

## Safety and Regulatory Information

### Notice for the USA

**FCC Part 15:** This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, this notice is not a guarantee that interference will not occur in a particular installation.

**CAUTION:** To comply with the limits for the class B device, pursuant to Part 15 of the FCC Rules, this device must be installed in computer equipment certified to comply with the Class B limits. All cables used to connect the computer and peripherals must be shielded and grounded. Operation with non-certified computers or non-shielded cables may result in interference to radio or television reception.

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the device.

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# Chapter 1

## Motherboard Feature Introduction

Based on Intel's 810 GMCHset & ICH (82810-DC100 + 82801) chipsets, the BIW1A is an advanced motherboard that comes with onboard audio and video capabilities, an audio modem riser slot, a 4MB BIOS that includes built-in anti-virus protection and UltraDMA/66 technology for lightning-fast IDE transfer speeds.

The BIW1A is an ATX-sized motherboard, measuring 305mm by 173 mm, and it uses a four-layer printed circuit board. Designed for a Socket 370 CPU, the BIW1A also includes two DIMM sockets for the addition of up to 512MB of memory. The bus system supports speeds of 66MHz to 100MHz, which means either inexpensive 66MHz or high-performance 100MHz memory modules can be added to the system.

In addition to its 32-bit onboard sound functionality, the BIW1A comes with an integrated VGA adapter with 2D and 3D graphics engines and 4MB of onboard video memory. An audio modem riser slot is included as well as hardware monitoring and wake-on LAN capabilities. Built-in anti-virus protection ensures you will maintain a clean operating environment free of unwanted viruses. The BIW1A also features UltraDMA/66 technology, which allows for Master IDE transfer rates of up to 66MB/sec.

The BIW1A is a powerful platform that leverages the benefits of a low-cost system with high-performance functionality, and we are confident you will see for yourself how convenient this motherboard is when you assemble your system.

### **FEATURES**

#### **Full-function Processing -**

Intel's new-generation chipset—the Intel 810 GMCHset—supports all Socket 370 and compatible processors. The motherboard comes with many excellent functions built in, such as an audio modem riser slot, onboard 3D graphics, UltraDMA/66 support and built-in anti-virus protection. The motherboard enables users to move up to optimized performance at a low cost. Processor

speed configurations are automatically set through the board's firmware, which means changing switch or jumper settings on the motherboard is not necessary.

### **High Performance -**

The board has two DIMM sockets for the installation of 168-pin, 3.3V non-buffered DIMM memory modules. The DIMM memory modules must be SDRAM memory chips. The board supports a memory bus of 100/66MHz, and each DIMM socket can accept modules up to 256MB in capacity for up to 512MB of total system memory.

### **3D Graphic VGA & Clear 32-bit Audio Built In -**

Full multimedia function is integrated onto the motherboard, which means you won't need to spend extra money on additional adapters, processors and cards. Either 2D or 3D graphics can be displayed, and the motherboard comes with a 4MB onboard SDRAM display cache that supports 1024 X 768 X 16-bit 3D graphics and 1600 X 1200 X 8-bit color 2D graphics. AC'97 DAC/ADC, which is built into the audio CODEC, reduces noise and results in improved audio quality and performance for a signal to noise ratio of +90dB. These features greatly improve voice synthesis and recognition.

### **Double or Quadruple IDE Transfer Speeds -**

IDE transfers using UltraDMA/33 Bus Master IDE technology can handle rates of up to 33MB/sec., while UltraDMA/66 technology supports IDE transfer speeds of 66MB/sec. Best of all, this technology is compatible with existing ATA-2 IDE specifications, so there is no need to upgrade current IDE devices or cables.

### **Slot Expansion Options -**

The motherboard has a full set of expansion slots, with five usable slots: four 32-bit PCI slots and one 8/16-bit ISA slot. The ISA slot and one PCI slot share the same physical area, which means you cannot use both at the same time.(BIW1A-I only)

### **Integrated I/O -**

With its built-in Windbond I/O chip, this motherboard has a comprehensive set of integrated I/O ports. The I/O port array features PS/2 keyboard and mouse ports, a parallel port, two USB ports, two serial ports, a monitor port, a game/MIDI port, and three audio jacks. You may also use the built-in

motherboard header to add in an infrared port. In addition, the motherboard has two PCI-IDE channels and a floppy disk drive interface.

### **ACPI Ready -**

APCI (Advanced Configuration and Power Interface) technology provides for more energy saving functions for future operating systems supporting OS Director Power Management (OSPM) functionality. With these features implemented in the operating system, your system can be ready around the clock while meeting all energy-saving standards.

### **Programmable Firmware -**

The motherboard includes a 4MB Award BIOS that allows CPU parameters to be set through the BIOS. The firmware BIOS includes a new, easy-to-use interface that gives users more control over their system's performance. The fully programmable firmware provides enhanced system features and allows users to set power management, CPU and memory timing levels, as well as LAN and modem wake-up alarms.

## **1.1 ABOUT THE MANUAL**

The manual consist of the following chapters:

- CH1. Motherboard features introduction – Introduce the features of **BIW1A***series* and the checklist of items that are shipped with the package.
- CH2. Setup guide – Let you learn how to install the motherboard and get your system up and running.
- CH3. Award BIOS setup – Configure the BIOS of motherboard for optimum performance.
- CH4. Software setup – Let you learn how to install the software drivers and support programs that are provided with this motherboard.

## 1.2 SPECIFICATIONS

<b>Chipset</b>	Intel 810 GMCHset & ICH (82810-DC100 + 82801) solution.
<b>Processor</b>	Socket 370 Support. Intel Celeron processor 300MHz ~ 500MHz and higher.
<b>Bus Architecture</b>	PCI/ISA.
<b>Clock Generator</b>	66.8, 68.3, 70, 75, 100 up to 150 MHz.
<b>DRAM Modules</b>	2 x 168 pin DIMM Sockets Support Maximum Memory Size to 512 MB SDRAM PC100 SDRAM.
<b>BIOS</b>	4Mbit Firmware Hub (82802AB). Award PnP BIOS with enhanced ACPI feature for PC98 compliance Supports 120MB ATAPI floppy disk. Supports ZIP disk drive. Supports multi-boot from IDE, SCSI, CD-ROM and FDD. Supports software clock frequency control.
<b>On Board VGA Port</b>	Graphics and Memory Controller Hub (82810-DC100 GMCH). Gamma Corrected Video. DDC2B Compliant. Integrated 2D & 3D Graphics Engines. 2D Graphics Up to 1600 x 1200 in 8bit Color at 85Hz Refresh. 4M Display Cache. Integrated 24 bit 230MHz DAC.
<b>On Board Sounds</b>	AC97 Codec Compliant. 1 x CD audio in. 1 x Mic in. 1 x Line in. 1 x Speaker out.

<b>On Board I/O</b>	1 x Digital Video. 1 x Floppy port (up to 2.88MB, 3 mode floppy supported & LS-120). 2 x Serial ports. 1 x Parallel port (SPP/EPP/ECP). 2 x USB. 1 x PS/2 mouse. 1 x PS/2 keyboard. 1 x IrDA. 1 x Joystick.
<b>On Board IDE Port</b>	Dual Ultra DMA66 IDE ports. ATAPI IDE CD-ROM & LS-120.
<b>Expansion slot</b>	1 x AMR Riser slot 4 x 32-bit PCI slots. 1 x 16-bit ISA slot. (Optional)
<b>ICH</b>	I/O Controller Hub (82801AA I/O). Supports PCI Rev 2.2 Specification. Supports PCI 6 Master Devices on PCI. Supports IDE Ultra DMA66 Mode. AC 97 2.1 Link Compliant. Low Pin Count (LPC) I/F. SMBus Interface. Power Management Logic. Firmware Hub I/F.
<b>LPC I/F Chip &amp; Hardware Monitoring</b>	Winbond W83627HF.
<b>PCI to ISA Bridge set</b>	W83628F & W83629D. (Optional)
<b>Advanced Features</b>	1. Supports keyboard & mouse power on feature with ATX power V2.01 3. Ring Indicate header. 4. ACPI 1.0 Compliant. 5. APM Rev 1.2 Compliant.
<b>Form Factor</b>	ATX Size (173mm x 305mm)

## **1.3 DEFINITION OF BIW1Aseries MODEL**

**BIW1Aseries** have different function for meeting customer demand. When you purchase the motherboard of **BIW1Aseries** you just follow below description to know which extra function you have.

1. Find the model of **BIW1Aseries** you have purchased.
2. Check having any words after the “Dash” mark of model.
3. Review these words show what Extra functions / Optional Functions.

### **Codes Definition**

<b>Code</b>	<b>Description</b>
I	ISA Slot

#### **Example:**

- ◆ BIW1A-I There is a word “I” after the Dash mark, so the extra function is with ISA Slot.

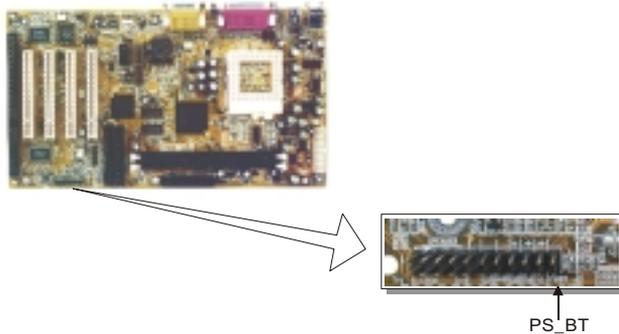
It is easily to differentiate between varieties of **BIW1Aseries** motherboards.

## **1.4 POWER OFF CONTROL SOFTWARE**

The motherboard design supports the software power off Control feature through the SMI code in the BIOS under WIN98/95 operating system environment. It is an ATX form factor, so you should use ATX power supply.

First, connect the power switch cable (provided by the ATX case Supplier) to the connector [ PWBT ] on the motherboard (Please refer to the following illustration). In the BIOS screen of “POWER MANAGEMENT SETUP”, choose “User Defined”(or min power saving or Max power saving) in “POWER MANAGEMENT” and choose “Yes” in “PM Control by APM”.

**Note: BIOS Setup. Please refer the “Chapter 3 Award BIOS Setup”**



In Windows 98/95, under the “SHUT DOWN” option, the computer’s power will switch off automatically and put the PC in a suspend mode. This will be indicated by a blinking power light. To restart the system, simply press the Power Button.

## **1.5 PACKAGING CHECK LIST**

The Motherboard comes securely packed in a gift box and shipping carton. If any of the above items are missing or damaged, please contact your supplier.

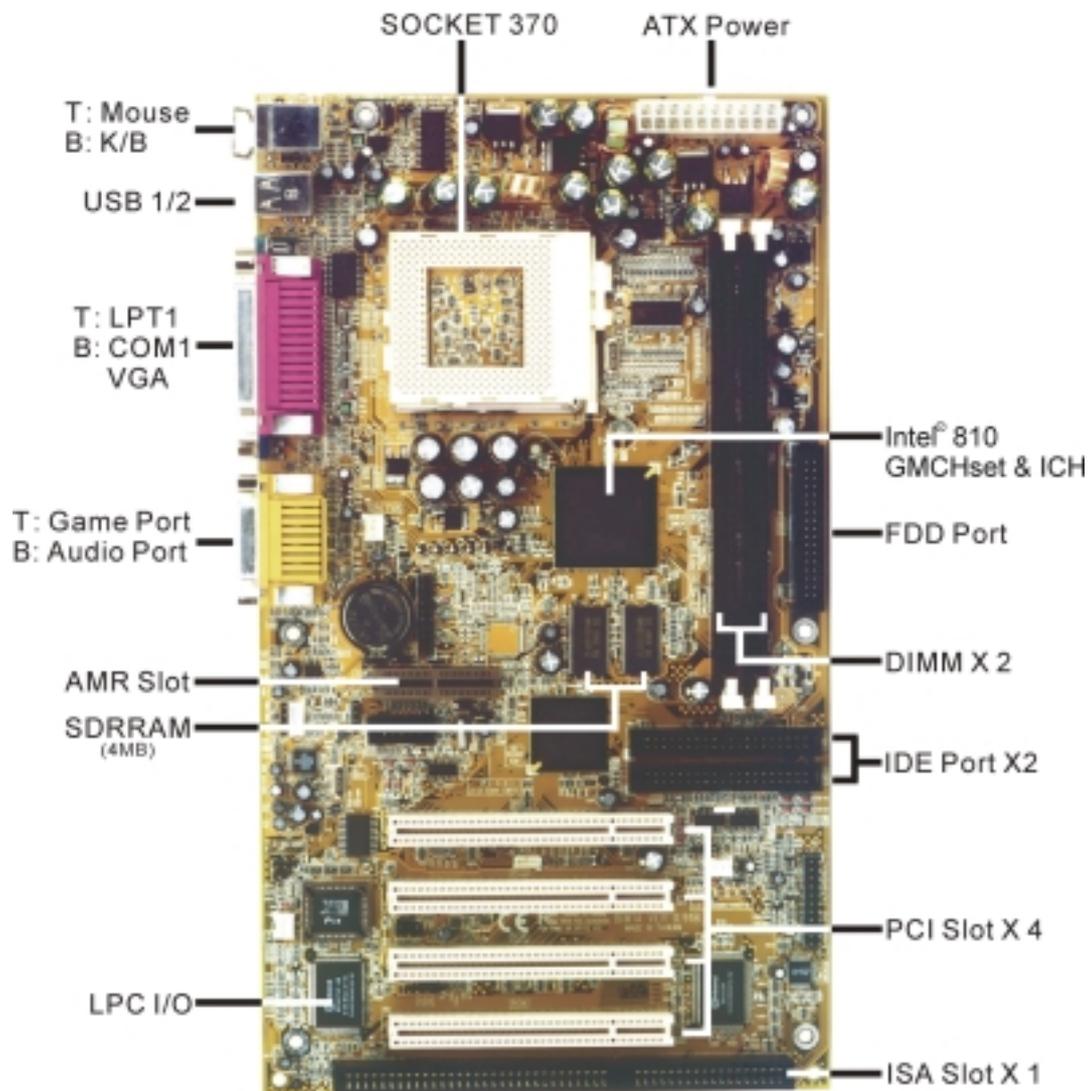
The motherboard contains:

Q’TY		Description
1	Motherboard	: With Intel 810 GMCHset & ICH (82810-DC100 + 82801) chipset
1	Driver	: CD-Title w/Installation label <ul style="list-style-type: none"><li>• PC-Cillin Software</li><li>• Motherboard Bus master Driver</li><li>• Audio Driver</li></ul>
1	Cable	: IDE Cable
1	Cable	: Floppy Cable
1	Cable	: COM2 Cable
1	User’ s guide	: PC-Cillin
1	Manual	: User’ s manual

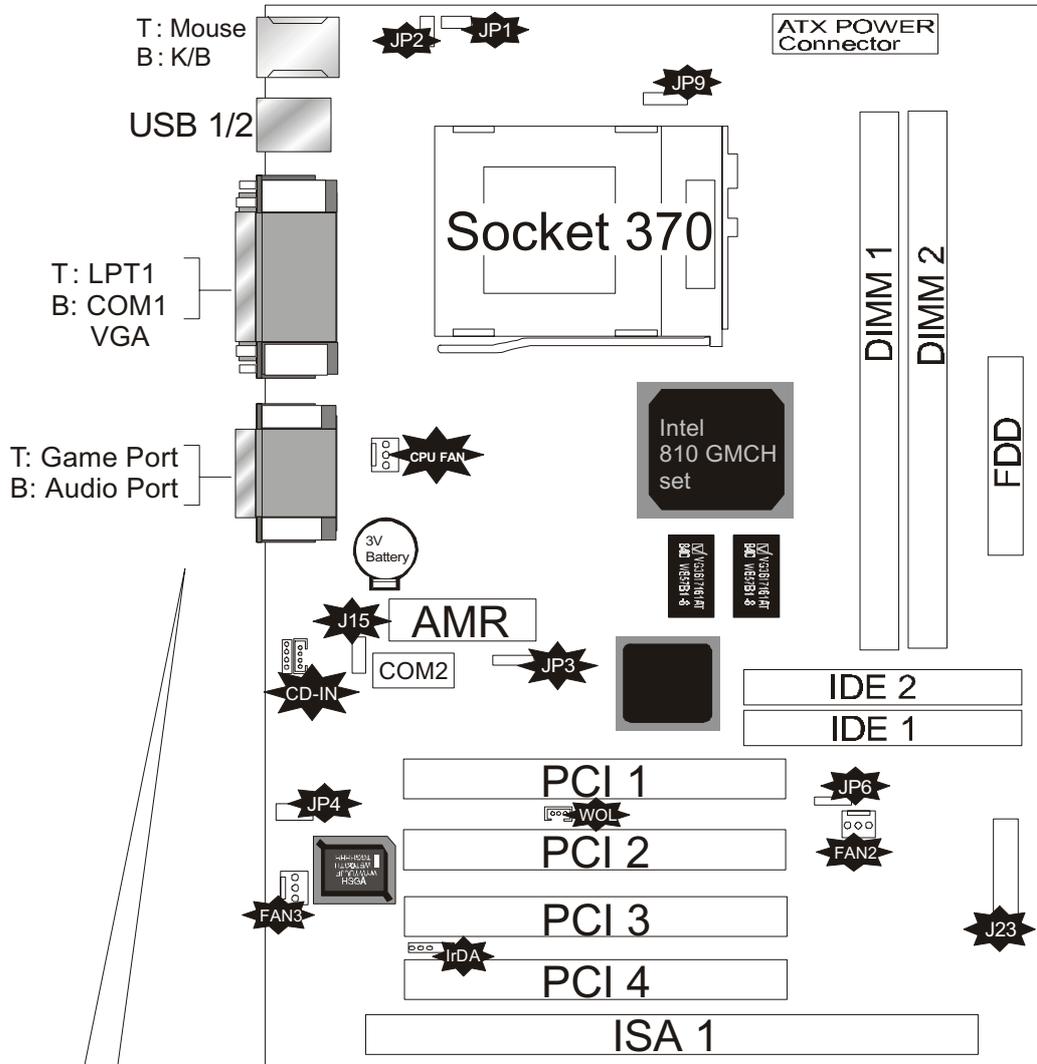
# Chapter 2

## Setup Guide

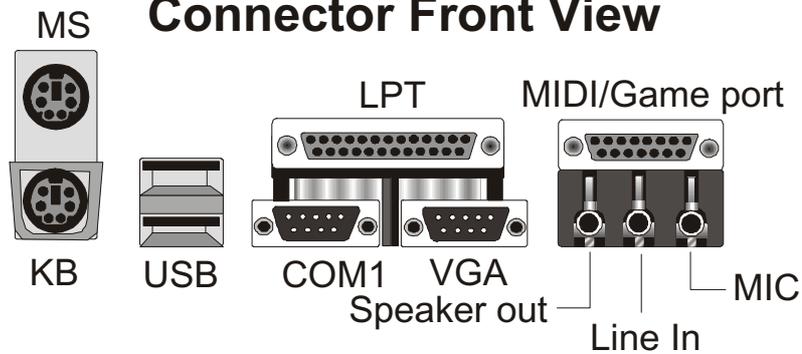
### 2.1 Motherboard layout



## 2.2 Connector & Jumper Reference Chart



### Connector Front View



## 2.3 The setup steps

Please refer to the following steps to setup your computer:

- I. Refer to the Jumper Setup section to set up the jumpers correctly.
- II. Install the DIMM modules on the motherboard; be sure to set up safely.
- III. Install the CPU on the motherboard (please refer to the CPU installation manual).
- IV. Choose a case and install the motherboard into this case.
- V. Plug in all the interface cards of your system equipment.
- VI. Connect the cable, power supply and other message lines in the correct position.
- VII. Reboot, and enter the Award BIOS setup Menu to correct the definitions.
- VIII. Turn on the power and set up your computer system software.

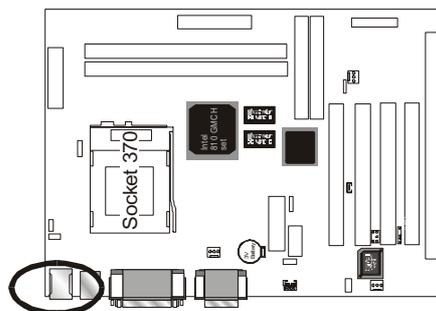
### 2.3-1 Jumper & Connector Setting

#### **PS/2 Keyboard Connector**

Color : Purple ; Pantone : 2715C

This connector can connect PS/2 Keyboard and has better performance.

Pin	Description	Pin	Description
1	Keyboard Data	2,6	N.C.
3	Ground	4	+5V
5	Keyboard Clock		

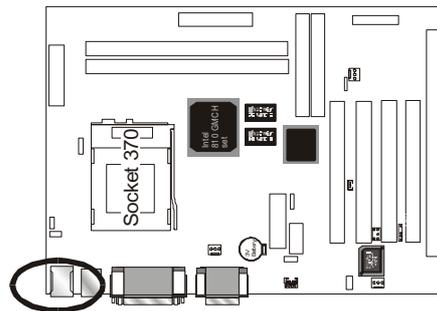


**PS/2 Mouse Connector**

Color : Green ; Panton : 3395C

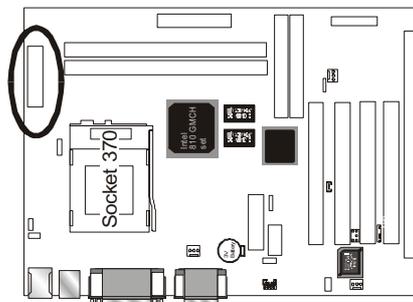
This connector can connect PS/2 Mouse and has better performance.

Pin	Description	Pin	Description
1	Mouse Data	2,6	N.C.
3	Ground	4	+5V
5	Mouse Clock		

**ATX Power Supply Connector**

This connector allows the motherboard to draw the power form ATX power supply. It requires an ATX power supply of 250 watt at least.

Pin	Description	Pin	Description
1,2,11	+ 3.3 V	3,5,7,13, 15,16,17	Ground
4,6,19,20	+ 5 V	8	POWER GOOD
9	5VSB	10	+12 V
12	-12 V	14	PS-ON
18	- 5 V		

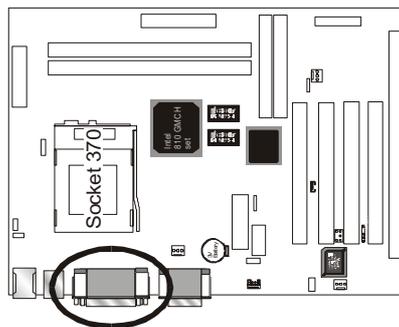


**Printer Connector**

Color : Burgundy ; Panton : 235C

This Connector can transfer the data to printer for printing on paper.

Pin	Signal Name	Pin	Signal Name
1	Strobe-	14	AFD
2	Data Bit 0	15	Error
3	Data Bit 1	16	INIT
4	Data Bit 2	17	SLCTIN
5	Data Bit 3	18	GND
6	Data Bit 4	19	GND
7	Data Bit 5	20	GND
8	Data Bit 6	21	GND
9	Data Bit 7	22	GND
10	ACK	23	GND
11	Busy	24	GND
12	PE	25	GND
13	SLCT	26	GND

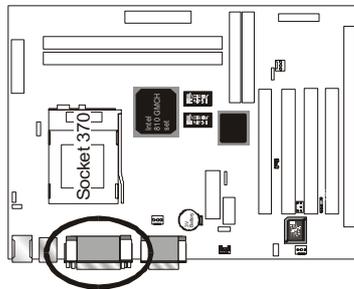


**COM1–Serial Connectors**

Color : Turquoise ; Panton : 322C

These connectors allow mouse or the other device which use this type connector for transferring data between computer and devices.

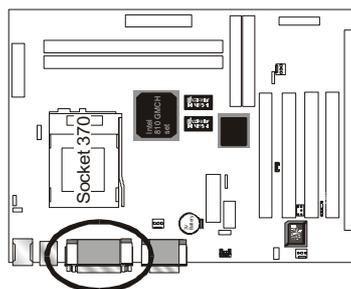
Pin	Signal Name	Pin	Signal Name
1	DCD	6	DSR
2	SIN	7	RTS
3	SOUT	8	CTS
4	DTR	9	RI
5	GND	10	NC

**VGA – VGA Out Connector**

Color : Blue ; Panton : 661C

This connector is for the external monitor. Use this port to connect to a VGA or higher resolution display monitor.

Pin	Signal Name	Pin	Signal Name
1	RED Signal	9	N.C.
2	GREEN Signal	10	GND
3	BLUE Signal	11	N.C.
4	N.C.	12	Display data channel data
5	GND	13	Horizontal Sync
6	GND	14	Vertical Sync
7	GND	15	Display data channel clock
8	GND		

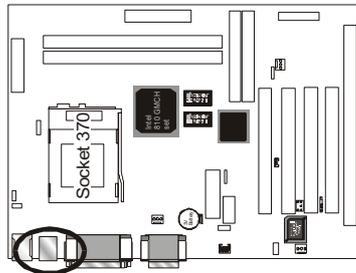


**USB- Universal Serial Bus (USB1, USB2) Connectors**

Color : Black ; Panton : 426C

These connectors allow the device which use this type connector for transferring information between computer and devices.

USB1 Pin	Signal Name	USB2 Pin	Signal Name
1	USB VCC 0	1	USB VCC 1
2	USB Data -	2	USB Data -
3	USB Data +	3	USB Data +
4	USB GND 0	4	USB GND 1
5	GND	5	GND

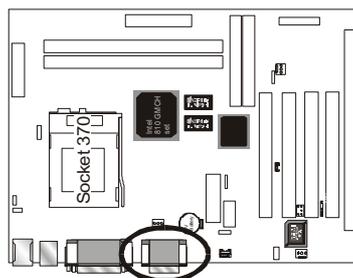


**GAME/MIDI – For Game or MIDI Connector**

Color: Gold ; Panton : 131C

You can use this port to connect a joystick or a MIDI device to your system.

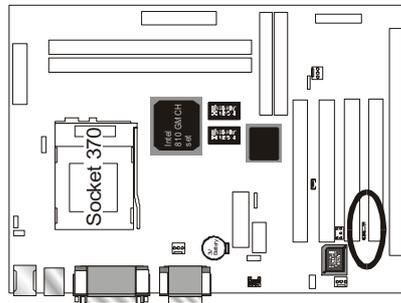
Pin	Signal Name	Pin	Signal Name	Pin	Signal Name
1	VCC	6	TB	11	TC
2	SWA	7	SWD	12	MSD
3	TA	8	VCC	13	TD
4	GND	9	VCC	14	SWD
5	GND	10	SWC	15	MSI



**IrDA - Infrared Connector: IR**

This connector is used to connect IR Device.

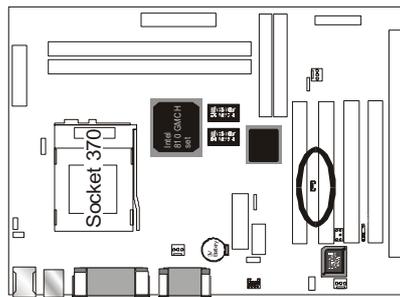
Pin	Signal Name
1	VCC
2	NC
3	SIRRX
4	GND
5	IRTX



**WOL – Wake-up On LAN Connector**

This connector is used to connect an add-in NIC ( Network Interface Card ) which gives WOL function to the motherboard. Enable this function for remotely managing PC on a network. When a PC receives the wake up command during sleep, the LAN controller will wake up the PC.

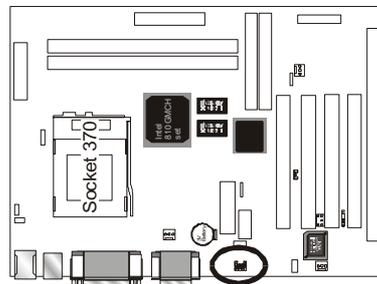
Pin	Signal Name
1	5VSB
2	GND
3	LID



**CD-IN: CD audio Connector**

This connector is used to connect CD-ROM audio output to motherboard, through this, the CD audio can output to audio chip directly.

Pin	Description
1	Left
2	Ground
3	Ground
4	Right



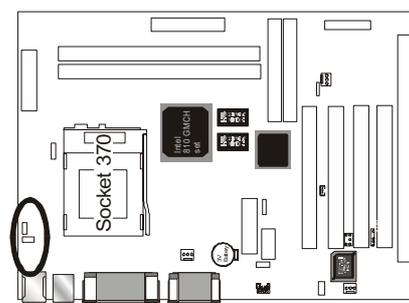
**JP1: Jump for Cyrix CPU**

This jump only is reserved for Cyrix CPU, but the Cyrix CPU is not available yet.

**JP2 – Keyboard & PS/2 Mouse ON NOW Connector**

This connector is used to enable keyboard & PS/2 mouse power on with hot keys or mouse button.

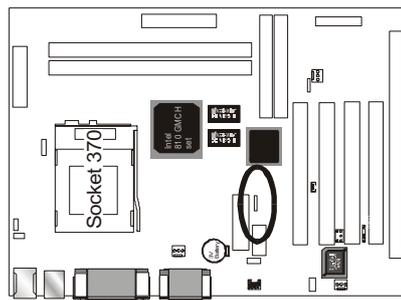
Pin	Signal Name
1-2	Enable
2-3	Disable



**JP3 – CMOS Clear**

This jumper is able to clear the current data stored in the CMOS memory.

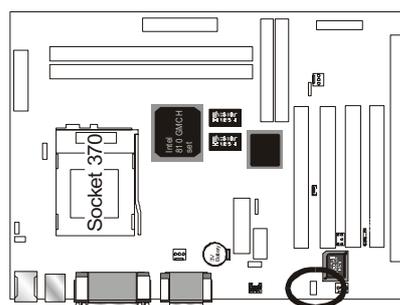
Pin	Description
1-2	Normal (default)
2-3	Clear CMOS



**JP4 – On Board AC97 Sound Switch**

This jumper is able to Open/Close the on board sound function.

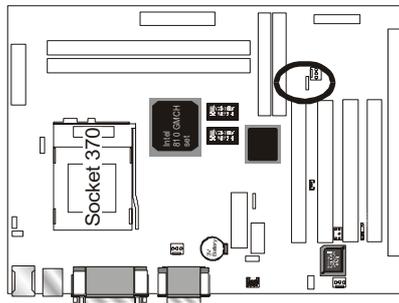
Pin	Description
1-2	Disable
2-3	Enable (Default)



**JP6 – Password Power on Jump Select**

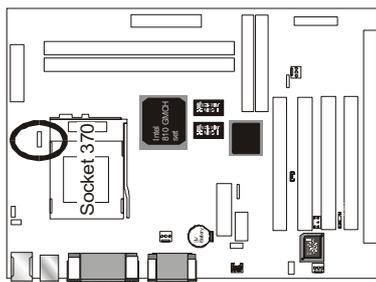
This jumper is able to Open/Close the Power On by Password function. Your system will be under security, when you use this function. (When you want to use this function, you should check the Integrated Peripherals of BIOS utility is setup firstly.)

Pin	Description
1-2	Enable (Default)
2-3	disable

**JP9 – CPU Frequency Select Jump**

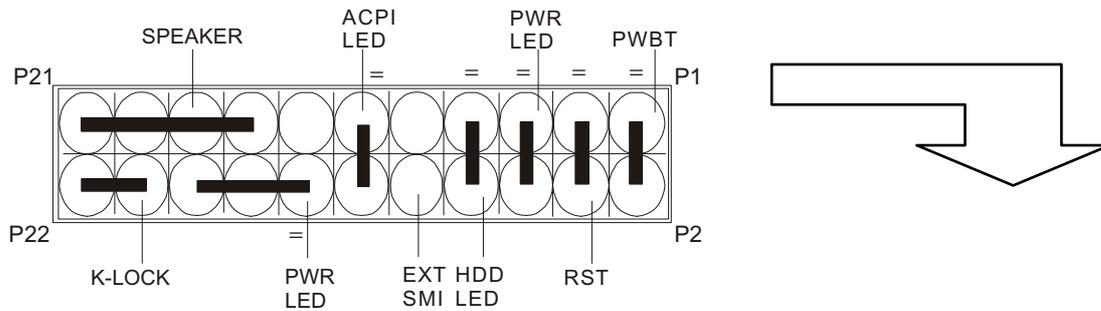
JP9 can set your motherboard's external bus speed to 100MHz. Even if your Intel Pentium® CPU doesn't support an external bus speed of 100MHz. (The Socket 370 processor supports external bus frequencies of both 66MHz and 100MHz, but not all Intel Pentium® CPUs can support both frequencies. Please refer to your CPU specifications before setting the bus speed on your motherboard.)

Pin 9	Description
Short 1-2	66 MHz
Short 2-3	Auto Detect (Default)
Open Jumper	100MHz

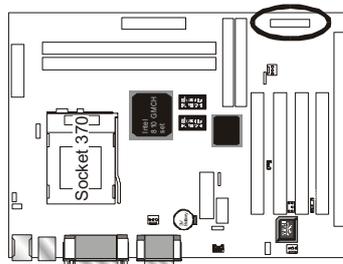


**PANEL CONNECTORS SETTING**

Locate the bank of switch and indicator connectors. These connectors provide control functions to your system case. Such as Speaker, HD LED, Power LED, Key Lock, SMI Switch, SMI ED and Reset ...etc. Please use the cable below to make the connections.

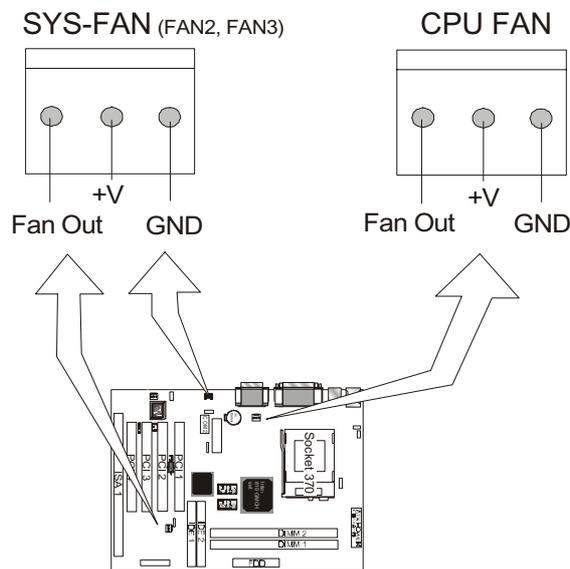


Pin	Name	Description
1 – 2	PWBT	Power Button
3 – 4	RST	Reset
5 – 6	PWR LED	Power LED
7 – 8	HDD LED	HDD LED
9 – 10	EXT SMI	EXT SMI
11 – 12	ACPI	ACPI
14 – 18	PWR LED	Power LED
20 – 22	K-LOCK	KEY LOCK
15 – 21	SPEAKER	Speaker



## **FAN1, FAN2, FAN3 - FAN CONNECTORS**

These connectors allow the fans of CPU and system to draw the power from the motherboard.



**FAN1** : CPU FAN CONNECTOR.

**FAN2** : For SYSTEM COOL FAN CONNECTOR.

**FAN3** : For SYSTEM COOL FAN CONNECTOR.

## **CPU TYPE SELECT**



The Socket 370 processor supports external bus frequencies of both 66MHz and 100MHz, but not all Intel Pentium® CPUs can support both frequencies. Please refer to your CPU specifications before setting the bus speed on your motherboard.

BIW1A will auto-detect the CPU type without any jumper setting. So you just need to install your CPU on Socket 370 and your system will help

you to find the CPU type.

The Clock Frequency is 66 by default. But you can change the frequency in the BIOS Setup, so you can refer 3.3 - Chipset Features setup of Chapter 3. That's mean Even if your Intel Pentium® CPU doesn't support an external bus speed of 100MHz, you can still set your motherboard's external bus speed to 100MHz.

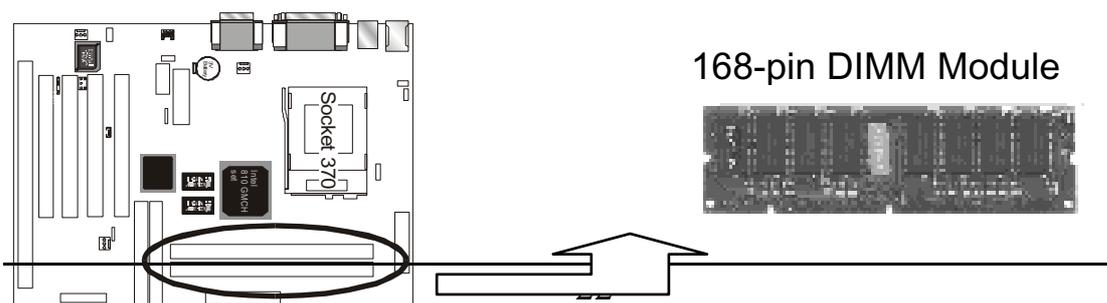
## 2.3-2 Memory installation

No jumper setting is necessary for DRAM setting; BIOS will check DRAM type and size automatically. This motherboard contains 2 by 168-pin DIMM socket (DIMM1, DIMM2). The motherboard has a table-free (or auto-bank) feature; the user can install DIMM into any bank. The two DIMM Sockets permit system memory expansion from 8MB to 512MB. Each bank provides a 64-bit wide data path. You can install 100MHz SPD RAM or 66MHz SDRAM into the motherboard, using your CPU clock to make the selection.

If you want to install more memory and there are no sockets available, you must remove some installed modules and replace them with the upgrade modules.

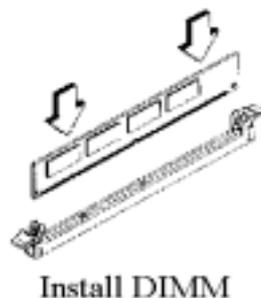
If you have to do this, be sure to identify what type of memory is already installed. In some cases, there may be a mix of module types. You can confirm this by checking the configuration screen that appears while the computer is starting up. Press the pause key to temporarily interrupt the start-up so that you have more time to read the screen. When you're done, press any key to resume.

Remove the lowest performance and smallest size modules and replace them with the upgrades.



### **How to Install DIMM Modules on Motherboard**

1. The SDRAM sockets are keyed with notches and the DIMMs are keyed with cut-outs so that they cannot be installed incorrectly. Check that the cut-outs on the DIMM edge connector match the notches in the SDRAM socket. In other words, before inserting the DIMM, make sure the pin1 of the DIMM matches with the pin1 on the DIMM socket.
2. Push down the latches on each side of the SDRAM socket.
3. Install the DIMM into the socket and press it carefully but firmly down so that it seats correctly. The latches at either side of the socket will be levered upwards and latch on the edges of the DIMM when it is installed correctly.



### **How to Remove DIMM Modules from Motherboard**

1. Press the holding latches at either side of the socket outward to release the DIMM.
2. Gently pull the DIMM out of the socket.



**NOTE: Samples of System Memory Combinations Options**

<b>DIMM1</b>	<b>DIMM2</b>	<b>TOTAL</b>
8MB	-----	8MBytes
-----	8MB	8MBytes
8MB	8MB	16MBytes
-----	16MB	16MBytes
16MB	-----	16MBytes
16MB	8MB	24MBytes
8MB	16MB	24MBytes
16MB	16MB	32MBytes
32MB	-----	32MBytes
-----	32MB	32MBytes
8MB	32MB	40MBytes
32MB	32MB	64MBytes
-----	64MB	64MBytes
64MB	-----	64MBytes
64MB	64MB	128MBytes
:	:	:
:	:	:
128MB	128MB	256MBytes
256MB	256MB	512MBytes

DIMM type : 3.3V, unbuffered or registered, 64/72-bit Synchronous DRAM with SPD. Supports Single/Double-side 16/32/64/128 Mbytes module size with parity or non-parity.

## 2.3-3 How to install the CPU

Prepare the motherboard by installing the supplied CPU-Socket 370, then install the CPU according to the instructions supplied. Complete the processor installation by installing the supplied heat-sink support, and connecting the heat sink power cable to the motherboard connector.

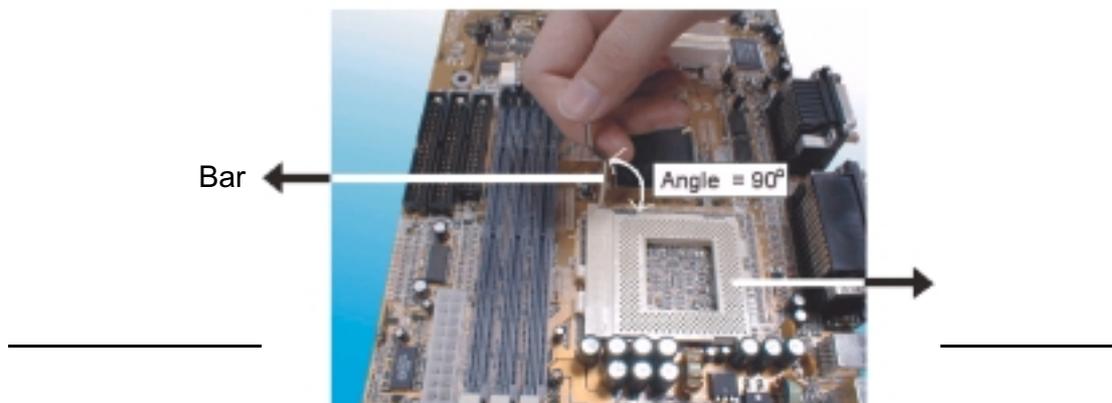
### Referential Steps of installing the Socket 370 CPU

This section is only for CPU installation, the motherboard in the picture is not the **BIW1A***series*. Regarding the heat-sink, please refer to the instructions supplied.

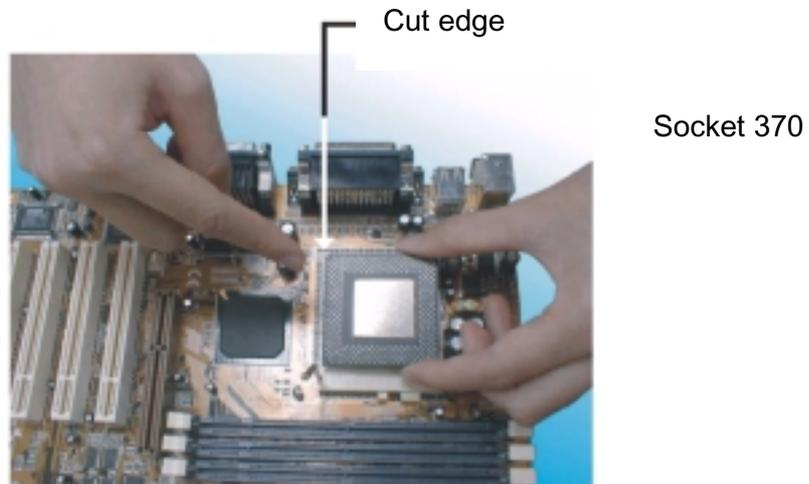
1. Review the CPU and motherboard.



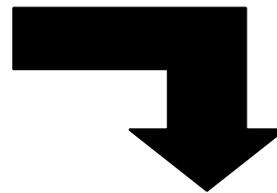
2. Pull the lever sideways away from the socket then raise the lever up to a 90-degree angle.



3. Locate Pin 1 in the socket and look for the cut edge in the CPU, match Pin 1 with the cut edge then insert the CPU. It should be inserted easily.



4. Press the lever down to lock the CPU into the socket.



**Note:**  
Regarding the heatsink installation, please refer to the instruction of the supplier.



## **CPU & Power Supply Fan Connectors (3-pin FanPWR)**

These connectors support cooling fans of 500mAMP (6 watts) or less. Position the fans so that the heat-sink fins allow the airflow to go across the onboard heat-sink(s) instead of the expansion slots. Depending on the fan manufacturer, the wiring and plug may be different. The red wire should be positive, while the black one should be grounded. Connect the fan's plug to the board, taking into consideration the polarity of this connector.

The "rotation" signal is to be used only by a specially designed fan with a rotation signal.



The CPU and motherboard will overheat if the hot air generated by the CPU does not flow across the onboard heat-sinks, and the CPU fan and motherboard can be damaged if these pins are used improperly.

## **2.3-4 Installing the Motherboard**

The **BIW1A***series* motherboard complies with the specifications for an ATX board, so you can also install this kind of board into a full-size ATX case. Some features on the motherboard are implemented by cabling connectors on the motherboard to indicators and switches on the system case. Ensure that your case supports all the features required. The **BIW1A***series* motherboard can support one or two floppy diskette drives and four enhanced IDE drives. Ensure that your case has sufficient power and space for all the drives that you intend to install.



**Caution:** Make sure that you have already installed the system board components like the CPU and memory, and have set the appropriate jumpers before you proceed.

## **2.3-5 Installing the interface card**

This section explains how to install new interface cards on your motherboard. It covers installing ISA cards and PCI cards. There are five expansion card slots on the motherboard, four PCI slots and one ISA slots.(BIW1A-Ionly) When you get an expansion card, it will come with instructions on how to install it, so this section covers relevant information for the motherboard only.

### **PCI Cards and Slots**

With very few exceptions, any PCI expansion card you are likely to get will be Plug and Play compliant. If you are using an Operating System that supports PnP, such as Windows 98/95, you should be able to follow the installation instructions that come with the card and have the Operating System automatically recognize and configure the card.

The PCI slots on the motherboard all have “Bus Master” capability. For installed PCI cards to use this feature, an Operating system specific Bus Master software driver that comes with this motherboard must be installed under your Operating System. These drivers are located on the support Disk.

### **ISA Cards and Slots (BIW1A-I only)**

ISA expansion cards often use system resources in the form of IRQs and DMA channels. Newer cards that comply with the Plug and Play (PnP) standard are designed to allow the Operating System to automatically configure system resources. Cards that do not support PnP may require manual configuration of both the card hardware and settings in the CMOS Setup Utility.

If you have a PnP compliant card to install, there should be little to do other than follow the installation instructions. If, however, you have a non-PnP card and it requires configuring system resources, you may need to setup the configuring expansion card resources in CMOS Setup.

## 2.3-6 Installing Accessory Cables

This section describes how to connect the accessory cable that motherboard or system housing supports. In the case of ATX, there is no need to use a bracket to extend the connectors to the rear panel, so here we will discuss only the installation instructions for Floppy, IDE, Power supply and Front Panel switch/LED cables.

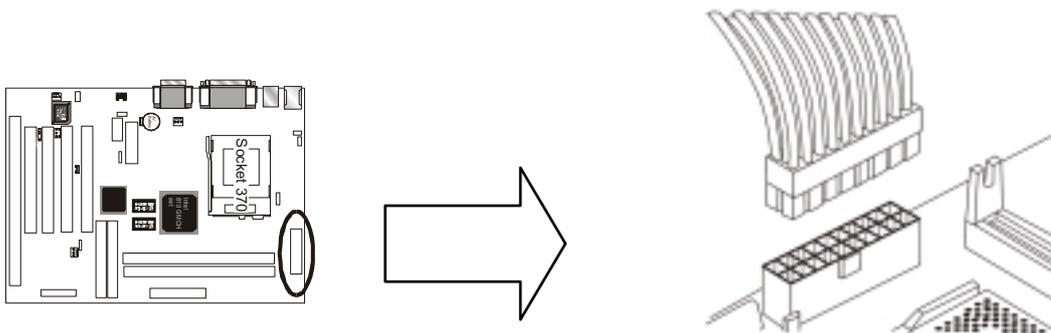


**Caution:** Make sure that the power supply is OFF before connecting or disconnecting any bracket or cable.

### ATX Power Cable

The 20-pin ATX power cable supports 5V standby current and soft power-on switch. The soft power switch can be either momentary or toggle type and must comply with the ATX specification.

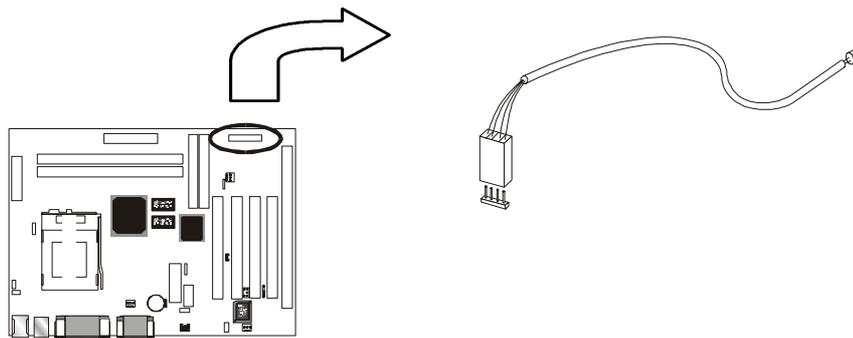
Plug in the power cable to the onboard power connector.



### Front Panel Switch and LED Cables

Normally, the front-panel housing has power switch, power LED, reset switch, suspend switch, speaker, keylock and HDD LED. These accessories are included in the housing package.

Refer to the 2.3-1 “PANEL CONNECTORS SETTING” for proper location of the connector.

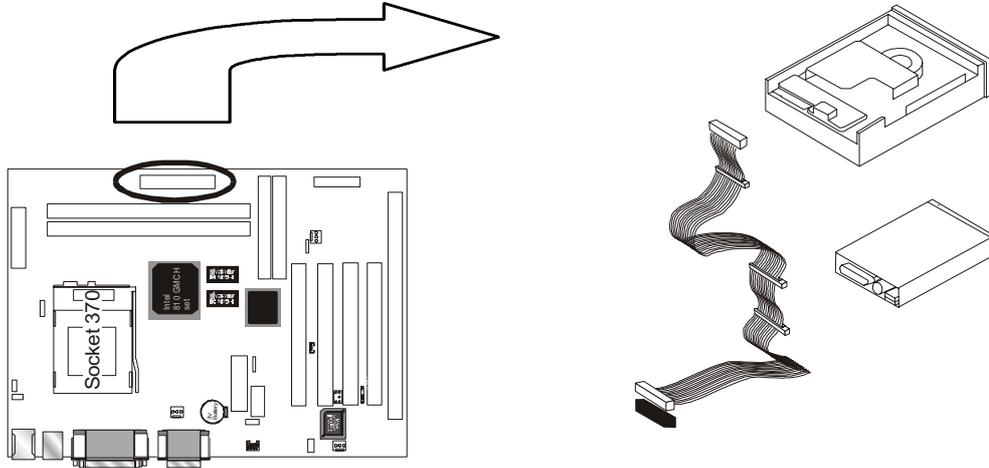


### **Floppy Cable**

The floppy cable for floppy drives is a 34-pin flat cable with 5 connectors classified as follows:

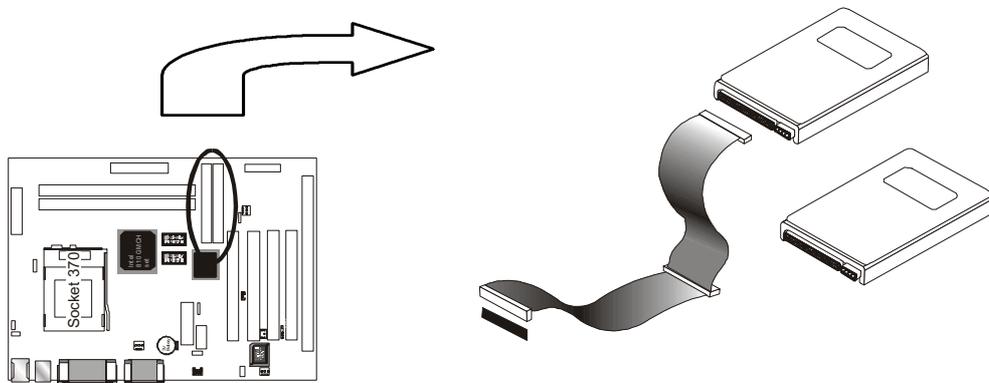
1. Female header (For floppy connector onboard)
2. Female header and Edge connector (For driver B)
3. Female header and Edge connector (For driver A)

The end-most connector cable is twisted to support floppy drive A, while the middle connectors are for floppy drive B. The drive B connectors are designed to accommodate both 1.44MB and 1.2MB drives. The female header supports the 1.44MB drive, while the female edge connector supports the 1.2MB drive. When connecting the drive, make sure that pin1 of the cable (ie., the red-colored wire) matches pin1 of the drive.



### **IDE Cables for HDD and CDROM**

The motherboard comes with two IDE interfaces; primary IDE and secondary IDE connectors. Each channel supports two IDE devices via 34-pin flat cable, thus enabling the system to accommodate a maximum of four devices.



# Chapter 3

## Award BIOS Setup

This chapter explains how to use and modify the BIOS setup utility that is stored on the motherboard. The setup utility stores information about the motherboard components, and the configuration of other devices that are connected to it. The system uses this information to test and initialize components when it is started up, and to make sure everything runs properly when the system is operating.

The setup utility is installed with a set of default values. The default values are designed to ensure that the system will operate adequately. You will probably have to make changes to the setup utility whenever you add new components to your system such as new disk drives. You may be able to generate increased performance by changing some of the timing values in the setup, but this can be limited by the kind of hardware you are using, for example the rating of your memory chips. In certain circumstances, the system may generate an error message which asks you to make changes to the setup utility. This happens when the system finds an error during the POST (power on self test) that it carries out at start up.

### Starting the Setup Utility

You can only start the setup utility shortly after the computer has been turned on. A prompt appears on the computer display which says "**Press DEL to run Setup**". When you see this prompt press the **Delete** key, and the system will start the setup utility and display the main menu of the utility.

### Using the Setup Utility

When you press the **Delete** key to start setup, the main menu of the utility appears.

The main menu of the setup utility shows a list of the options that are available in the utility. A highlight shows which option is currently selected. You can use the cursor arrow keys to move the highlight to other options.

When an option is highlighted, you can execute the option by pressing the **Enter** key. Some options lead to dialog boxes which ask you verify that that you wish to execute that option. You usually answer these dialogs by typing **Y** for yes and **N** for no.

Some options lead to dialog boxes which ask for more information. Setting the User Password or Supervisor Password have this kind of dialog box.

## **PRESS F1 TO CONTINUE, CTRL-ALT-ESC OR DEL TO ENTER SETUP**

### **Control Keys**

Up Arrow	Move to previous item
Down Arrow	Move to next item
Left Arrow	Move to the item in the left hand
Right Arrow	Move to the item in the right hand
Esc Key	Main Menu: Quit without saving changes Submenus: Exit Current page to the next higher level menu
PgUp Key	Increase the numeric value or make changes
+ key	Increase the numeric value or make changes
- key	Decrease the numeric value or make changes
PgDn Key	Decrease the numeric value or make changes
F1 Key	General help, only for Status Page Setup Menu and Option Setup Menu
F5 Key	Load previous values from CMOS
F6 Key	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
F7 Key	Load the default
F8 Key	Reserved
F9 Key	Reserved
F10 Key	Save all the CMOS changes, only for Main Menu

### **3.1 The Main Menu**

Once you enter Award BIOS CMOS Setup Utility, the Main Menu will appear on the Screen.. Use arrow keys to select among the items and press to accept or enter the **sub-menu**.

Some options lead to tables of items. These items usually have a value on the right side. The value of the first item is highlighted, and you can use the cursor arrow keys to select any of the other values in the table of items. When an item is highlighted, you can change the value by pressing the **PageUp** or **PageDown** keys, or the **Plus** or **Minus** keys. The **PageUp** and **Plus** keys cycle forward through the available values, the **PageDown** and **Minus** keys cycle backwards through the values.

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

---

#### **Standard CMOS Setup**

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

---

#### **Advanced BIOS Features**

This setup page includes all the items of Advanced Features available on your system.

---

### **Advanced Chipset Features**

This setup page includes all the items of chipset special features.

---

### **Integrated Peripherals**

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

---

### **Power Management Setup**

This menu provides functions for Green products by allowing users to set the timeout value for monitor and HDD.

---

### **PnP / PCI Configurations**

This menu allows the user to modify PNP / PCI configuration function.

---

### **PC Health Status**

This menu allows users to monitor PC Health status

---

### **Frequency/Voltage Control**

This menu to specify your settings for frequency/voltage control

---

### **Load Fail-Save Defaults**

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

---

### **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 maximize performance, the factory has the right to change these defaults to meet their needs.

---

### **Supervisor / User Password Setting**

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

---

### **Save & Exit Setup**

Save CMOS value changes to CMOS and exit setup.

---

### **Exit Without Saving**

Abandon all CMOS value changes and exit setup.

## 3.2 Standard CMOS Setup

The item in Standard CMOS Setup Menu are divided into several 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.

Standard CMOS Features		Item Help
Date(mm:dd:yy)	Mon, Jul 8 1999	
Time(hh:mm:ss)	16:19:20	
➤ IDE Primary Master	Press Enter 2557 MB	Menu Level ➤
➤ 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	1.44M, 3.5 in.	
Drive B	None	
Floppy 3 Mode Support	Disabled	
Video	EGA/VGA	
Halt On	All Errors	
Based Memory	640K	
Extended Memory	64512K	
Total Memory	65536K	
↑↓←→Move Enter: Select +/-/PU/PD: Value F10:Save ESC: Exit F1:General Help F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults		

---

### Date and Time

The Date and Time items show the current date and time held by your computer. If you are running a Windows operating system, these items will automatically be updated whenever you make changes to the Windows Date and Time Properties utility.

---

### Hard Disks

*Default: Auto*

These items show the characteristics of any hard disk drives on the four available IDE channels. (Note that SCSI hard disk drives do not appear here.) You can automatically install most modem hard disks using the IDE HDD Auto Detect Option from the main menu. However, if you find that a drive

cannot be automatically detected, you can use these items to select USER, and then manually enter the characteristics of the drive. The documentation provided with your drive provides the data you need to fill in the values for CYLS (cylinders), HEAD (read/write heads), and so on.

The documentation provided with the drive may not tell you what value to use under the MODE heading. If the drive is smaller than 528 NM, set MODE to Normal. If the drive is larger than 528 NM and it supports Logical Block Addressing, set MODE to LBA- Very few high-capacity drives do not support Logical Block Addressing. If you have such a drive, you might be able to configure it by setting the MODE to Large. If you're not sure which MODE setting is required by your drive, set MODE to Auto and let the setup utility try to determine the mode automatically.

---

**Drive A and Drive B****Default: 1.44M, 3.5 in., None**

These items define the characteristics of any diskette drive attached to the system. You can connect one or two diskette drives.

---

**Floppy 3 Mode Support****Default: Disabled**

Floppy 3 mode refers to a 3.5" diskette with a capacity of 1.2MB. Floppy 3 mode is sometimes used in Japan.

---

**Video****Default: EGA/VGA**

This item defines the video mode of the system. This motherboard has a built-in VGA graphics system so you must leave this **item** at the default value.

---

**Halt On****Default: All. But Keyboard**

This item defines the operation of the system POST (Power On Self Test) routine. You can use this item to select which kind of errors in the POST are sufficient to halt the system.

---

**Base, Extended and Other Memory****Default: Auto Detect**

These items show how much memory is available on the system. They are automatically detected by the system so you cannot manually make changes to these items.

### 3.3 Advanced BIOS Features

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

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Advanced BIOS Features

Anti-Virus Protection	Enabled	Item Help
CPU Internal Cache	Enabled	
External Cache	Enabled	Menu Level      ➤
CPU L2 Cache ECC Checking	Enabled	
Quick Power On Self Test	Enabled	Allows you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep
First Boot device	Floppy	
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	
Gate A20 Option	Normal	
Typematic Rate Setting	Disabled	
Typematic Rate (Chars/Sec)	6	
Typematic Delay (Msec)	250	
Security Option	Setup	
OS Select For DRAM > 64MB	Non-OS2	
BIOS Write Protect	Disabled	
HDD S.M.A.R.T. Capability	Enabled	
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		

**Anti-Virus Protection** *Default: Enabled*

Anti-Virus program could locate and remove the problem before any damage is done. So when this item is enabled, the Award BIOS will monitor the boot sector and partition table of the hard disk drive for any attempt at modification. If an attempt is made, the Anti-Virus program built-in the BIOS will be run for protecting your system to be clean.



**WARNING:**

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

Enabled : Activates automatically when the system boots up, if anything attempts to access the boot sector or hard disk partition table will cause a warning message to **appear**.

Disabled : No warning message will appear when anything attempts to access the boot **sector or hard disk partition table**.

Many disk diagnostic programs which attempt to access the boot sector table can cause the above warning message.

---

**CPU Internal Cache**

*Default: Enabled*

All the processors that can be installed in this motherboard use internal (level 1) cache memory to improve performance. Leave this item at the default value Enabled for better performance.

---

**External Cache**

*Default: Enabled*

Most of the processor cartridges that can be installed in this motherboard have (level 2) external cache memory (the Celeron-266MHz is an exception). Only enable this item if your processor cartridge has external cache memory.

---

**CPU L2 Cache ECC Checking**

*Default: Enabled*

This item can be used to enable ECC (Error Checking Code) for the level-2 cache memory. We recommend that you leave this item at the default value Enabled.

---

**Quick Power On Self Test**

*Default: Enabled*

You can enable this item to shorten the power on testing and have your system start up a little faster.

---

**First/Second/Third Boot Device**

*Default: Floppy,HDD-0,LS/ZIP*

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

---

**Swap Floppy Drive**

*Default: Disabled*

If you have two floppy diskette drives in your system, this item allows you to swap around the assigned drive letters so that drive A becomes drive B, and drive B becomes drive A.

---

**Boot Up Floppy Seek****Default: Disabled**

During POST, BIOS will determine if the Floppy disk drive installed is 40 or 80 tracks. 360 K type is 40 tracks while 720K, 1.2M and 1.44M drive type as they are all 80 tracks.

**Enabled:** BIOS searches for floppy disk drive to determine if it is 40 or 80 tracks. Note that BIOS can not tell from 720K, 1.2M or 1.44M drive type as they are all 80 tracks.

**Disabled:** BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360K.

---

**Boot Up NumLock Status****Default: On**

This item defines if the keyboard Num Lock key is active when your system is started.

---

**Gate A20 Option****Default: Fast**

This option provides compatibility with older software written for the 286 processor. Leave this item at the default value Fast.

---

**Typematic Rate Setting****Default: Disabled**

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

---

**Typematic Rate (Chars/Sec)****Default: 6**

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

<u>6</u>	<u>6 characters per second</u>	<u>15</u>	<u>15 characters per second</u>
<u>8</u>	<u>8 characters per second</u>	<u>20</u>	<u>20 characters per second</u>
<u>10</u>	<u>10 characters per second</u>	<u>24</u>	<u>24 characters per second</u>
<u>12</u>	<u>12 characters per second</u>	<u>30</u>	<u>30 characters per second</u>

---

**Typematic Delay (Msec)****Default: 250**

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

<u>250</u>	<u>250 msec</u>
<u>500</u>	<u>500 msec</u>
<u>750</u>	<u>750 msec</u>
<u>1000</u>	<u>1000 msec</u>

---

**Security Option****Default: Setup**

If you have installed password protection, this item defines if the password is required at system start up, or if it is only required when a user tries to enter the setup utility.

---

**OS Select For DRAM > 64 MB****Default: Non-OS2**

This item is required if you have installed more than 64 NM of memory and you are running the OS/2 operating system. Otherwise, leave this item at the default Non-OS2.

---

**BIOS Write Protect****Default: Disabled**

This item allow users to protect the BIOS been written

---

**HDD S.M.A.R.T Capability****Default: Enabled**

S.M.A.R.T is an industry acronym for Self-monitoring, Analysis and Reporting Technology. If the documentation of your hard disk states that S.M.A.R.T. is supported, you can enable this item.

---

**Report No FDD For WIN 95****Default: No**

Set this item to Yes BIOS will report FDD to Win95. If in standard CMOS setup, set Drive A to none, and set this item to yes. Inside Win95, My Computer and File manager Disk(A:) will show Removable Disk (A:).

---

### **3.4 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 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.

---



installed in the system.

---

**System BIOS Cacheable****Default: Enabled**

Selecting *Enabled* allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

---

**Video BIOS Cacheable****Default: Enabled**

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.

---

**Memory Hole At 15M-16M****Default: Disabled**

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.

---

**Delayed Transaction****Default: Enabled**

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

---

**On-Chip Video Window Size****Default: 64MB**

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

---

**\* Onboard Display Cache Setting \***

Setting the onboard display cache timing..

---

**CAS# Latency****Default: 3**

Select the local memory clock periods.

---

**Paging Mode Control****Default: Open**

Select the paging mode control.

---

**RAS-to-CAS Override****Default: by CAS# LT**

Select the display cache clock periods control.

---

**RAS# Timing****Default: Fast**

This item controls RAS# active to Protegra, and refresh to RAS# active delay (in local memory clocks).

**RAS# Precharge Timing**

*Default:Fast*

This item controls RAS# precharge (in local memory clocks).

### 3.5 Integrated Peripherals

This option displays a list of items which **defines** the operation of some peripheral items on the system's input/output ports.

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Integrated Peripherals

OnChip Primary PCI IDE	Enabled	Item Help
OnChip Secondary PCI IDE	Enabled	
IDE 32-bit Transfer Mode	Enabled	Menu Level ➤ If your IDE hard drive supports block mode select Enabled for automatic detection of the optimal number of block read/write per sector the drive can support
IDE Primary Master PIO	Auto	
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	Enabled	
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	Nomal	
Onboard Parallel Port	378/IRQ7	
Parallel Port Mode	ECP+EPP	
EPP Mode Select	EPP1.9	
ECP Mode Use DMA	3	
PWRON After PWR-Fail	Off	
Game Port Address	201	
Midi Port Address	Disabled	
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** *Default: Enabled*

This setup item allows you to either enable or disable the primary/secondary controller. You might choose to disable the controller if you were to add higher performance or specialized controller..

---

**IDE Primary/Secondary Master/Slave PIO** *Default: Auto*

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

---

**IDE Primary/Secondary Master/Slave UDMA** *Default: Auto*

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.

---

**USB Controller** *Default: Enabled*

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

---

**USB Keyboard Support** *Default: Disabled*

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

---

**Init Display First** *Default: PCI Slot*

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

---

**AC97 Audio/Modem** *Default: Auto*

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

---

**IDE HDD Block Mode** *Default: Enabled*

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.

---

**POWER ON Function***Default: BUTTON ONLY*

The Power On Function item allows you to power on the system by pressing hot-keys. If you set this item to Hot Key, you can use the item Hot Key Power On to choose which hot keys are installed. If you set this item to Password, you can use the item KB Power On Password to choose which password are installed.

---

**Onboard FDC Controller***Default: Enabled*

This item will enable or disable the floppy disk controller.

---

**FDC Write Protect***Default: Disabled*

To enable/disable the write protection of floppy.

---

**Onboard Serial Port 1/Port 2***Default: 3F8/IRQ4*

Select an address and corresponding interrupt for the first and second serial ports. Note : Set to Auto is not recommended.

---

**UART Mode Select***Default: Normal*

This lets you select the Infrared mode. Choices are Standard, HPIR, and ASKIR. If you choose BPIR or ASKIR mode, the screen will show another two lines to let you choose 'IR Function Duplex' (Full or Half) and " RxD TxD Active" (Hi Lo; Lo Hi; Hi Hi-,Lo Lo).

---

**Onboard Parallel Port***Default: 378/IRQ7*

This item lets you disable the built-in parallel port, or enable it by assigning an I/O address and an Interrupt Request Line (IRQ).

---

**EPP Mode Select***Default: EPP1.9*

Select EPP mode for the port.

---

**ECP Mode Use DMA***Default: 3*

Select a DMA channel for the port. Choices are 3, 1.

## 3.6 Power Management Setup

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Power Management Setup

ACPI function	Enabled	Item Help
ACPI Suspend	S1(POS)	
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	Disabled	
HDD Power Down	Disabled	
Soft-Off by PWRBTN	Instant-off	
Wake-up by PCI Card	Disabled	
Power on by Ring	Disabled	
CPU THRM-Throttling	62.5%	
Resume by Alarm	Disable	
Date(of Month) Alarm	0	
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		

### ACPI function

*Default: Enabled*

When Enabled, this function can save the power of your system.

### Power Management

*Default: User Define*

This category allows you to select the type (or degree) of power saving and is directly related to the following modes : Doze; Standby; Suspend; HDD

Power Down.

Min.Power Saving	Minimum power management.    Doze =1 hr.;
Max. Power Saving	Standby= I hr.; Suspend= I hr.; HDD Power <u>Down=15min</u>
	Maximum power management only
	available for SL CPU.Doze=1min.;
	Standby=1min.;Suspend=1 min.;HDD <u>Power Down= 1 min</u>

User Allows you to set each mode individually.  
Defined When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 to 15min. and disable

If you would like to use Software Power-off Control function, you cannot choose " Disabled "here, and should select "Yes" in PM Control by APM.

---

**Video Off Method**

*Default: DPMS*

This determines the manner in which the monitor is blanked.

V/H SYNC+ Blank	This selection will cause the system to turn off the vertical and horizontal sync. ports and write blanks to the <b>video buffer</b>
Blank Screen	This option only writes blanks to the <b>video buffer</b>
DPMS	Initial display power management <b>signaling</b>

---

**Video Off In Suspend**

*Default: Yes*

This determines the manner in which the monitor is blanked.

---

**Suspend Type**

*Default: Stop Grant*

Select the Suspend Type.

The choice: PWRON Suspend, Stop Grant.

---

**MODEM Use IRQ**

*Default: 3*

This item determines the IRQ in which the MODEM can be used.

The choice: 3,4,5,7,9, 10,11,N/A.

---

**Suspend Mode**

*Default: Disable*

If you have selected User Define for the Power Management item, you can set this item to a selection of timeouts from 20 seconds to 40 minutes.

---

**HDD Power Down**

*Default: Disable*

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

---

**Soft-off by PWR-BTTN**

*Default: Instant-off*

Under ACPI (advanced configuration and power interface) the system can be turned off mechanically (by the power button) or it can undergo a software power off. If the system has been turned off by software, the system can be resumed by a LAN, MODEM or ALARM wake up signal. This item allows you to define a software power off using the power button. If the value is set to Instant-Off, the power button will automatically cause a software power

off. If the value is set to Delay 4 Sec. the power button must be held down for a full four seconds to cause a software power off.

---

**PowerOn by Ring**

*Default: Disabled*

Enabled: when system in suspend mode, it can be wake up by modem.

Disabled: it cannot be wake up by modem.

---

**Wake Up On LAN**

*Default: Enabled*

Enabled: If you have installed LDCM administrator software, and any client side is powered off, you can wake up by LAN through the LDCM mechanism.

---

**Resume by Alarm**

*Default: Disabled*

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

---

**Reload Global Timer Events**

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

IRQ [3 -7, 9-15], NM;

Primary IDE 0;

Primary IDE 1;

Secondary IDEO;

Secondary IDEL;

FDD,COM,LPT Port

PCI PIRQ[A-D]#



## BIW1Aseries

---

requires a special IRQ and DMA, you can modify the list of assignments. Change the values of the IRQ and DMA that are required to Legacy ISA.

---

**IRQ 3/4/5/7/9/10/11/12/14/15**

**DMA 0/1/3/5/6/7 (BIW1A-I Only)**

This item allows you to determine the IRQ/DMA assigned to the ISA bus and is not available to any PCI slot. Choices are Legacy ISA and PCI/ISA PnP.

---

**Assign IRQ For VGA**

*Default: Enabled*

To assign a IRQ to VGA card if you enable this item.

---

**Assign IRQ For USB**

*Default: Enabled*

To assign a IRQ to USB Ports if you enable this item.

## 3.8 PC Health Status

This option displays a list of PC health status which are detected by on board sensor chips.

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Frequency/Voltage Control

CPU Warning Temperature	Disabled	Item Help	
Current System Temp.	40°C/104°F		
Current CPU1 Temperature	40°C/104°F	Menu Level    ➤	
Current CPUFAN1 Speed	5037 RPM		
Current CPUFAN2 Speed	0 RPM		
Current CPUFAN3 Speed	0 RPM		
IN0(V)	2.01 V		
IN2(V)	2.48 V		
IN2(V)	3.42 V		
+ 5 V	4.99 V		
+12 V	11.97 V		
-12 V	-11.86 V		
- 5 V	- 5.09 V		
VBAT(V)	3.22 V		
5VSB(V)	5.45 V		
Shutdown Temperature	60°C/140°F		
↑↓←→ Move    Enter: Select    +/-/PU/PD: Value    F10:Save    ESC: Exit    F1:General Help F5:Previous Values    F6:Fail-safe defaults    F7:Optimized Defaults			

---

**CPU Warning Temperature**

*Default: Disabled*

When this item is enabled, we can set the CPU warning temperature . If the CPU temperature is higher than the setting temperature, the system will beep.

---

**Current System Temp.**

This field displays the *current* system temperature.

---

**Current CPU1 Temperature**

It shows the current CPU temperature.

---

**Current CPUFAN1 Speed**

**Current CPUFAN2 Speed**

**Current CPUFAN3 Speed**

It shows the running speed of the system fan, Chassis fan and power fan. The value will be changing when the system is running. If you do not install the fan, the value will show 0.

---

**Shutdown Temperature**

*Default: 60°C/140°F*

When the system temperature up to 60°C/140°F, it will be shutdown.

### 3.9 Frequency/Voltage Control

CMOS Setup Utility – Copyright © 1984-1998 Award Software  
Frequency/Voltage Control

Auto Detect DIMM/PCI CLK	Enabled	Item Help
Spread Spectrum	Disabled	
CPU/SDRAM/PCI Clock	Default	
CPU Ratio	X 3	
		Menu Level >
↑↓←→ Move Enter: Select +/-/PU/PD: Value F10:Save ESC: Exit F1:General Help F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults		

---

**Auto Detect DIMM/PCI Clk**

*Default: Enabled*

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

---

**Spread Spectrum Modulated**

*Default: Disabled*

Enable / Disable this item the BIOS will Enable / Disable the clock generator spread spectrum .

---

**CPU/SDRAM/PCI Clock**

*Default: Default*

This item allows you to select the CPU/SDRam/PCI frequency. We recommend that you leave this item at the default value.

---

**CPU Clock Ratio**

*Default: X 3*

This item allows you to select the CPU frequency.

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

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

Load Fail-Safe Defaults (Y/N) ?

Pressing ‘ Y ’ loads the BIOS default values for the most stable, minimal-performance system operations.

### **3.11 Load Optimized Defaults**

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

Load Optimized Defaults (Y/N) ?

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

### **3.12 Supervisor/User Password Setting**

These two items can be used to install a Supervisor Password and a User Password. If you log on as Supervisor, you have full access to the system, and you can restrict the permissions granted to someone who logs on as User. For example, a Supervisor can restrict a User from entering the setup utility.

To install a Supervisor or User Password, follow these steps:

1. Highlight the item Supervisor/User password on the main menu and press **Enter**.
2. The password dialog box will appear.
3. If you are installing a new password, carefully type in the password. You cannot use more than 8 characters or numbers. The password will differentiate between upper case and lower characters. Press **Enter** after you have typed in the password. If you are deleting a password that is already installed just press **Enter** when the password dialog box appears.
4. The system will ask you to confirm the new password by asking you to type it in a second time, Carefully type the password again and press **Enter**, or just press **Enter** if you are deleting a password that is already installed.
5. If you type the password correctly, the password will be installed.

### ***3.13 Save and Exit Setup Option***

This allows you to save the new setting values in the CMOS memory and continue with the booting process. Select what you want to do, press <Enter>.

### ***3.14 Exit Without Saving Option***

This allows you to exit the BIOS setup utility without recording any new values or changing old ones.

Highlight this item and press **Enter** to save the change that you have made in the setup utility and exit the setup program. When the *Save and Exit* dialog box appears, press **Y** to discard changes and exit, or press **N** to return to the setup main menu.

# Chapter 4

## Software Setup

The support software for this motherboard may be supplied on a CD-Title, or it may be supplied on diskettes. All the support programs are stored in separate folders, so you can find the program you need easily enough. The support software contains the following programs:

- IDE Bus Master drivers for Win 98/Win 95/NT.
- Intel 810 VGA driver.
- ADI 1881 Audio driver.
- PC-Cillin 98 Software.

*Note: Please refer the PC-Cillin 98 installation guide for installing the PC-Cillin 98.*

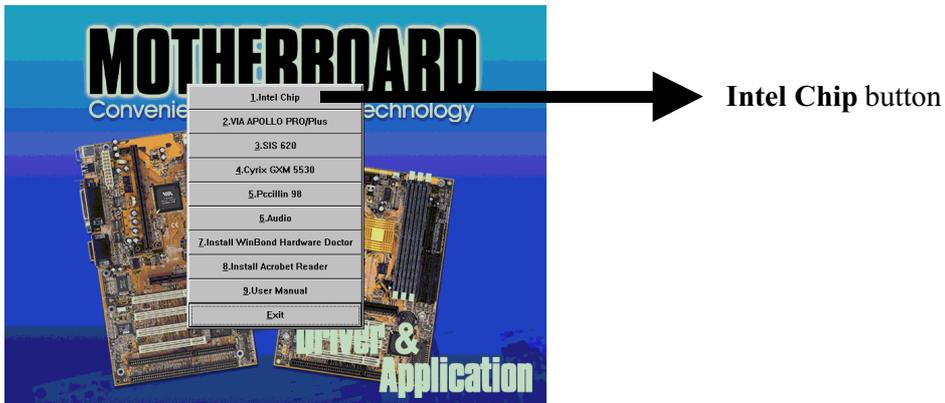
### **4.1 Installing the IDE Bus Master Driver**

After you have finished the hardware setup, you have to install the IDE Bus Master software of the motherboard, then you can enjoy the advance Motherboard.

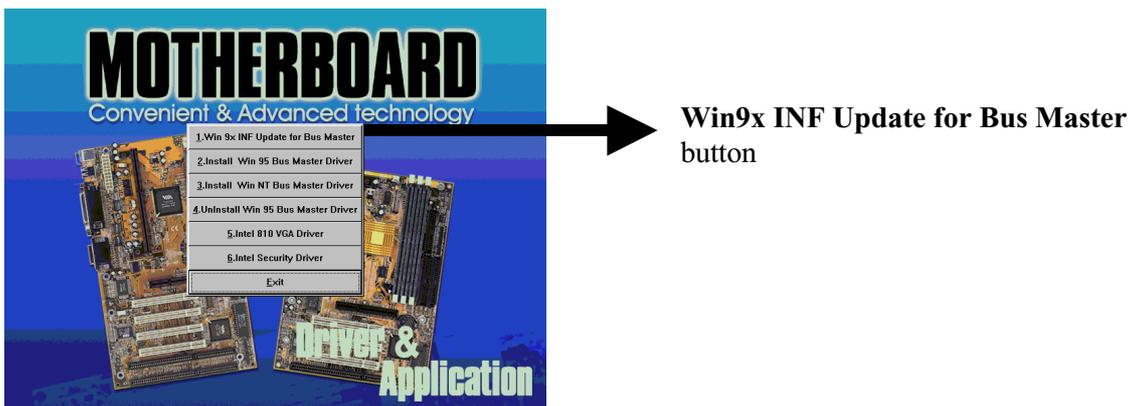
According the follow steps for IDE Bus Master driver installation:

1. Turn on your PC then put the “**CD title**” into your CD-ROM drive.  
(Please make sure it's under Win98/95 mode)
2. The CD title will be auto-run. If not, please click the “**start**” button and select “**Run**” item. Then type-> **D:\setup** (D is assigned your CD-ROM Device)

3. Press “Intel Chip” button.



4. Press “Win9x INF Update for Bus Master” and follow the instructions to this software. Then Re-boot your PC.



5. Click **Next** when the Welcome screen appears.

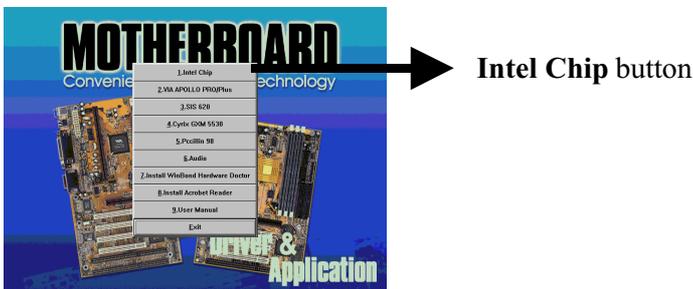


6. Follow the instructions to complete the software installation, then re-boot your PC.

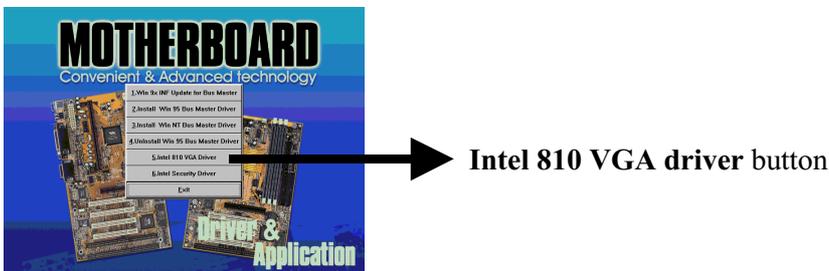
## **4.2 Installing the Intel 810 VGA Driver**

According the follow steps for Intel 810 graphics driver installation:

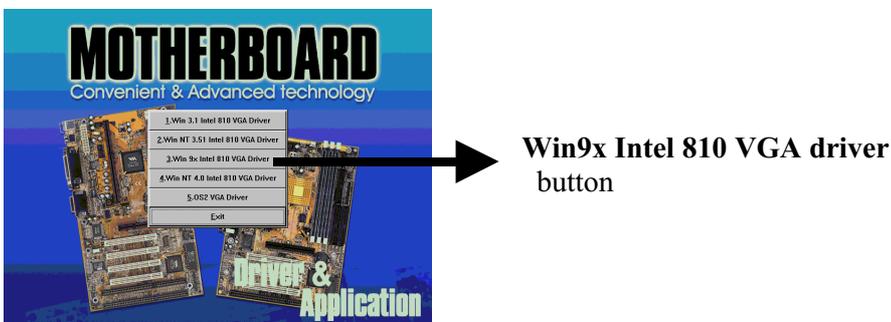
1. Turn on your PC then put the “**CD title**” into your CD-ROM drive. (Please make sure it’s under Win98/95 mode)
2. The CD title will be auto-run. If not, please click the “**start**” button and select “**Run**” item. Then type-> **D:\setup** (D is assigned your CD-ROM Device)
3. Press “**Intel Chip**” button.



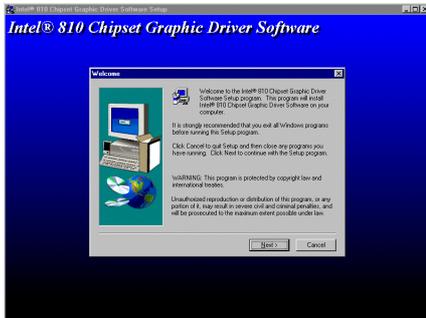
4. Press “**Intel 810 VGA driver**” button.



5. Press “**Win9x Intel 810 VGA driver**” button.



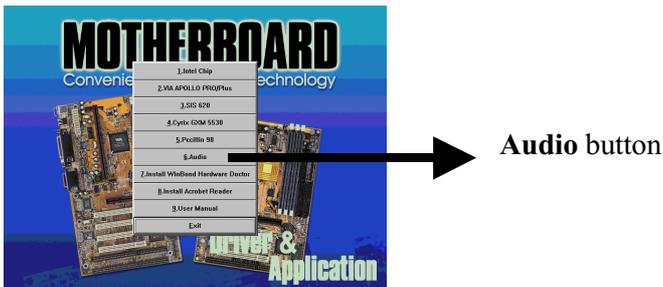
6. Follow the instructions to complete the software installation, then re-boot your PC.



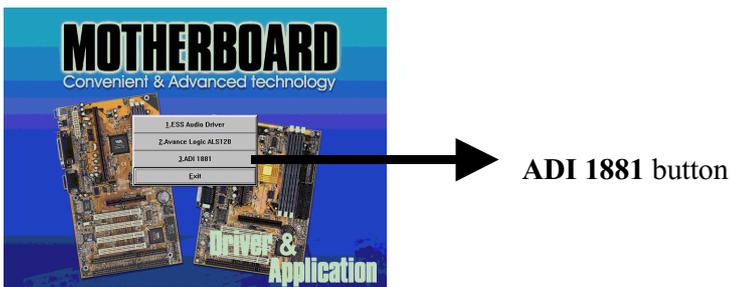
### **4.3 Installing the ADI 1881 Audio Driver**

According the follow steps for ADI 1881 audio driver installation:

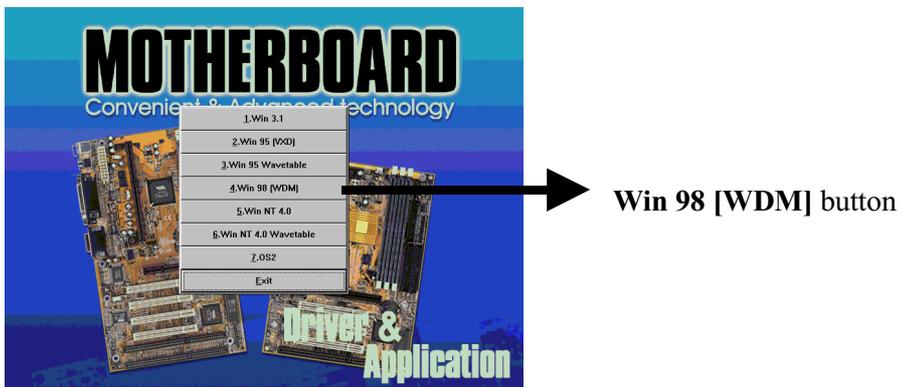
1. Turn on your PC then put the “**CD title**” into your CD-ROM drive. (Please make sure it’s under Win98/95 mode)
2. The CD title will be auto-run. If not, please click the “**start**” button and select “**Run**” item. Then type-> **D:\setup** (D is assigned your CD-ROM Device)
3. Press “**Audio**” button.



4. Press “**ADI 1881**” button.



5. Press “Win 98 [WDM]” button.



***Note: If your O.S. is Win95, please press “Win95 [Vxd] & Win95 Wavetable” button to install the audio driver.***

6. Follow the instructions to complete the software installation, then re-boot your PC.





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