,8,9,10,11,12,13,14)is just for reference, please refer to the BIOS installed on the board for updated information.*

### © Figure 1. Main Menu

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|  |                           |
|--|---------------------------|
| Standard CMOS Features                         | Frequency/Voltage Control |
| Advanced BIOS Features                         | Load Fail-Safe Defaults   |
| Advanced Chipset Features                      | Load Optimized Defaults   |
| Integrated Peripherals                         | Set Supervisor Password   |
| Power Management Setup                         | Set User Password         |
| PNP/PCI Configuration                          | Save & Exit Setup         |
| PC Health Status                               | Exit Without Saving       |
| Esc : Quit F9 : Menu in BIOS ←→↑↓: Select Item |                           |
| F10 : Save & Exit Setup                        |                           |
| Time , Date , Hard Disk Type ...               |                           |

### Standard CMOS Features

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

### **Advanced BIOS Features**

This setup page includes all the items of the BIOS special enhanced features.

### **Advanced Chipset Features**

This setup page includes all the items of the Chipset special enhanced features.

### **Integrated Peripherals**

This selection page includes all the items of the IDE hard drive and Programmed Input/Output features.

### **Power Management Setup**

This setup page includes all the items of the power management features.

### **PnP/PCI Configuration**

This setup page includes the user defined or default IRQ Setting.

### **PC Health Status**

This page shows the hardware Monitor information of the system.

### **Frequency / Voltage Control**

This setup page controls the CPU's clock and frequency ratio.

### **Load Fail-Safe Defaults**

Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate.

### **Load Optimized Defaults**

These settings are more likely to configure a workable computer when something is wrong. If you cannot boot the computer successfully, select the BIOS Setup options and try to diagnose the problem after the computer boots. These settings do not provide optional performance.

### **Set Supervisor Password**

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

### **Set User Password**

You can specify both a User and a Supervisor password. When you select either password option, you are prompted for a 1-6 character password. Enter the password and then retype the password when prompted.

### **Save & Exit Setup**

Save CMOS value changes to CMOS and exit setup.

### **Exit Without Saving**

Abandon all CMOS value changes and exit setup.

## 2.2 Standard CMOS Features

This item in the Standard CMOS Setup Menu is divided into 10 categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

### © Figure 2. Standard CMOS Features

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#### Standard CMOS Features

|                      |                  |   |
|----------------------|------------------|---|
| Date(mm:dd:yy)       | Tue,Jun 6 2000   | Item Help                                     |
| Time (hh:mm:ss)      | 11:26:10         |   |
| IDE Primary Master   | None             | Menu Level                                    |
| IDE Primary Slave    | None             |   |
| IDE Secondary Master | None             | Change the day,<br>month,year<br>and century. |
| IDE Secondary Master | None             |   |
| Drive A              | 1.44M,3.5 in     |   |
| Drive B              | None             |   |
| Floppy 3 Mode        | Disabled         |   |
| Video                | EGA/VGA          |   |
| Halt On              | All,But Keyboard |   |
| Base Memory          | 640K             |   |
| Extended Memory      | 65472K           |   |
| Total                | 1024K            |   |

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

## Main Menu Selections

This table shows the selections that you can make on the Main Menu.

| Item                 | Options  | Description   |
|----------------------|--|---|
| Date                 | Month DD YYYY  | Set the system,date. Note that the 'Day' automatically changes when you set the data. |
| IDE Primary Master   | Options are in its sub menu.   | Press<Enter> to enter the sub menu of detailed.                                       |
| IDE Primary Slave    | Options are in its sub menu.   | Press<Enter> to enter the sub menu of detailed.                                       |
| IDE Secondary Master | Options are in its sub menu.   | Press<Enter> to enter the sub menu of detailed.                                       |
| IDE Secondary Slave  | Options are in its sub menu.   | Press<Enter> to enter the sub menu of detailed.                                       |
| Drive A<br>Drive B   | None<br>360K,5.25in<br>1.2M,5.25in<br>720K,3.5in<br>1.44M,3.5in<br>2.88M,3.5in | Select the type of floppy disk drive installed in your system.                        |
| Video                | EGA/VGA<br>CGA 40<br>CGA 80<br>MONO  | Select the default video device.  |



| <b>Item</b>     | <b>Options</b>   | <b>Description</b>   |
|-----------------|--|--|
| Halt On         | All Errors<br>No Errors<br>All, but Keyboard<br>All, but Diskette<br>All, but Disk/Key | Select the situation in which you want the BIOS to stop the POST process and notify. |
| Base Memory     | N/A  | Displays the amount of conventional memory detected during boot up.                  |
| Extended Memory | N/A  | Displays the amount of conventional memory detected during boot up.                  |
| Total Memory    | N/A  | Displays the total memory available in the system.                                   |

## 2.3 Advanced BIOS Features

### © Figure 3. Advanced BIOS Features

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#### Advanced BIOS Features

|                            |          |  |
|----------------------------|----------|--|
| Virus Warning              | Disabled | Item Help  |
| CPU Internal Cache         | Enabled  | Menu Level<br><br>Allows you 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. |
| External Cache             | Enabled  |  |
| CPU L2 Cache ECC Checking  | Enabled  |  |
| Processor Number Feature   | Enabled  |  |
| Quick Power On Self Test   | Disabled |  |
| First Boot Device          | Floppy   |  |
| Second Boot Device         | HDD-0    |  |
| Third Boot Device          | LS120    |  |
| Boot Other Device          | Enabled  |  |
| Swap Floppy Drive          | Disabled |  |
| Boot Up Floppy Seek        | Enabled  |  |
| Boot Up NumLock Status     | On       |  |
| Boot Up System Speed       | Hight    |  |
| Gate A20 Option            | Fast     |  |
| Typematic Rate Setting     | Disabled |  |
| Typematic Rate (Chars/Sec) | 6        |  |
| Typematic Delay (Msec)     | 250      |  |
| Security Option            | Setup    |  |
| OS Select For DRAM >64MB   | Non-OS2  |  |
| 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

This option allows you 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.

**The Choices:** Disabled(default), Enabled.

### CPU Internal Cache

These two categories speed up memory access. However, it depends on CPU/chipset design.

**Enabled(default)** Enabled cache.

**Disabled** Disabled cache.

### **External Cache**

This fields allow you to Enable or Disable the CPU'S "Level 2" secondary cache. Caching allows better performance.

**Enabled(default)**                      Enabled cache.

**Disabled**                                  Disabled cache.

### **CPU L2 Cache ECC Checking**

The item allows you to enable/disable CPU L2 Cache ECC Checking.

**The Choices:** Enabled(default), Disabled.

### **Processor Number Feature**

The item will show up when you install the Pentium III processor.

**Enabled(default)**                      Pentium Processor Number Feature.

**Disabled**                                  Disabled.

### **Quick Power On Self Test**

This category speeds up Power on self-Test(POST) after you power up the computer. If it is set to Enable, BIOS will shorten or skip some check items during POST.

**Enabled**                                  Enabled quick POST.

**Disabled(default)**                      Normal POST.

### **First/Secondary/Third Boot Device**

This BIOS attempts to load the operating system from the devices in the sequence selected in these items.

**The Choices:** Floppy, LS120, HDD-0, SCSI, CDROM, HDD-1, HDD-2, HDD-3, ZIP100, USB-FDD, USB-ZIP, USB-CDROM, USB-HDD, LAN, Disabled.

### **Boot Other Device**

**The Choices:** Enabled(default), Disabled.

### Swap Floppy Drive

If the system has two floppy drives, you can swap the logical drive name assignments.

**The Choices:** Disabled(default), Enabled.

### Boot Up Floppy Seek

Seek disk drives during boot up. Disabled speeds boot-up.

**The Choices:** Enabled(default), Disabled.

### Boot Up NumLock Status

Select power on state for Numlock.

**On(default)**

Numpad is number keys.

**Off**

Numpad is arrow keys.

### Boot Up System Speed

**The Choices:** Hight(default), Low.

### Gate A20 Option

Select if chipset or keyboard controller should control Gate A20.

**Normal**

A pin in the keyboard controller controls Gate A20.

**Fast(default)**

Lets chipset control Gate A20.

### Typematic Rate Setting

**Enabled**

Enabled this option to adjust the keystroke repeat rate.

**Disabled(default)**

Disabled.

### Typematic Rate (Char/Sec)

Range between 6(default) and 30 characters per second. This option controls the speed of repeating keystrokes.

### Typematic Delay (Msec)

This option sets the time interval for displaying the first and the second characters.

**The Choices:** 250(default), 500, 750, 1000

### **Security Option**

This category allows you to limit access to the system and Setup, or just to Setup.

**System**

The system will not boot and access to Setup will be denied if the correct password is not entered in prompt.

**Setup(default)**

The system will boot, but access to Setup will be denied if the correct password is not entered in prompt.

### **OS Select For DRAM >64MB**

Select the operating system that is running with greater than 64MB of RAM on the system.

**The Choices: Non-OS2(default), OS2**

### **Report No FDD For Window 95**

**No(default)**

Assign IRQ6 For FDD.

**Yes**

FDD Detect IRQ6  
Automatically.

## 2.4 Advanced Chipset Features

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

### © Figure 4. Advanced Chipset Features

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#### Advanced Chipset Features

|                                 |            |            |
|---------------------------------|------------|------------|
| SDRAM CAS Latency/Time          | 3          | Item Help  |
| SDRAM Cycle Time Tras/Trc       | 6/8        | Menu Level |
| SDRAM RAS -to- CAS Delay        | 3          |            |
| SDRAM RAS Precharge Time        | 3          |            |
| System BIOS Cacheable           | Disabled   |            |
| Video BIOS Cacheable            | Disabled   |            |
| Memory Hole At 15M-16M          | Disabled   |            |
| CPU Latency Timer               | Disabled   |            |
| Delayed Transaction             | Enabled    |            |
| On-Chip Video Window Size       | 64MB       |            |
| Local Memory Frequency          | 100MHz     |            |
| *Onboard Display Cache Setting* |            |            |
| Initial Display Cache           | Disabled   |            |
| CAS# Latency                    | 3          |            |
| Paging Mode Control             | Open       |            |
| RAS-to-CAS Override             | by CAS# LT |            |
| RAS# Timing                     | Fast       |            |
| RAS# Precharge Timing           | Fast       |            |

←→↑↓: 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****3(default)**

Slower SDRAM DIMM Module.

**2**

Fastest SDRAM DIMM Module.

**SDRAM Cycle Time Tras/Trc****6/8(default)**

Set SDRAM Tras/Trc Cycle time in 6/8 SCLKs.

**5/7**

Set SDRAM Tras/Trc Cycle time in 5/7 SCLKs.

**SDRAM RAS -to- CAS Delay****3(default)**

Set SDRAM RAS -to- CAS delay 3 SCLKs.

**2**

Set SDRAM RAS -to- CAS delay 2 SCLKs.

**SDRAM RAS Precharge Time****3(default)**

Set SDRAM RAS Precharge Time to 3.

**2**

Set SDRAM RAS Precharge Time to 2.

**System BIOS Cacheable**

When enabled, the access to the system BIOS ROM address at F0000H-FFFFFFH is cached.

**The Choices:** Disabled(default), Enabled.

**Video BIOS Cacheable****Enabled**

Enabled Video BIOS Cacheable.

**Disabled(default)**

Disabled Video BIOS Cacheable.

## **Memory Hole At 15-16M**

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

**The Choices:** **Diablded**(default), Enabled.

## **CPU Latency Timer**

**Enabled** Enabled.

**Disabled**(default) Disabled.

## **Delayed Transaction**

**Enabled**(default) Slow speed ISA device in system.

**Disabled** Disabled.

## **On-Chip Video Window Size**

**64MB**(default) Set Graphics Aperture Size to 64 MB.

**32MB** Set Graphics Aperture Size to 32 MB.

## **Local Memory Frequency**

**The Choices:** **100MHz**(default), 133MHz.

## **Initial Display Cache**

**The Choices:** **Disabled**(default), Enabled.

## **CAS# Latency**

**The Choices:** **3**(default), 2.

## **Paging Mode Control**

**The Choices:** **Open**(default), Close.

## **RAS-to-CAS Override**

**The Choices:** **by CAS# LT**(default), Override.

## **RAS# Timing**

**The Choices:** **Fast**(default), Slow.

## **RAS# Precharge Timing**

**The Choices:** **Fast**(default), Slow.



## 2.5 Integrated Peripherals

© Figure 5. Integrated Peripherals

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### Integrated Peripherals

|                           |             |            |
|---------------------------|-------------|------------|
| On-Chip Primary PCI IDE   | Enabled     | Item Help  |
| On-Chip Secondary PCI IDE | Enabled     |            |
| IDE Primary Master PIO    | Auto        | Menu Level |
| IDE Primary Slave PIO     | Auto        |            |
| IDE Secondary Master PIO  | Auto        |            |
| IDE Secondary Slave PIO   | Auto        |            |
| IDE Primary Master UDMA   | Auto        |            |
| IDE Primary Slave UDMA    | Auto        |            |
| IDE Secondary Master UDMA | Auto        |            |
| IDE Secondary Slave UDMA  | Auto        |            |
| USB Controller            | Enabled     |            |
| USB Keyboard Support      | Disabled    |            |
| Init Display First        | PCI Slot    |            |
| AC97 Audio                | Auto        |            |
| AC97 Modem                | Auto        |            |
| IDE HDD Block Mode        | Enabled     |            |
| Power On Function         | Button Only |            |
| KB Power On Password      | Enter       |            |
| Hot 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      |            |
| RxD,TxD Active            | Hi,Lo       |            |
| IR Transmission Delay     | Enabled     |            |
| UR2 Duplex Mode           | Half        |            |
| Use IR Pins               | IR/Rx2Tx2   |            |
| Onboard Paraller Port     | 378/IRQ7    |            |
| Parallel Port Mode        | SPP         |            |
| EPP Mode Type             | EPP1.7      |            |
| ECP Mode Use DMA          | 3           |            |
| PWRON After PWR-Fail      | OFF         |            |
| Game Port Address         | 201         |            |
| Midi Port Address         | 330         |            |
| Midi Port IRQ             | 10          |            |

←→↑↓: 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**

**Enabled(default)**

Enabled onboard 1st channel IDE port.

**Disabled**

Disabled onboard 1st channel IDE port.

### **On-Chip Secondary PCI IDE**

**Enabled(default)**

Enabled onboard 2nd channel IDE port.

**Disabled**

Disabled onboard 2nd channel IDE port.

### **IDE Primary Master PIO(for onboard IDE 1st channel)**

**Auto(default)**

BIOS will automatically detect the IDE HDD Accessing mode.

**Mode 0~4**

Manually set the IDE Accessing mode.

### **IDE Primary Slave PIO(for onboard IDE 2nd channel)**

**Auto(default)**

BIOS will automatically detect the IDE HDD Accessing mode.

**Mode 0~4**

Manually set the IDE Accessing mode.

### **IDE Secondary Master PIO(for onboard IDE 1st channel)**

**Auto(default)**

BIOS will automatically detect the IDE HDD Accessing mode.

**Mode 0~4**

Manually set the IDE Accessing mode.

### **IDE Secondary Slave PIO(for onboard IDE 2nd channel)**

**Auto(default)**

BIOS will automatically detect the IDE HDD Accessing mode.

**Mode 0~4**

Manually set the IDE Accessing mode.

|                                  |  |
|----------------------------------|--|
| <b>IDE Primary Master UDMA</b>   |  |
| <b>Auto(default)</b>             | BIOS will automatically detect the IDE HDD Accessing mode. |
| <b>Disabled</b>                  | Disabled.  |
| <b>IDE Primary Slave UDMA</b>    |  |
| <b>Auto(default)</b>             | BIOS will automatically detect the IDE HDD Accessing mode. |
| <b>Disabled</b>                  | Disabled.  |
| <b>IDE Secondary Master UDMA</b> |  |
| <b>Auto(default)</b>             | BIOS will automatically detect the IDE HDD Accessing mode. |
| <b>Disabled</b>                  | Disabled.  |
| <b>IDE Secondary Slave UDMA</b>  |  |
| <b>Auto(default)</b>             | BIOS will automatically detect the IDE HDD Accessing mode. |
| <b>Disabled</b>                  | Disabled.  |
| <b>USB Controller</b>            |  |
| <b>Enabled(default)</b>          | Enabled USB Controller.                                    |
| <b>Disabled</b>                  | Disabled USB Controller.                                   |
| <b>USB Keyboard Support</b>      |  |
| <b>Enabled</b>                   | Enabled USB Keyboard Support.                              |
| <b>Disabled(default)</b>         | Disabled USB Keyboard Support.                             |
| <b>Init Display First</b>        |  |
| <b>PCI Slot(default)</b>         | Set Init Display First to PCI Slot.                        |
| <b>Onboard AGP</b>               | Set Init Display First to onboard AGP.                     |

## **AC 97 Audio**

**Auto(default)**

BIOS will automatically detect onboard Audio.

**Disabled**

Disabled.

## **AC 97 Modem**

**Auto(default)**

BIOS will automatically detect onboard Modem.

**Disabled**

Disabled.

## **IDE HDD Block Mode**

**Enabled(default)**

Enabled.

**Disabled**

Disabled.

## **Power On Function**

**Password**

Enter from 1 to 7 characters to set the Keyboard Power On Password.

**Hot Key**

Hot Key.

**Mouse Left**

Mouse Left.

**Mouse Right**

Mouse Right.

**Any Key**

Any Key.

**Button Only(default)**

Button Only.

**Keyboard 98**

If your keyboard has an Owner key button, you can press the key to power on your system.

## **KB Power On Password**

**Enter**

Enter from 1 to 7 characters to set the keyboard Power On Password.

## **Hot Key Power On**

**Ctrl-F1(default)**

First you must choose the Power On by Hot Key function then Enter from 1 to 8 characters to set the Hot Key Power On your system.

**Ctrl-F2**

**Ctrl-F3**

**Ctrl-F4**

**Ctrl-F5**

**Ctrl-F6**

**Ctrl-F7**

**Ctrl-F8**

## **Onboard FDC Controller**

**Enabled(default)**

Enabled onboard FDC Controller.

**Disabled**

Disabled onboard FDC Controller.

## **Onboard Serial Port1**

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

**The Choices:** **3F8/IRQ4**(default), Auto, (2F8/IRQ3), (3E8/IRQ4), (2E8/IRQ3), Disabled.

## **Onboard Serial Port 2**

**Auto**

BIOS will automatically setup the Serial Port 2 address.

**3F8/IRQ4**

Enabled onboard Serial Port 2 and address is 3F8.

**2F8/IRQ3(default)**

Enabled onboard Serial Port 2 and address is 2F8.

**3E8/IRQ4**

Enabled onboard Serial Port 2 and address is 3E8.

**2E8/IRQ3**

Enabled onboard Serial Port 2 and address is 2E8.

**Disabled**

Disabled.

## **UART Mode Select**

This item allows you to select which Infra Red(IR) function of the onboard I/O chip you wish to use.

**The Choices:** **Normal**(default), IrDA, SCR, ASKIR.

## **UR2 Duplex Mode**

This item allows you to select which Infra Red(IR) function of the onboard I/O chip you wish to use.

**The Choices:** Half (default), Full.

## **Onboard Parallel Port**

This item allows you to select the I/O address with which to access the onboard parallel port controller.

**Disabled.**

**378/IRQ7.(default)**

**278/IRQ5.**

**3BC/IRQ7.**

## **Parallel Port Mode**

**SPP(default)**

Using Parallel port as Standard Parallel Port.

**EPP**

Using Parallel port as Enhanced Parallel Port.

**ECP**

Using Parallel port as Extended Capabilities Port.

**ECP+EPP**

Using Parallel port as ECP+EPP mode.

## **PWRON After PWR-Fail**

**The Choices:** OFF(default), ON, Former-Sts.

## **Game Port Address**

**201(default)**

Set onboard game port to 201.

**209**

Set onboard game port to 209.

**Disabled**

Disabled.

## **Midi Port Address**

**300**

Set Midi Port address to 300.

**330(default)**

Set Midi Port address to 330.

## **Midi Port IRQ**

**10(default)**

Set Midi Port IRQ to 10.

**5**

Set Midi Port IRQ to 5.

## 2.6 Power Management Setup

The Power Management Setup allows you to configure your system to most effectively save energy while operating in a manner consistent with your own style of computer use.

### © Figure 6. Power Management Setup

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#### Power Management Setup

|                                 |             |            |
|---------------------------------|-------------|------------|
| ACPI Function                   | Enabled     | Item Help  |
| ACPI Suspend Type               | S1(POS)     | Menu Level |
| Power Management                | User Define |            |
| Video Off Method                | DPMS        |            |
| Video Off In Suspend            | Yes         |            |
| Suspend Type                    | Stop Grant  |            |
| Modem Use IRQ                   | 3           |            |
| Suspend Mode                    | Disabled    |            |
| HDD Power Down                  | Disabled    |            |
| Soft-Off by PWR-BTN             | Instant-Off |            |
| Wake Up by PCI Card             | Disabled    |            |
| Power On by Ring                | Enabled     |            |
| Wake Up On LAN                  | Enabled     |            |
| USB KB Wake-up From S3          | Disabled    |            |
| CPU Thermal-Throttling          | 50.0%       |            |
| Resume by Alarm                 | Disabled    |            |
| Data (of Month) Alarm           | 0           |            |
| Time (of hh:mm:ss) Alarm        | 0 0 0       |            |
| **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 display status of the Advanced Configuration and Power Management (ACPI).

### ACPI Suspend Type

The item allows you to select the suspend type under ACPI operating system.

**S1(POS)(default)**

Power on Suspend.

**S3(STR)**

Suspend to RAM.

## **Power Management**

This category allows you to select the type (or degree) of power saving and is directly related to the following modes.

1. HDD Power Down.
2. Doze Mode.
3. Suspend Mode.

If you highlight “Press Enter” next to the “Power Management” label and then press the enter key, it will take you a submenu with the following options:

### **Power Management**

This option allows you to set each mode individually.

When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

**The Choices:** User Define (default), Min Saving, Max Saving.

### **HDD Power Down**

By default, this is “Disabled”, meaning that no matter the mode of the rest of system, the hard drive will remain ready. Otherwise, you have a range of choices from 1 to 15 minutes or Suspend. This means that you can select to have your hard disk drive be turned off after a selected number of minutes or when the rest of the system goes into a suspend mode.

**Disabled**(default).

### **Doze Mode/Suspend Mode**

The **Doze Mode**, and **Suspend Mode** fields set the Period of time after each of these modes activates. At Max Saving, these modes activate sequentially (in the given order) after one minute; at Min Saving after one hour.

## **Video Off In Suspend**

This field determines when to activate the video off feature for monitor power management.

**The Choices:** Yes(default), No



## **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 synchronization ports and write blanks to the video buffer.

### **Blank Screen**

This option only writes blanks to the video buffer.

### **DPMS Support (default)**

Initial display power management signaling.

## **Suspend Type**

### **Stop Grant(default)**

Set Suspend type is stop grant.

### **PwrOn Suspend**

Set Suspend type is Power on Suspend.

## **Modem Use IRQ**

This determines the IRQ, which can be applied in Modem use.

### **3(default)**

**4/5/7/9/10/11/NA**

## **Suspend Mode**

### **Disabled(default)**

Disabled.

### **1 min - 1 Hour**

Set the timer to enter Suspend Mode.

## **HDD Power Down**

### **Disabled(default)**

Disabled.

### **1 - 15 mins**

Enabled.

### **Soft-Off by PWRBTN**

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has “hung”.

**The Choices:** Instant-Off(default), Delay 4 Sec.

### **Wake Up by PCI Card**

|                          |           |
|--------------------------|-----------|
| <b>Enabled</b>           | Enabled.  |
| <b>Disabled(default)</b> | Disabled. |

### **Power On by Ring**

|                         |           |
|-------------------------|-----------|
| <b>Disabled</b>         | Disabled. |
| <b>Enabled(default)</b> | Enabled.  |

### **Wake Up On LAN**

|                         |           |
|-------------------------|-----------|
| <b>Enabled(default)</b> | Enabled.  |
| <b>Disabled</b>         | Disabled. |

### **USB KB Wake-up From S3**

|                          |           |
|--------------------------|-----------|
| <b>Disabled(default)</b> | Disabled. |
| <b>Enabled</b>           | Enabled.  |

### **CPU Termal-Throttling**

**50.0%(default)**

**Monitor CPU Temp. will cause system to slow down**

**CPU Duty Cycle to 12.5% / 25.0% / 37.5% / 62.5% / 70.5% / 87.5%**

### **Resume by Alarm**

|                          |           |
|--------------------------|-----------|
| <b>Disabled(default)</b> | Disabled. |
| <b>Enabled</b>           | Enabled.  |

### **Primary IDE 0/1**

|                          |  |
|--------------------------|--|
| <b>Disabled(default)</b> | Disabled.  |
| <b>Enabled</b>           | Enabled monitor Primary IDE 0/1 for Green event. |

**Secondary IDE 0/1****Disabled(default)**

Disabled.

**Enabled**

Enabled monitor Secondary IDE 0/1 for Green event.

**FDD,COM,LPT Port****Disabled(default)**

Disabled.

**Enabled**

Enabled monitor FDD, COM, LPT Port.

**PCI PIRQ[A-D]#****Disabled(default)**

Ignore PCI PIRQ[A-D]#

Active.

**Enabled**

Monitor PCI PIRQ[A-D]#

Active.

## 2.7 PnP/PCI Configurations

This section describes configuring the PCI bus system. PCI or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed of the CPU itself when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users make any changes to the default settings.

### © Figure 7. PnP/PCI Configurations

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#### PnP/PCI Configurations

|                          |             |  |
|--------------------------|-------------|--|
| Reset Configuration Data | Disabled    | Item Help  |
| Resources Controlled By  | Auto(ESCD)  | Menu Level   |
| IRQ Resources            | Press Enter |  |
| PCI/VGA Palette Snoop    | Disabled    | When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt |

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

## Reset Configuration Data

The system BIOS supports the PnP feature so the system needs to record which resource is assigned and proceeds resources from conflict. Every peripheral device has a node, which is called ESCD. This node records which resources are assigned to it. The system needs to record and update ESCD to the memory locations. These locations (4K) are reserved at the system BIOS. If Disabled (Default) is chosen, the system's ESCD will update only when the new configuration varies from the last one. If Enabled is chosen, the system is forced to update ESCDs and then is automatically set to the "Disabled" mode.

|       |                         |
|-------|-------------------------|
| IRQ3  | assigned to:PCI/ISA PnP |
| IRQ4  | assigned to:PCI/ISA PnP |
| IRQ5  | assigned to:PCI/ISA PnP |
| IRQ6  | assigned to:PCI/ISA PnP |
| IRQ7  | assigned to:PCI/ISA PnP |
| IRQ8  | assigned to:PCI/ISA PnP |
| IRQ9  | assigned to:PCI/ISA PnP |
| IRQ10 | assigned to:PCI/ISA PnP |
| IRQ11 | assigned to:PCI/ISA PnP |
| IRQ12 | assigned to:PCI/ISA PnP |
| IRQ13 | assigned to:PCI/ISA PnP |
| IRQ14 | assigned to:PCI/ISA PnP |
| IRQ15 | assigned to:PCI/ISA PnP |
| DMA-0 | assigned to:PCI/ISA PnP |
| DMA-1 | assigned to:PCI/ISA PnP |
| DMA-2 | assigned to:PCI/ISA PnP |
| DMA-3 | assigned to:PCI/ISA PnP |
| DMA-4 | assigned to:PCI/ISA PnP |
| DMA-5 | assigned to:PCI/ISA PnP |
| DMA-6 | assigned to:PCI/ISA PnP |
| DMA-7 | assigned to:PCI/ISA PnP |

The above settings will be shown on the screen only if “Manual” is chosen for the resources controlled by function.

Legacy is the term, which signifies that a resource is assigned to the ISA Bus and provides for non-PnP ISA add-on cards. PCI/ISA PnP signifies that a resource is assigned to the PCI Bus or provides for ISA PnP add-on cards and peripherals.

### **Resources Controlled By**

By Choosing “Auto” (default), the system BIOS will detect the system resources and automatically assign the relative IRQ and DMA channel for each peripheral. By Choosing “Manual”, the user will need to assign IRQ & DMA for add-on cards. Be sure that there are no IRQ/DMA and I/O port conflicts.

### **IRQ Resources**

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

## **PCI / VGA Palette Snoop**

Choose Disabled or Enabled. Some graphic controllers which are not VGA compatible take the output from a VGA controller and map it to their display as a way to provide boot information and VGA compatibility.

However, the color information coming from the VGA controller is drawn from the palette table inside the VGA controller to generate the proper colors, and the graphic controller needs to know what is in the palette of the VGA controller. To do this, the non-VGA graphic controller watches for the write access to the VGA palette and registers the snoop data. In PCI based systems, the Write Access to the palette will not show up on the ISA bus if the PCI VGA controller responds to the Write.

In this case, the PCI VGA controller should not respond to the Write, it should only snoop the data and permit the access to be forwarded to the ISA bus. The non-VGA ISA graphic controller can then snoop the data on the ISA bus. Unless you have the above situation, you should disable this option.

**Disabled**(default)

Function Disabled.

**Enabled**

Function Enabled.

## 2.8 PC Health Status

### © Figure 8. PC Health Status

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#### PC Health Status

|                          |          |            |
|--------------------------|----------|------------|
| CPU Warning Temperature  | Disabled | Item Help  |
| Current System Temp.     |          | Menu Level |
| Current CPU1 Temperature |          |            |
| Current CPU Fan1 Speed   |          |            |
| Current CPU Fan2 Speed   |          |            |
| Current CPU Fan3 Speed   |          |            |
| VCORE                    |          |            |
| +3V                      |          |            |
| +5V                      |          |            |
| +12V                     |          |            |
| -12V                     |          |            |
| -5V                      |          |            |
| VBAT(V)                  |          |            |
| 5VSB(V)                  |          |            |
| Shut down Temperature    | Disabled |            |

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

#### **Current Voltage(V) Vcore / VGTL / Vcc3/+12V/5V/5VSB/ VBAT**

Detect system's voltage status automatically.

#### **Current CPU1/System Temperature(°C / °F)**

This field displays the current CPU temperature,if your computer contains a monitoring system.

#### **Current Fan/Power Fan / System Fan Speed**

These field displays the current speed of up to System Fans,if your computer contains a monitoring system.



## **CPU Warning Temperature(°C)**

|                          |                                   |
|--------------------------|-----------------------------------|
| <b>Disabled(default)</b> | Disabled.                         |
| <b>60°C / 140°F</b>      | Monitor CPU Temp.at 60°C / 140°F. |
| <b>50°C / 122°F</b>      | Monitor CPU Temp.at 50°C / 122°F. |
| <b>53°C / 127°F</b>      | Monitor CPU Temp.at 53°C / 127°F. |
| <b>56°C / 133°F</b>      | Monitor CPU Temp.at 56°C / 133°F. |
| <b>63°C / 145°F</b>      | Monitor CPU Temp.at 63°C / 145°F. |
| <b>66°C / 151°F</b>      | Monitor CPU Temp.at 66°C / 151°F. |
| <b>70°C / 158°F</b>      | Monitor CPU Temp.at 70°C / 158°F. |

## **Shutdown Temperature(°C / °F)**

|                          |  |
|--------------------------|--|
| <b>Disabled(default)</b> | Disabled.  |
| <b>60°C / 140°F</b>      | Monitor CPU Temp.at 60°C / 140°F, if Temp.>60°C / 140°F system will automatically power off. |
| <b>65°C / 149°F</b>      | Monitor CPU Temp.at 65°C / 149°F, if Temp.>65°C / 149°F system will automatically power off. |
| <b>70°C / 158°F</b>      | Monitor CPU Temp.at 70°C / 158°F, if Temp.>70°C / 158°F system will automatically power off. |
| <b>75°C / 167°F</b>      | Monitor CPU Temp.at 75°C / 167°F, if Temp.>75°C / 167°F system will automatically power off. |

## 2.9 Frequency / Voltage Control

### © Figure 9. Frequency / Voltage Control

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#### Frequency / Voltage Control

|                             |         |            |
|-----------------------------|---------|------------|
| Auto Detect DIMM / PCI CLK  | Enabled | Item Help  |
| CPU Clock / Spread Spectrum | Default |            |
| CPU Clock Ratio             | X3      | 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

This item allows you to enable/disable auto detect DIMM / PCI CLOCK.

**The Choices:** Enabled(default), Disabled.

#### CPU Clock/Spread Spectrum

This item allows you to select CPU Host Clock .

**The Choices:** Default(default), 66/ON, 66/OFF, 75/OFF, 83/OFF, 95/OFF, 100/OFF, 100/ON, 112/ON, 117/ON, 124/OFF, 133/ON, 138/OFF, 140/ON, 150/OFF.

#### CPU Clock Ratio

This option will not be shown if you are using a CPU with the locked ratio.

X3/X3.5/X4/X4.5/X5/X5.5/X6/X6.5/X7/X7.5/X8

## 2.10 Load Fail-Safe Defaults

When you press <Enter> on this item, you get a confirmation dialog box with a message similar to:

© **Figure 10. Load Fail-Safe Defaults**

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|  |  |
|--|--|
| Standard CMOS Features                         | Frequency/Voltage Control              |
| Advanced BIOS Features                         | <b>Load Fail-Safe Defaults</b>         |
| Advanced Chipset Features                      | Load Optimized Defaults                |
| Integrated Peripherals                         | Set Supervisor Password                |
| Power Management                               | <b>Load Fail-Safe Default (Y/N)? N</b> |
| PNP/PCI Configuration                          | Save & Exit Setup                      |
| PC Health Status                               | Exit Without Saving                    |
| Esc : Quit F9 : Menu in BIOS ←→↑↓: Select Item |  |
| F10 : Save & Exit Setup                        |  |
| Time , Date , Hard Disk Type ...               |  |

Pressing 'Y' loads the default values that are factory settings for optimal performance of system operations.

## 2.11 Load Optimized Defaults

When you press <Enter> on this item, you get a confirmation dialog box with a message similar to:

© **Figure 11. Load Optimized Defaults**

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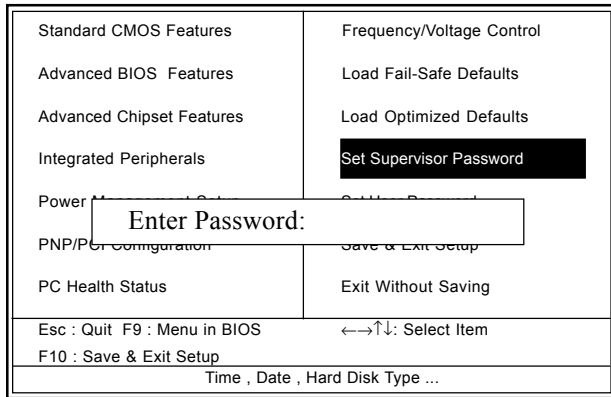
|  |                                 |
|--|---------------------------------|
| Standard CMOS Features                         | Frequency/Voltage Control       |
| Advanced BIOS Features                         | Load Fail-Safe Defaults         |
| Advanced Chipset Features                      | <b>Load Optimized Defaults</b>  |
| Integrated Peripherals                         | Set Supervisor Password         |
| Power Management                               | Load Optimized Default (Y/N)? N |
| PNP/PCI Configuration                          | Save & Exit Setup               |
| PC Health Status                               | Exit Without Saving             |
| Esc : Quit F9 : Menu in BIOS ←→↑↓: Select Item |                                 |
| F10 : Save & Exit Setup                        |                                 |
| Time , Date , Hard Disk Type ...               |                                 |

Pressing ‘Y’ loads the default values that are factory settings for optimal performance of system operations.

## 2.12 Set Supervisor / User Password

© Figure 12. Set Supervisor / User Password

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When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

### Enter Password

Type a password, up to eight characters, and press <Enter>. The password you type 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 the password, just press <Enter> when you are prompted to enter a password. A message will confirm that you wish to disable the password. Once the password is disabled, the system will boot and you can enter setup freely.

### **Password Disabled**

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

## 2.13 Save & Exit Setup

© Figure 13. Save & Exit Setup

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|  |                              |
|--|------------------------------|
| Standard CMOS Features                         | Frequency/Voltage Control    |
| Advanced BIOS Features                         | Load Fail-Safe Defaults      |
| Advanced Chipset Features                      | Load Optimized Defaults      |
| Integrated Peripherals                         | Set Supervisor Password      |
| Power Management Setup                         | Set User Password            |
| PNP/PCI Configuration                          | <b>Save &amp; Exit Setup</b> |
| PC Health Status                               | Exit Without Saving          |
| Esc : Quit F9 : Menu in BIOS ←→↑↓: Select Item |                              |
| F10 : Save & Exit Setup                        |                              |
| Time , Date , Hard Disk Type ...               |                              |

Typing “Y” will quit the Setup Utility and save the user setup value to RTC CMOS RAM.

Typing “N” will return to the Setup Utility.

## 2.14 Exit Without Saving

© Figure 14. Exit Without Saving

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|  |                           |
|--|---------------------------|
| Standard CMOS Features                         | Frequency/Voltage Control |
| Advanced BIOS Features                         | Load Fail-Safe Defaults   |
| Advanced Chipset Features                      | Load Optimized Defaults   |
| Integrated Peripherals                         |                           |
| Exit Without Saving (Y/N)? Y                   |                           |
| Power Management Setup                         | Set User Password         |
| PNP/PCI Configuration                          | Save & Exit Setup         |
| PC Health Status                               | Exit Without Saving       |
| Esc : Quit F9 : Menu in BIOS ←→↑↓: Select Item |                           |
| F10 : Save & Exit Setup                        |                           |
| Time , Date , Hard Disk Type ...               |                           |

Typing “Y” will quit the Setup Utility without saving to RTC CMOS RAM.

Typing “N” will return to the Setup Utility.



Date :     /     /

## Warranty Card/Technical Fault Report

M/B Model No.: \_\_\_\_\_

Vender

Serial No. : \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Hardware Configuration Used :

|                |  |
|----------------|--|
| CPU            |  |
| RAM (Brand,MB) |  |
| Video Card     |  |
| Hard Drive     |  |
| Other Card     |  |

Diagnostic Software Used :

|  |
|--|
|  |
|--|

Fault Description :

|  |
|--|
|  |
|--|

# The 6M810E2 Mainboard Layout

