

# User's Manual

# MotherBoard



S/N:0028



CONTENTS

**Socket370 810 ATX**  
**Mainboard**  
**with Integrated Sound and**  
**Graphics**

S/N: 0028 Rev. 1.0

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# Chapter 1 - Introduction

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## 1.1. Package Checklist

This mainboard package contains the following items. Please inspect the package contents and confirm that the following items are included. If there is anything missing or damaged, call your vendor for instructions before proceeding. The package includes :

Item	Quantity
Mainboard	1
Flat cable: 1. Floppy ribbon cable (34-pin) 2. IDE ribbon cable (40-pin)	1 1
Card-edge: 1. 9-pin (male) serial port cable. bracket (for COM2)	1
User's Manual	1
Software Support CD-ROM	1

# Chapter 1 - Introduction

## 1.2. Specifications

Chipset	<b>System</b>	Intel 82810, 82801, 82802
	<b>VGA</b>	Integrated high performance 2D/3D graphics
	<b>Audio</b>	Integrated audio controller + AC97 codec
<b>CPU</b>		Intel Celeron processor with 370-pin PPGA package
CPU Host Clock	<b>66MHz</b>	66MHz, 75MHz, 83MHz
	<b>100MHz</b>	100MHz, 112MHz, 124MHz, 133MHz
<b>Form Factor</b>		ATX
<b>BIOS</b>		AWARD Green , Plug & Play
<b>System Memory</b>		Two 168-pin DIMMs [SDRAM / PC-100 MHz SDRAM]. Max. 512MB SDRAM main memory.
<b>Display Memory</b>		Optional 4MB
Slots	<b>AMR</b>	1 x AMR
	<b>PCI</b>	5 x 32-Bit PCI
<b>I/O</b>		<ol style="list-style-type: none"> <li>Two high speed 16550 compatible serial ports</li> <li>One Multi-Mode parallel port (SPP/EPP/ECP standard).</li> <li>Two Universal Serial Bus ports (USB).</li> <li>PS/2 keyboard and PS/2 mouse ports</li> <li>IrDA Interface.</li> <li>Two IDE ports ,supports four IDE devices (PIO mode 4, DMA mode 2, Ultra DMA 33/66), and LS-120/ZIP disk driver</li> <li>Two 720KB/1.2MB/1.44MB/2.88MB floppy disk controller.</li> <li>One VGA port.</li> <li>One Game/MIDI port.</li> <li>Three audio jacks : Line-in, Line-out, Mic-in.</li> </ol>
<b>Features</b>		<ol style="list-style-type: none"> <li>Menu in BIOS (M.I.B.) for use for nature</li> <li>Support AMR (Audio / Modem Riser) specification.</li> <li>Support ACPI specification</li> <li>Integrated PCI Sound controller.</li> <li>Integrated High Performance 3D AGP display graphics.</li> <li>Ultra DMA 33/66 and PIO Mode 0/1/2/3/4, Multi-word DMA Mode 0/1/2.</li> <li>Keyboard Password Power on.</li> <li>Wake on LAN (WOL).</li> <li>Real Time Clock Wake-up.</li> <li>Modem Ring Wake-up</li> <li>Trend ChipAwayVirus in BIOS and PC-Cillin software in CD-ROM to ensure virus free.</li> <li>Random Number Generator (RNG) functions.</li> <li>Fan speed monitor.</li> <li>Auto Temperature, Voltage monitor (optional).</li> </ol>
<b>Dimension</b>		Four-Layer PCB ATX size ( 305mm X 190mm )

# Chapter 1 - Introduction

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## 1.3. Technology

### ***Ultra DMA-33/66 Bus Master IDE***

Synchronous Ultra DMA mode provides data transfer rate up to a maximum of 33/66MB/sec, which is twice of the data transfer rate of Enhanced IDE or ATA-2. This enables the CPU to operate more efficiently while handling simultaneous events.

New Ultra ATA/66 IDE cable:40-pin connector 80conductor cable, color coded for connection: Blue to mainboard, Grey to slave, Black to master.

### ***ACPI (Advanced Configuration and Power Interface)***

The system board is designed to meet the ACPI specification. ACPI has energy saving feature that enables PCs to implement Power Management and Plug-and-Play with operating systems that supports OS Direct Power Management.

### ***AMR (Audio / Modem Riser)***

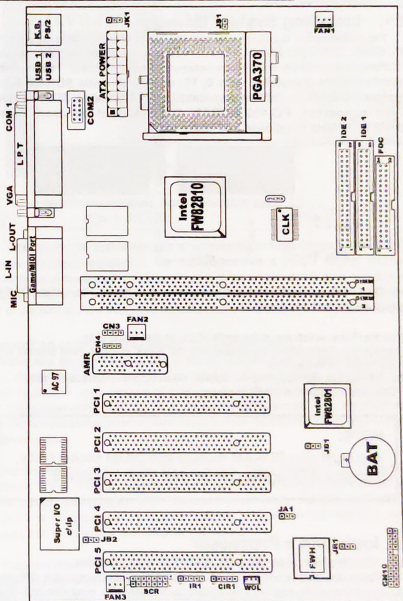
The Audio / Modem Riser (AMR) specification is an open industry standard specification that defines a hardware motherboard rise board and interface, which supports both audio and modem, while also addressing specific functional limitations of today's audio and modem subsystems.

### ***RNG (Random Number Generator)***

The FWH integrated a Random Number Generator (RNG) using thermal noise generated from inherently random quantum mechanical properties of silicon. When not generating new random bits the RNG circuitry will enter a low power state. Intel will provide a binary software driver to give third party software access to our RNG for use as a security feature.

# Chapter 2 – Hardware Installation

## 2.1. Mainboard Layout Drawing



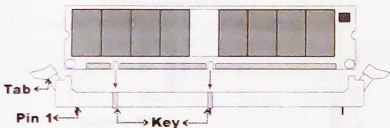
Socket370 810 ATX Mainboard  
with Integrated Sound and Graphics

# Chapter 2 – Hardware Installation

## 2.2. Hardware Installation Steps

### 2.2.1. Installing System Memory

The mainboard is equipped with two 168-pin DIMM sockets. It supports 16MB, 32MB, 64MB, 128MB and 256MB. The above DIMMs are combined differently so as to form different total memory somewhere between 16MB and 512MB. **The mainboard supports DIMMs populated with 8, 16, and 32 bit wide SDRAM devices. Registered DIMMs or DIMMs populated with 4 bit wide SDRAM devices are not supported. PC-100 SDRAM DIMM should be used for either 100MHz or 66MHz front side bus processor.**



A DIMM simply snaps into a socket on the system board. Pin 1 of the DIMM must correspond with pin 1 of the socket

- Pull the 'Tabs' which are at the ends of the socket to the side.
- Position the DIMM above the socket with the 'Keys' in the module aligned with the 'Keys' on the socket.
- Set the module vertically into the socket. Make sure it is completely set. The tabs will hold the DIMM in place.

#### NOTE:

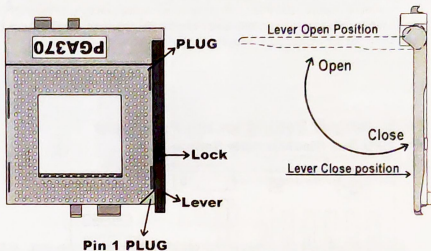
You must plug SDRAM module into DIMM socket firstly, then plug ATX power connector in your mainboard.

### 2.2.2. Installing a Processor

#### 2.2.2.1. Central Processing Unit (CPU) Installation

The mainboard is equipped with a PGA 370 socket which is a 370-pin Zero Insertion Force (ZIF) socket. This socket is designed for easy removal of an old processor and easy insertion of an upgrade processor. The ZIF socket allows you to carefully and easily place the new processor into its position. If you need to apply excessive force to insert the processor, you may not be installing the processor correctly.

## Chapter 2 – Hardware Installation



The 370-pin ZIF socket consists of six rows of pin holes on each side. To prevent improper processor installation, the ZIF socket has a Plug / Keying mechanism. Several holes in the socket are plugged, so that the processor will go in only one way. If you cannot easily insert the processor, verify that pin 1 of the processor is aligned with pin 1 of the socket. Also verify that all the pins are straight, and not bent nor broken.

To install an upgrade processor, do the following :

1. Make sure the lever on the side of the ZIF socket is up. To raise the lever, push it down, slightly pull it out to the side, then raise it as far as it will go. It may be necessary to initially apply a small amount of sideways force to free the lever from its retaining "tab". Once clear of the "tab", the lever will open relatively easily. The top plate will slide back. Do not use screwdriver or other tools to open the socket, or you may damage the system or socket.
2. Position the processor above the ZIF socket. Make sure pin 1 of the processor is aligned with pin 1 of the socket. Lower the processor until the pins are inserted properly in their corresponding holes. If the processor is not easily inserted, verify whether or not pin 1 of the processor is aligned with pin 1 of the socket. Applying too much pressure can damage the processor or the socket.
3. Push the handle down until the lever locks into place. The top plate will slide forward. You will feel some resistance as pressure starts to secure the processor in the socket. This is normal and will not damage the processor. However, if the handle is not completely closed, damage to the processor and/or mainboard may result.

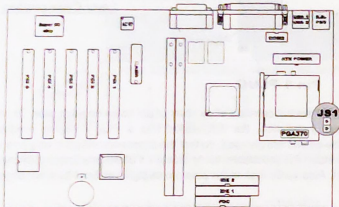
# Chapter 2 – Hardware Installation

## 2.2.2.2. CPU Cooling Fan Installation

It is recommended that a fan with heatsink is mounted on CPU to keep CPU cool, refer to the installation guide accompanied with the fan / heatsink for installation before insert CPU into the PGA370 ZIF socket.

## 2.2.3. Jumper Setting for the Processor

### \* CPU Bus Clock Jumper Setting



JS1 – Short : Auto detect CPU host bus frequency grade.(default)

Open : Drive the host bus frequency of CPU up to 100MHz grade.

- Base on the grade setting, BIOS will provide higher CPU host frequency possibility within the grade (Main Menu → Frequency / Voltage Control → CPU Host Clock) for over clocking.

### ● CPU Frequency Ratio Jumper Setting

Intel Celeron processor will provide CPU frequency ratio automatically. No external hardware jumper is needed.

※ CPU Bus Clock X CPU Frequency Ratio = CPU Frequency

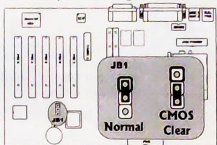
Your System 5VSB ATX power supply needs to provide Min.1A stand-by current.



## Chapter 2 – Hardware Installation

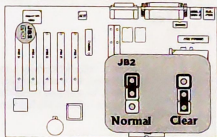
### 2.2.4. Other Jumper Settings on the Mainboard

#### 2.2.4.1. Jumper Setting for CMOS Clear



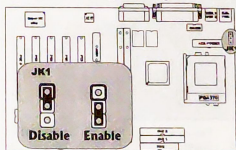
- If the mainboard crashes due to any inappropriate BIOS setting, you may need to clear CMOS data by setting the jumper to "Clear" position and stay there for 2 seconds at least, then put the jumper back to the "Normal" position.
- You need to enter the BIOS setup utility to save the BIOS settings (Save & Exit Setup) when the system boot first time after the CMOS data was cleared.
- It is recommended that you clear the CMOS data after you replace current BIOS flash ROM chip with new BIOS code.

#### 2.2.4.2. Jumper Setting for Clear I/O Keyboard Password Data



- JB2 (1-2): Normal (default)
- JB2 (2-3): For clear I/O keyboard wake up password data

#### 2.2.4.3. Jumper Setting for Keyboard wake up

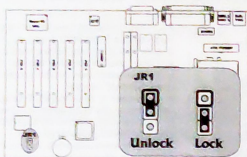


**NOTE :**

- (1 - 2) Disable – Default setting.
- (2 - 3) Enable – Enable wake up function

# Chapter 2 – Hardware Installation

## 2.2.4.4. Jumper Setting for Random Number Generator(RNG)

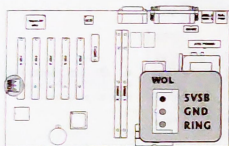


**NOTE:**

JR1(1-2) → Disable (default)  
JR1(2-3) → Enable

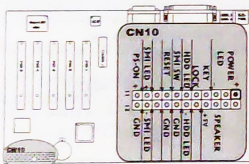
## 2.2.5. Ports and Connectors on the Mainboard

### 2.2.5.1. Connector for Wake On LAN (WOL)



- Your ATX power supply needs to provide 5V stand-by voltage and Min. 1A stand-by current to make Wake - On - LAN function properly.

### 2.2.5.2. Connector for System Panel



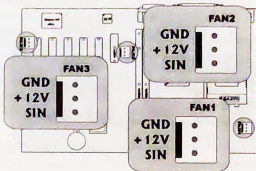
Pin 1-3 POWER LED  
Pin 7,16 SMI SW  
Pin 10,13 SMI LED

Pin 4,5 Key Lock  
Pin 8,15 Reset  
Pin 11,12 PS-ON

Pin 6,17 HDD LED  
Pin 19-22 Speaker

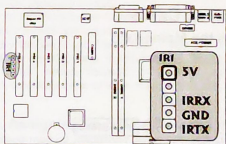
# Chapter 2 – Hardware Installation

## 2.2.5.3. Connector for CPU & System FAN

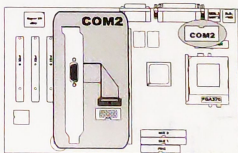


- FAN1 – Normally used for "CPU FAN"
- FAN2 – Normally used for "System FAN"
- FAN3 – Normally used for "System FAN"

## 2.2.5.4. Connector for IrDA Interface

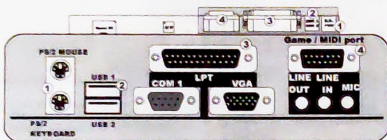


## 2.2.5.5. Connectors for COM2



# Chapter 2 – Hardware Installation

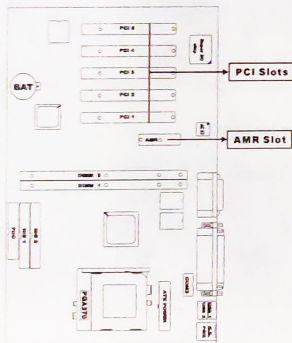
## 2.2.5.6. Connectors for External Panel



- 1 PS/2 Mouse and PS/2 Keyboard (6-pin mini-din female)
- 2 USB(Universal Serial Bus) port connectors (two 4-pin female)
- 3 LPT parallel printer connector (25-pin D-Sub female)  
One Serial port COM1 (9-pin D-Sub male)  
One VGA connector (15-pin D-Sub female)
- 4 Game / MINI port (15-pin D-Sub female)  
Line-Out, Line-In, Mic-In 3 audio jacks

## 2.2.6. Installing Expansion Cards

### 2.2.6.1. Expansion Slots on the Mainboard



# Chapter 2 – Hardware Installation

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## 2.2.6.2. Installing Steps

1. Switch off computer's power.
2. Locate for a free expansion slot on the system chassis. Remove the screw and slot cover. Save the slots cover for future use.
3. Unpack the expansion card. Refer to the expansion card user's manual for any hardware settings such as jumpers.
4. Position the expansion card above the free slot. When the card's edge – connector is aligned with the slot, press firmly on the top of the card to seat it. Secure it with the screw you removed in step2.
5. Replace the computer's cover and switch on the power.

## 2.2.6.3. Assigning an IRQ for an Expansion Card

The system has a total of 16 IRQs but most of them have been used by different components on the system leaving only 6 free IRQs available for expansion cards.

There are 2 types of ISA cards: Legacy (configured manually using jumpers) and PnP (IRQs are assigned automatically). When both type of cards exist, assign an IRQ for the Legacy cards first. The PnP card will then automatically be assigned an IRQ that has not been used by the Legacy cards.

After all ISA cards have been assigned an IRQ, the PCI cards will then be automatically assigned an IRQ.

Refer to the "Resources Controlled By" field in the PNP/PCI Configuration setup of the BIOS for more information.

To view the used and free IRQs. If you are using Windows 9x, double-click 'My Computer' in the Windows 9x desktop. In 'My Computer', select 'Control Panel'. In 'Control Panel', select 'System'. In 'System', select 'Device Manager'. In 'Device Manager', select a device to view the interrupt and IRQ used.

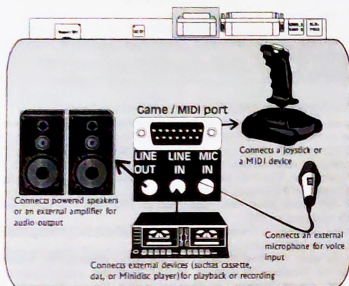
## 2.2.6.4. Assigning an DMA Channel for an Expansion Card

The same method (described above) is applied when assigning a DMA channel to an expansion card. Refer to the "Resources Controlled By" field in the PNP/PCI Configuration setup of the BIOS for more information.

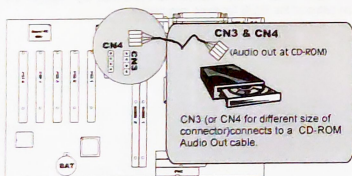
## Chapter 3 – SOUND

### 3.1. Connectors for the Integrated Sound

#### 3.1.1. Connectors for External Panel

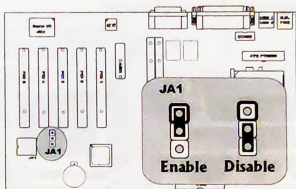


#### 3.1.2. CD Audio Connectors



# Chapter 3 – SOUND

## 3.1.3. Enable / Disable Integrated Audio



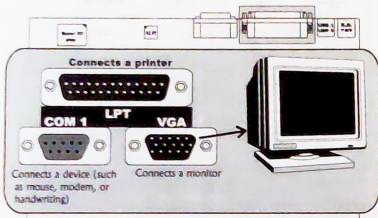
JA1 : Jumper for Enable / Disable onboard Audio (AC97 codec)  
(1-2) – Enable onboard Audio  
(2-3) – Disable onboard Audio

- You can disable onboard integrated audio function by using software BIOS setting too. Either BIOS or hardware jumper setting can disable the integrated audio.
- If you want to replace onboard integrated audio with an external AMR (Audio / Modem Riser) card. You should leave the BIOS audio setting on, and disable the onboard codec from the jumper setting "JA1" before you install the AMR card.
- If you want to replace onboard audio with external audio add on card, it is recommended that you disable both BIOS and "JA1" jumper setting.

## Chapter 4 – VGA

### 4.1. Connectors for the Integrated Display Graphics

#### 4.1.1. Connectors for External Panel



- The mainboard supports dual display feature by adding on a PCI display card, you can program the initial display sequence by setting BIOS (Integrated Peripherals → Init Display First).



# Chapter 5 – AWRD BIOS Setup Utility

## 5.1. Introduction

This manual discusses Award™ Setup program built into the ROM BIOS. The Setup program allows users 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 Basic Input / Output System (BIOS)™ has been customized by adding important, but non-standard, features such as virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

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

### Starting Setup

The Award BIOS™ is immediately activated when you first power on the computer. The BIOS reads the system information contained in the CMOS and begins the process of checking out the system and configuring it. When it finishes, the BIOS will seek an operating system on one of the disks and then launch and turn control over to the operating system.

While the BIOS is in control, the Setup program can be activated by one of two ways:

1. By pressing <Del> immediately after switching the system on, or
2. By pressing the <Del> key when the following message appears briefly at the bottom of the screen during the POST (Power On Self-Test).

Press DEL to enter SETUP.

If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to...

PRESS F1 TO CONTINUE, DEL TO ENTER SETUP

### Using Setup

In general, you use the arrow keys to highlight items, press <Enter> to select, use the PageUp and PageDown 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 using the keyboard.

Key	Function
Up Arrow	Move to the previous item
Down Arrow	Move to the next item
Left Arrow	Move to the item on the left (menu bar)

## Chapter 5 – AWRD BIOS Setup Utility

Right Arrow	Move to the item on the right (menu bar)
Esc	Main Menu: Quit without saving changes Submenus: Exit Current page to the next higher level menu
Move Enter	Move to the 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 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
F9 key	Menu In BIOS (M.I.B.)
F10 key	Save all the CMOS changes and exit

### Navigating through the menu bar

Use the left and right arrow keys to choose the menu you want to be in. To display a sub menu, use the arrow keys to move the cursor to the sub menu you want. Then press <Enter>. A ">" pointer marks all sub menus.

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### Getting Help

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc> or the F1 key again.

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### In Case of Problems

If, after making and saving system changes with Setup, you discover that your computer no longer is able to boot, the AwardBIOS™ supports an override to the CMOS settings, which resets your system to its defaults.

The best advice is to only alter settings, which you thoroughly understand. To this end, we strongly recommend that you avoid making any changes to the chipset defaults. These defaults have been carefully chosen by both Award and your systems manufacturer to provide the absolute maximum performance and reliability. Even a seemingly small change to the chipset setup has the potential for causing you to use the override.

# Chapter 5 – AWRD BIOS Setup Utility

## A Final Note about Setup

Not all systems have the same Setup. While the basic look and function of the Setup program remains the same for all systems, individual motherboard and chipset combinations require custom configurations. For example, you may find that your Setup main menu has a different number of entries from the main menu displayed in this manual. These are simply features not supported (or not user configurable) on your system.

The final appearance of the Setup program also depends on the Original Equipment Manufacturer (OEM) who built your system. If your OEM has decided that certain items should only be available to their technicians, those items may very well be removed from the Setup program

### 5.1.1. Main Menu

#### CMOS Setup Utility – Copyright 1984-1999 Award Software

<ul style="list-style-type: none"><li>&gt; Standard CMOS Features</li><li>&gt; Advanced BIOS Features</li><li>&gt; Advanced Chipset Features</li><li>&gt; Integrated peripherals</li><li>&gt; Power Management Setup</li><li>&gt; PnP / PCI Configuration</li></ul>	<ul style="list-style-type: none"><li>&gt; Frequency / Voltage Control</li><li>Load Fail-Safe Defaults</li><li>Load Optimized Defaults</li><li>Set Supervisor Password</li><li>Set User Password</li><li>Save &amp; Exit Setup</li><li>Exit Without Saving</li></ul>
Esc : Quit      F9 : Menu in BIOS	↑↓→← : Select Item
F10 : Save & Exit setup	
Time, Date, Hard Disk Type....	

Once you enter the AwardBIOS™ CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions and two exit choices. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.

# Chapter 5 – AWRD BIOS Setup Utility

Note that a brief description of each highlighted selection appears at the bottom of the screen.

Press < F9 > key to see all **Menu In BIOS (M.I.B.)**

- M.I.B. is a friendly design for user to review BIOS menu by a simple keystroke

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## Setup Items

The main menu includes the following main setup categories. Recall that some systems may not include all entries.

- \* **Standard CMOS Features**

Use this menu for basic system configuration. See Section 2 for the details.

- \* **Advanced BIOS Features**

Use this menu to set the Advanced Features available on your system. See Section 3 for the details.

- \* **Advanced Chipset Features**

Use this menu to change the values in the chipset registers and optimize your system's performance. See section 4 for the details.

- \* **Integrated Peripherals**

Use this menu to specify your settings for integrated peripherals. See section 4 for the details.

- \* **Power Management Setup**

Use this menu to specify your settings for power management. See section 5 for the details.

- \* **PnP / PCI Configuration**

This entry appears if your system supports PnP / PCI. See section 6 for the details.

- \* **Frequency/Voltage Control**

Use this menu to specify your settings for frequency/voltage control. See section 7 for the details.

- \* **Load Fail-Safe Defaults**

Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate. See section 8 for the details.

- \* **Load Optimized Defaults**

Use this menu to load the BIOS default values that are factory settings for optimal performance system operations. While Award has designed the custom BIOS to

# Chapter 5 – AWRD BIOS Setup Utility

maximize performance, the factory has the right to change these defaults to meet their needs. See section 8 for the details.

## \* Supervisor / User Password

Use this menu to set User and Supervisor Passwords. See section 9 for the details.

## \* Save & Exit Setup

Save CMOS value changes to CMOS and exit setup. See section 10 for the details.

## \* Exit Without Save

Abandon all CMOS value changes and exit setup. See section 10 for the details.

## 5.1.2. Standard CMOS Setup

### CMOS Setup Utility – Copyright 1984-1999 Award Software Standard CMOS Features

Date (mm: dd: yy) :	Wed, Mar 24 1999	Item Help
Time (hh: mm: ss) :	9 : 25 : 5	Menu Level >
> IDE Primary Master	Press Enter None	
> IDE Primary Slave	Press Enter None	
> IDE Secondary Master	Press Enter None	Change the day, month, year and century
> IDE Secondary Slave	Press Enter None	
Drive A	1.44, 3.5 in.	
Drive B	None	
Video	EGA / VGA	
Halt On	All Errors	
Base Memory	640K	
Extended Memory	30720K	
Total Memory	31744K	

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

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The items in Standard CMOS Setup Menu are 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.

## 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 date
Time	HH MM SS	Set the system time
IDE Primary Master	Options are in its sub menu (described in Table 3)	Press <Enter> to enter the sub menu of detailed options
IDE Primary Slave	Options are in its sub menu (described in Table 3)	Press <Enter> to enter the sub menu of detailed options
IDE Secondary Master	Options are in its sub menu (described in Table 3)	Press <Enter> to enter the sub menu of detailed options
IDE Secondary Master	Options are in its sub menu (described in Table 3)	Press <Enter> to enter the sub menu of detailed options
Drive A Drive B	None 360K, 5.25 in 1.2M, 5.25 in 720K, 3.5 in 1.44M, 3.5 in 2.88M, 3.5 in	Select the type of floppy disk drive installed in your system
Video	EGA/VGA CGA 40 CGA 80 MONO	Select the default video device
Halt On	All Errors No Errors All, but Keyboard All, but Diskette All, but Disk/Key	Select the situation in which you want the BIOS to stop the POST process and notify you
Base Memory	N/A	Displays the amount of conventional memory detected during boot up
Extended Memory	N/A	Displays the amount of extended memory detected during boot up
Total Memory	N/A	Displays the total memory available in the system

## IDE Adapters

The IDE adapters control the hard disk drive. Use a separate sub menu to configure each hard disk drive.

Use the legend keys to navigate through this menu and exit to the main menu. Use Table 3 to configure the hard disk.

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Item	Options	Description
IDE HDD Auto-detection	Press Enter	Press Enter to auto-detect the HDD on this channel. If detection is successful, it fills the remaining fields on this menu.
IDE Primary Master	None Auto Manual	Selecting 'manual' lets you set the remaining fields on this screen. Selects the type of fixed disk. "User Type" will let you select the number of cylinders, heads, etc. Note: PRECOMP=65535 means NONE !
Capacity	Auto Display your disk drive size	Disk drive capacity (Approximated). Note that this size is usually slightly greater than the size of a formatted disk given by a disk checking program.
Access Mode	Normal LBA Large Auto	Choose the access mode for this hard disk
The following options are selectable only if the 'IDE Primary Master' item is set to 'Manual'		
Cylinder	Min = 0 Max = 65535	Set the number of cylinders for this hard disk.
Head	Min = 0 Max = 255	Set the number of read/write heads
Precomp	Min = 0 Max = 65535	**** Warning: Setting a value of 65535 means no hard disk
Landing zone	Min = 0 Max = 65535	****
Sector	Min = 0 Max = 255	Number of sectors per track



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## 5.1.3. Advanced BIOS Features

CMOS Setup Utility – Copyright 1984-1999 Award Software  
Advanced BIOS Features

ChipAway/Virus Warning	Enabled	Item Help
CPU Internal Cache	Enabled	
External cache	Enabled	Menu Level >
CPU L2 Cache ECC Checking	Enabled	
Quick Power On Self Test	Enabled	
First Boot device	Floppy	Allows the system to skip certain tests while booting. This will decrease the time needed to boot the system
Second Boot device	HDD-0	
Third Boot device	LS/ZIP	
Boot other device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Disabled	
Boot Up Numlock Status	On	
Get A20 Option	Normal	
Typeomatic Rate Setting	Disabled	
Typeomatic Rate (Chars/Sec)	6	
Typeomatic 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

This section allows you to configure your system for basic operation. You have the opportunity to select the system default speed, boot-up sequence, keyboard operation, shadowing and security.

### \* Virus Warning

When this item is *Trend ChipAwayVirus (TCAV) on Guard*, Boot Viruses pose the most severe threat because they can move from a floppy diskette to your hard drive in less than a second. And it all happens during the loading of the boot sector. Provides a virus-free boot and operating system, experience peace of mind though hardware-base virus protection, detects known and unknown boot viruses with rule-based technology, receive immediate protection! Already installed on this board!

**The Choice:** Enabled, Disabled.

### \* CPU Internal Cache/External Cache

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

Enabled	Enable cache
Disabled	Disable cache



# Chapter 5 – AWRD BIOS Setup Utility

## \* CPU L2 Cache ECC Checking

This item allows you to enable/disable CPU L2 Cache ECC checking.

The choice: Enabled, 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	Enable quick POST
Disabled	Normal POST

## \* First/Second/Third/Other Boot Device

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

The Choice: Floppy, LS/ZIP, HDD, SCSI, CDROM, LAN, Disabled.

## \* Swap Floppy Drive

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

The choice: Enabled/Disabled.

## \* Boot Up Floppy Seek

Seeks disk drives during boot up. Disabling speeds boot up.

The choice: Enabled/Disabled.

## \* Boot Up NumLock Status

Select power on state for NumLock.

The choice: Enabled/Disabled.

## \* Gate A20 Option

Select if chipset or keyboard controller should control GateA20.

Normal	A pin in the keyboard controller controls GateA20
Fast	Lets chipset control GateA20

## \* Typematic Rate Setting

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

The choice: Enabled/Disabled.

## \* Typematic Rate (Chars/Sec)

Sets the number of times a second to repeat a key stroke when you hold the key down.

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

## Chapter 5 – AWRD BIOS Setup Utility

### \* Typematic Delay (Msec)

Sets the delay time after the key is held down before it begins to repeat the keystroke.

The choice: 250, 500, 750, 1000.

### \* Security Option

Select whether the password is required every time the system boots or only when you enter setup.

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

**Note:** To disable security, select PASSWORD SETTING at Main Menu and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter Setup freely.

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

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

The choice: Non-OS2, OS2.

### \* Report No FDD For Win 95

Whether report no FDD for Win 95 or not.

The choice: Yes, No.

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## 5.1.4. Advanced Chipset Features

CMOS Setup Utility – Copyright 1984-1999 Award Software  
Advanced Chipset Features

SDRAM CAS latency Time	3	Item Help
SDRAM Cycle Time Tras / Trc	5 / 7	Menu Level >
SDRAM Address Setup Time	1	
SDRAM RAS-to-CAS Delay	3	
SDRAM RAS Precharge Time	3	
Video BIOS Cacheable	Enabled	
Video RAM Cacheable	Disabled	
Memory Hole At 15M – 16M	Disabled	
Delayed Transaction	Disabled	
On-Chip Video Windows Size	64MB	

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

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 the external cache. It also coordinates communications between the conventional ISA bus and the PCI bus. It must be stated that these items should never need to be altered. The default settings have been chosen because they provide the best operating conditions for your system. The only time you might consider making any changes would be if you discovered that data was being lost while using your system.

### DRAM SETTING

The first chipset settings deal with CPU access to dynamic random access memory (DRAM). The default timings have been carefully chosen and should only be altered if data is being lost. Such a scenario might well occur if your system had mixed speed DRAM chips installed. So that greater delays may be required to preserve the integrity of the data held in the slower memory chips.

#### \* SDRAM CAS Latency Time

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.

The Choice: 2, 3

#### \* SDRAM Cycle Time Tras/Trc

Select the number of SCLKs for an access cycle.

The Choice: 5/7, 6/8.

## Chapter 5 – AWRD BIOS Setup Utility

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### \* SDRAM Address Setup Time

This item controls the Address Setup to the SDRAM timing.

The Choice: 1, 2.

### \* 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. Fast gives faster performance; and Slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system.

The Choice: 2, 3.

### \* SDRAM RAS Precharge 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. Fast gives faster performance; and Slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system.

The Choice: 2, 3.

### \* System BIOS Cacheable

Selecting *Enabled* allows caching of the system BIOS ROM at F000h-FFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

The choice: Enabled, Disabled.

### \* Video BIOS Cacheable

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

The Choice: Enabled, Disabled.

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

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

The Choice: Enabled, Disabled.

### \* Delay Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select *Enabled* to support compliance with PCI specification version 2.1.

The Choice: Enabled, Disabled.

### \* On-Chip Video Window Size

Select the on-chip video window size for VGA drive use.

The Choice: 32MB, 64MB, Disabled.

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## 5.1.5. Integrated Peripherals

CMOS Setup Utility – Copyright 1984-1999 Award Software  
Integrated Peripherals

			Item Help
On-Chip Primary PCI IDE	Enabled		
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	Enabled		
AC97 Modem	Disabled		
IDE HDD Block Mode	Enabled		
Power ON Function	Button Only		
x KB Power ON Password	Enter		
x 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		
x UR2 Duplex Mode	Half		
Onboard Parallel Port	378 / IRQ7		
Parallel Port Mode	SPP		
x ECP Mode Use DMA	3		
Game Port Address	201		
Midi Port Address	Disabled		
x 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/Secondary PCI IDE

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

The choice: Enabled, Disabled.

### \* IDE Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input / Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0

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through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

The choice: Auto, Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

### \* IDE Primary/Secondary Master/Slave UDMA

Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33, select Auto to enable BIOS support.

The Choice: Auto, Disabled.

### \* USB Controller

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

The choice: Enabled, Disabled.

### \* USB Keyboard Support

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

The choice: Enabled, Disabled.

### \* Init Display First

This item allows you to decide to active whether PCI Slot or on-chip VGA first

The choice: PCI Slot, Onboard.

### \* AC97 Audio/Modem

This item allows you to decide to enable/disable the 810 chipset family to support AC97 Audio/Modem.

The choice: Enabled, Disabled.

### \* IDE HDD Block Mode

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

The choice: Enabled, Disabled

### \* Onboard FDC Controller

Select *Enabled* if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install and-in FDC or the system has no floppy drive, select *Disabled* in this field.

The choice: Enabled, Disabled.

### \* Onboard Serial Port 1/Port 2

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

The choice: 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled, Auto.

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## \* Onboard Parallel Port

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

The choice: 378/IRQ7, 278/IRQ5, 3BC/IRQ7, Disabled.

## \* Parallel Port Mode

Select an operating mode for the onboard parallel (printer) port. Normal EPP (Extended Parallel Port) ECP (Extended Capabilities Port) ECP+EPP PC AT parallel port Bi-directional port Fast, buffered port Fast, buffered, bi-directional port. Select Normal unless you are certain your hardware and software both support EPP or ECP mode.

The choice: SPP, ECP+EPP, ECP.

## \* ECP Mode Use DMA

Select a DMA channel for the parallel port for use during ECP mode.

The choice: 3, 1.

## \* Game Port Address

If you select Enabled game port address, the address you can choice 201 or 209

The Choice: Disabled, Enabled, 201, 209.

## \* Midi Port Address / IRQ

If you select Enabled Midi port address / IRQ,

The Choice: Disabled, Enabled, 300, 330/10.

## \* Power ON Function

This item allows you to select which way to power on your computer. Password keyboard wake-up, press your password key and <Enter> key.

The choice: Button Only, Hot Key, Password, Keyboard 98, Mouse Move, Mouse Click.

<b>Password</b>	Setup your Password, and enter it (five words at most). Then confirm your Password
<b>Hot Key</b>	Select : <Ctrl> + <F1> ... <F12>

**NOTE : If you forget the password you set before , you can read page- 8 Clear I/O Keyboard Password Data (JB2) to reset your I/O Data.**

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## 5.1.6. Power Management Setup

CMOS Setup Utility – Copyright 1984-1999 Award Software  
Power Management Setup

		Item Help
ACPI Function	Enabled	
ACPI Suspend Type	S3	
Power Management	User Define	Menu Level >
Video Off Method	DPMS	
Video Off in Suspend	Yes	
Suspend Type	Stop Grant	
MODEM Use IRQ	3	
Suspend Mode	8 Min	
HDD Power Down	Disabled	
Soft-Off by PWR-BTTN	Instant – Off	
Power On on PCI card	Disabled	
Resume by Alarm	Disabled	
x Date (of Month) Alarm	0	
x Time (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

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

### \* ACPI Function

This item allows you to enable/disable the Advanced Configuration and Power Management (ACPI).

The choice: Enabled, Disabled.

### \* 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

There are four selections for Power Management, three of which have fixed mode settings.



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Disable (default)	No power management. Disables all four modes
Min. Power Saving	Minimum power management. Doze Mode = 1 hr. Standby Mode = 1 hr., Suspend Mode = 1 hr., and HDD Power Down = 15 min.
Max. Power Saving	Maximum power management – <b>ONLY AVAILABLE FOR SL CPU's.</b> Doze Mode = 1 min., Standby Mode = 1 min., Suspend Mode = 1 min., and HDD Power Down = 1 min.
User Defined	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.

### \* 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	Initial display power management signaling.

### \* Video Off In Suspend

This determines the manner in which the monitor is blanked.

The choice: Yes, No.

### \* Suspend Type

Select the Suspend Type.

The choice: PWRON Suspend, Stop Grant.

### \* MODEM Use IRQ

This determines the IRQ in which the MODEM can use.

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.

The choice: Enabled, Disabled.

### \* 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.

The choice: Enabled, Disabled.

### \* 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 choice: Delay 4 Sec, Instant-Off.

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### \* CPU THRM-Throttling

Select the CPU THRM-Throttling rate.

The choice: 25.0%, 37.5%, 50.0%, 62.5%, 75.0%, 87.5%.

---

### PM Events

PM events are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such a mode. In effect, the system remains alert for anything which occurs to a device which is configured as *Enabled*, even when the system is in a power down mode.

Primary IDE 0

Primary IDE 1

Secondary IDE 0

Secondary IDE 1

FDD, COM, LPT Port

PCI PIRQ[A-D] #

# Chapter 5 – AWRD BIOS Setup Utility

## 5.1.7. PnP / PCI Configuration

CMOS Setup Utility – Copyright 1984-1999 Award Software  
PnP / PCI Configurations

Reset Configuration Data	Disabled	Item Help
Resources Controlled By	Auto(ESCD)	Menu Level >
x IRQ Resources	Press Enter	
x Memory Resources	Press Enter	
PCI / VGA Palette Snoop	Disabled	Default is Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot

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

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 the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

### \* PnP OS Installed

This item allows you to determine install PnP OS or not.

The choice: Yes, No.

### \* Reset Configuration Data

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system can not boot.

The choice: Enabled, Disabled.

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### \* Resource controlled by

The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows®95. If you set this field to "manual" choose specific resources by going into each of the sub menu that follows this field (a sub menu is preceded by a ">").

The choice: Auto (ESCD), Manual.

### \* IRQ Resources

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

### \* IRQ3/4/5/7/9/10/11/12/14/15 assigned to

This item allows you to determine the IRQ assigned to the ISA bus and is not available to any PCI slot. Legacy ISA for devices compliant with the original PC AT bus specification, PCI/ISA PnP for devices compliant with the Plug and Play standard whether designed for PCI or ISA bus architecture.

The Choice: Legacy ISA and PCI/ISA PnP.

### \* DMA Resources

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

### \* DMA 0/1/3/5/6/7 assigned to

Legacy ISA for devices compliant with the original PC AT bus specification, PCI/ISA PnP for devices compliant with the Plug and Play standard whether designed for PCI or ISA bus architecture.

Choices are Legacy ISA and PCI/ISA PnP.

### \* Memory Resources

This sub menu can let you control the memory resource.

### \* Reserved Memory Base

Reserved a low memory for the legacy device (non-PnP device).

Choices are C800, CC00, D000, D800, DC00, D400, N/A.

### \* Reserved Memory Length

Reserved a low memory length for the legacy device (non-PnP device).

Choices are 8K, 16K, 32K, 64K.

### \* PCI/VGA Palette Snoop

Leave this field at Disabled.

Choices are Enabled, Disabled.

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## 5.1.8. Frequency / Voltage Control

CMOS Setup Utility – Copyright 1984-1999 Award Software  
Frequency / Voltage Control

Auto Detect DIMM/PCI CLK	Disabled	Item Help
Spread Spectrum	Disable	
CPU Host / PCI Clock	Default	Menu Level >
CPU Ratio	x 3	

↑↓→←: 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

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

**The choice:** Enabled, Disabled.

### \* CPU Ratio

This item allows you to select the CPU ratio.

**The Choice:** x3, x3.5, x4, x4.5, x5, x5.5, x6, x6.5, x7, x7.5.

### \* Spread Spectrum Modulated

This item allows you to enable/disable the spread spectrum modulate.

**The choice:** Enabled, Disabled.

## Chapter 5 – AWRD BIOS Setup Utility

### 5.1.9. Set Supervisor / User Password Setting

You can set either supervisor or user password, or both of them. The differences between are:

*user password* : just can only enter but do not have the right to change the options of the setup menus.

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

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

PASSWORD DISABLED.

When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents an unauthorized person from changing any part of your system configuration.

Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted. This would prevent unauthorized use of your computer.

You determine when the password is required within the BIOS Features Setup Menu and its Security option. If the Security option is set to "System", the password will be required both at boot and at entry to Setup. If set to "Setup", prompting only occurs when trying to enter Setup.

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## 5.2. Upgrade BIOS Utility

The upgrade process requires two files, the new BIOS file (*XXXX.bin*) and the upgrade utility (*awdf flash.exe*). Both files can be downloaded from your vendor's Web site.

### RUNNING THE UPGRADE PROGRAM:

1. Boot system from the bootable floppy diskette you created. Booting from the diskette bypasses loading drivers from the **CONFIG.SYS** and **AUTOEXE.BAT** files on the hard drive, eliminating the possibility of loading a program (a.g., a *memory manager*) that conflicts with the AWARD flash utility.

**E** : The Award flash utility cannot run when EMM386 or QEMM are loaded. If you try, an error message appears.

2. At the **DOS** command line, type **AWDFLASH** and press <Enter>.
3. The cursor should be opposite "**FILE NAME to PROGRAM**".
4. Type the name of the new BIOS file (for example, *newbios.bin*), and press <Enter>.
5. At the bottom of the menu, this prompt appears:

**Do you Want to Save BIOS (Y/N)?**

6. If you **DO NOT** wish to save the old BIOS, type <N> and press <Enter>. Then move to step 8.  
If you **DO** wish to save the old BIOS, respond <Y>, and press <Enter>.
7. In the "File Name to Save" field, type a file name for the old BIOS (for example, *oldbios.bin*), and press <Enter>.  
Your old BIOS is saved in a file as named, in the default drive and directory (in this example, on the A drive).
8. Then the program prompts you  
**Do You Want to Update? (Y/N)**
9. If you **DO NOT** wish to update the BIOS, type <N> and press <Enter>. The program exits to the command line. Skip the remainder of this section and go directly to the next section.  
If you **DO** wish to update the BIOS, respond <Y> and press <Enter>. When the updating is finished, the following message appears:

Programming Flash Memory – 7FFFF(for 4MB) OK

**Please Power off or Reset System**

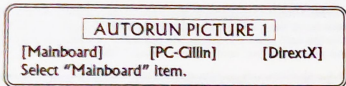
**Restart you system. You BIOS should be successfully update.**

# Chapter 6 – Supported Software

## 6.1. Software Installation Steps

Insert the CD that will be autorun after insertion into CD driver, select the items that need to be installed. We provide auto installation of the various drivers for mainboard, graphics, and sound. You can follow the instructions shown on the monitor step by step to complete your installation.

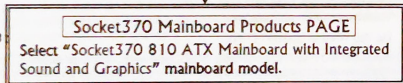
STEP 1 :



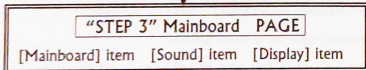
STEP 2 :



STEP 3 :



STEP 4 :





# Chapter 6 – Supported Software

## 6.2. Mainboard Installation

### 6.2.1. System Hardware Monitor Setup Utility(Optional)

The mainboard comes with a system health monitor utility contained in the provided CD. This utility shows the current temperature of the processor, power voltages, and processor / chassis fan speed.

The utility also allows you to manually set the range of the processors temperature, power voltages, and processor / chassis fan speed. If the values of setting are over or under the set range, an error message will pop-up and an alarm will go off. This software driver supports the following OS: Microsoft Windows 9X and Windows NT

### 6.2.2. IDE Bus Master Driver

The mainboard comes with IDE Bus Master driver which supports the following OS: Windows 9X and O/SR2. To install the IDE driver, please refer to the "Readme" file contained in the provided CD.

## 6.3. Graphics Driver Installation

Please refer back to "6.1." Software Installation Steps. After selecting the "Mainboard \ Socket370 \ Socket370 810 ATX Mainboard with Integrated Sound and Graphics" page item, choose the 'Graphics Item' for the installation of the Graphics. Graphics driver support Win 9x, Win200 and Win NT.

This is an autorun installation system, just do according to the instruction, in which most of it is to click a 'next' button and 'finish' button for the last step.

If you like to know much more about the Graphics and the installation, please refer to the 'Readme' file.

## 6.4. Sound Driver Installation

The installation is the same as the previous one. Insert the CD, select the "Mainboard \ Socket370 \ Socket370 810 ATX Mainboard with Integrated Sound and Graphics" page, choose the 'Sound Item', and do according to the instruction. After a couple of 'next', the last 'finish' will complete the installation.

'Readme' file is the place to refer, if you like to know more about the Sound and the installation.

## 6.5. Trend OEM English PC-Cillin

This Trend PC-cillin (OEM-English) is for Windows 9X. To installed select Auto Run "PC-cillin", please refer to the "Readme" file contained in the provided CD. For optimum protection against viruses, you must continue to update your virus pattern file, which is used by PC-cillin to detect virus activity. You can download pattern files from either the Internet or BBS after you register the product.

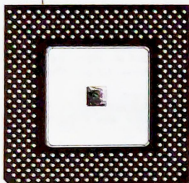
Technical support is available to registered users at Trend offices worldwide. To find a Trend Office nearest you, look in the tech.txt file in the program group or under the Technical Support topic in the on-line help or user's guide. You can also find the address of a Trend office near you from our Web site at:

Web Page

<http://www.antivirus.com> or [www.trend.com.tw](http://www.trend.com.tw)

## Appendix – Identify Celeron Processor (PPGA)

Top



Bottom



2-D Matrix Mark

Intel UCC#



Order code (Product-Speed)

S number

Lot Number(date, factory)

**FV524RZZZ**

**LLL SYYYY**

**FFFFFFFF-XXXX**

ZZZ = Speed(MHz)

LLL = Level 2 Cache Size(in Kilobytes)

SYYYY = S-spec number

FFFFFFFF-XXXX = Assembly Lot Tracking Number







MotherBo

MotherBoard

S/N:0028