

# 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

Congratulations on purchasing the BVD2A motherboard. We are certain it will provide you with many years of outstanding and reliable performance.

Based on the VIA Pro-Plus 133A chipset, the **BVD2A** comes with a Socket 370 interface and supports Intel Celeron PPGA and Intel Coppermine FCPGA processors operating at speeds ranging from 300 to 750MHz . An ATX-sized board, the **BVD2A** measures 210mm by 305mm and includes AGP, ISA and PCI expansion slots, as well as three DIMM sockets for adding up to 768MB of memory.

The **BVD2A**'s clock generator can operate at speeds of 66, 100 or 133 MHz, and up to 256MB of RAM may be added to each of the board's three DIMM sockets. In addition, the **BVD2A** comes with one AGP, two ISA and five PCI slots for the addition of devices such as graphics adapters, modems and sound cards. One ISA and one PCI slot are shared, meaning you may connect either two ISA and four PCI cards or one ISA and five PCI cards.

The board has a 2MB Award PnP BIOS with enhanced ACPI features. Not only does the BIOS support 120MB ATAPI floppy disk and ZIP disk drives, it also allows multiple boots from a wide selection of IDE, SCSI, CD-ROM and FDD drives. The Trend ChipAway AntiVirus protection built into the BIOS helps ensure that your system remains virus-free. The BIOS also comes with system heat and fan speed detectors, and can be configured to generate a warning if user-defined fan speeds or temperatures are exceeded.

Other advanced features include keyboard and mouse power-on, a wake-on-LAN header, wake-up alarm support, HDD S.M.A.R.T. error detection, and PC' 99-compliant color-coded connectors. The BVD2A comes with one parallel port, two serial ports, two USB ports, a PS/2 mouse port, and a PS/2 keyboard port.

The **BVD2A** motherboard is a high-performance device that offers full functionality at a low cost. Its ease of use and reliability will become evident from the very start.

### 1.1 ABOUT THE MANUAL

This manual contains the following information:

- CH1. Motherboard Feature Introduction – Introduces the features of the **BVD2A** board, and provides a checklist of items that are shipped with the package.
- CH2. Setup guide– Guidelines on how to install the motherboard and how to get your system up and running.
- CH3. Award BIOS Setup – Explanation of the BIOS setup items, for configuring your motherboard for optimum performance.
- CH4. Software Setup – How to install the software drivers and support programs that are provided with this motherboard.

### 1.2 SPECIFICATIONS

<b>System Chipset</b>	VIA Apollo Pro-Plus 133A (VT82C694X and VT82C596B) with AGP solution.
<b>Processor</b>	Intel Socket370 PPGA and FCPGA at 300MHz ~ 750MHz
<b>Bus</b>	AGP/PCI/ISA

## BVD2A

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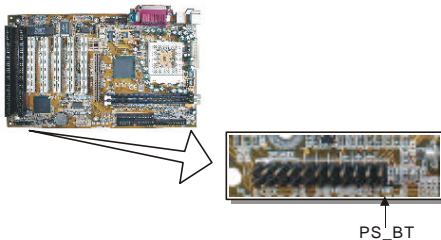
<b>Architecture</b>	
<b>Clock Generator</b>	66, 100, up to 133Mhz
<b>DRAM Modules</b>	168 pin DIMMs x 3, max. 256MB each Supports total of 8MB to 768MB SDRAM.
<b>BIOS</b>	2MB Award PnP BIOS with enhanced ACPI feature for PC98 compliance. Supports 120MB ATAPI floppy disk. Supports ZIP disk drive. Supports multi-boot from IDE, SCSI, CD-ROM and FDD. Supports software clock control. Supports Trend™ ChipAway AntiVirus. Supports HDD S.M.A.R.T.
<b>On Board I/O</b>	1 Floppy port (up to 2.88MB, 3 mode floppy supported & LS-120). 2 Serial ports, 1 Parallel port (SPP/EPP/ECP). 2 USB, 1 PS/2 mouse, 1 PS/2 keyboard. 1 IrDA.
<b>On Board IDE Port</b>	Dual Ultra DMA 33/66 IDE ports Supports ATAPI IDE CD-ROM & LS-120.
<b>Expansion slot</b>	1 x 64-bit AGP slot. Supports AGP 4X Mode 5 x 32-bit PCI slots. (5 Master, 1 Share) 2 x 16-bit ISA slots. (1 Share)
<b>I/O Chip</b>	Winbond super I/O W83977TF-AW.
<b>Other Feature</b>	Supports keyboard & mouse power on feature with ATX power. Supports Wake-up by Alarm Wake-up On LAN header.
<b>Board Size</b>	ATX form factor Size : 305mm x 210mm (12" x 8.26")

## 1.3 POWER OFF CONTROL SOFTWARE

The motherboard design supports the software power off Control feature through the SMI code in the BIOS under a Windows9x operating system environment. This is an ATX form factor feature, so you should use ATX power supply in order to enable it.

First, connect the power switch cable (provided by the ATX/AT case Supplier) to the connector [ PWBT ] on the motherboard (Please refer to the illustration below). 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:** Refer to “Chapter 3: Award BIOS Setup” for more information on the BIOS Setup



In Windows 9x, when using the “SHUT DOWN” function, the computer will switch off automatically and put the PC in a suspend mode. This will be indicated by a blinking power light indicator. To restart the system, simply press the Power Button.

## **1.4 PACKAGING CHECK LIST**

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

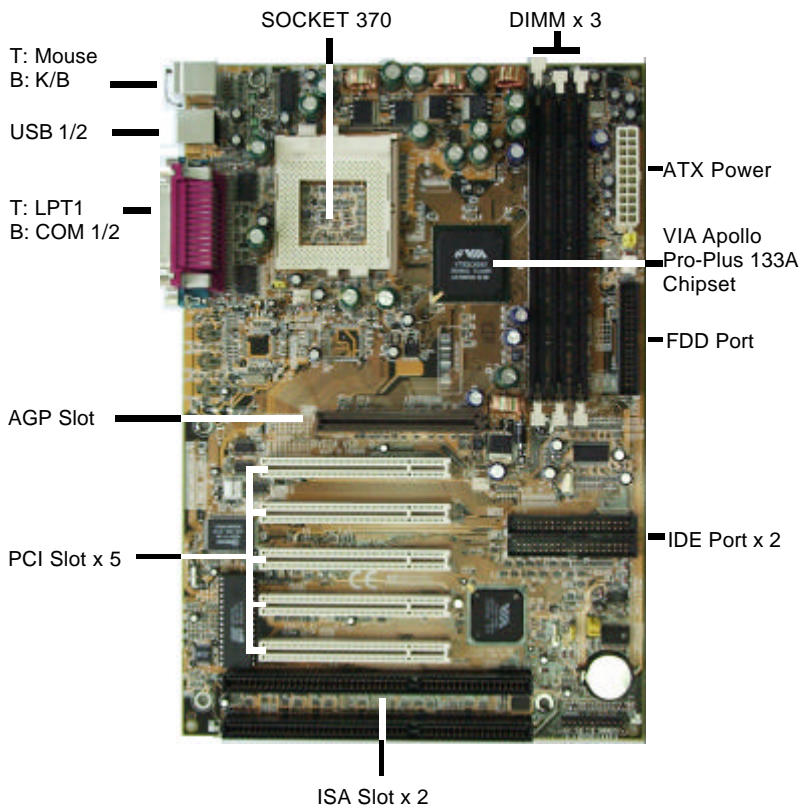
The motherboard package list contains:

<b>Q'TY</b>	<b>Description</b>	
1	Motherboard	: With VIA Apollo Pro-Plus 133A chipset
1	Driver	: CD-Title <ul style="list-style-type: none"><li>• PC-Cillin Software</li><li>• Motherboard Bus master Driver</li></ul>
1	Cable	: IDE Cable
1	Cable	: Floppy Cable
1	Manual	: User's manual

# Chapter 2

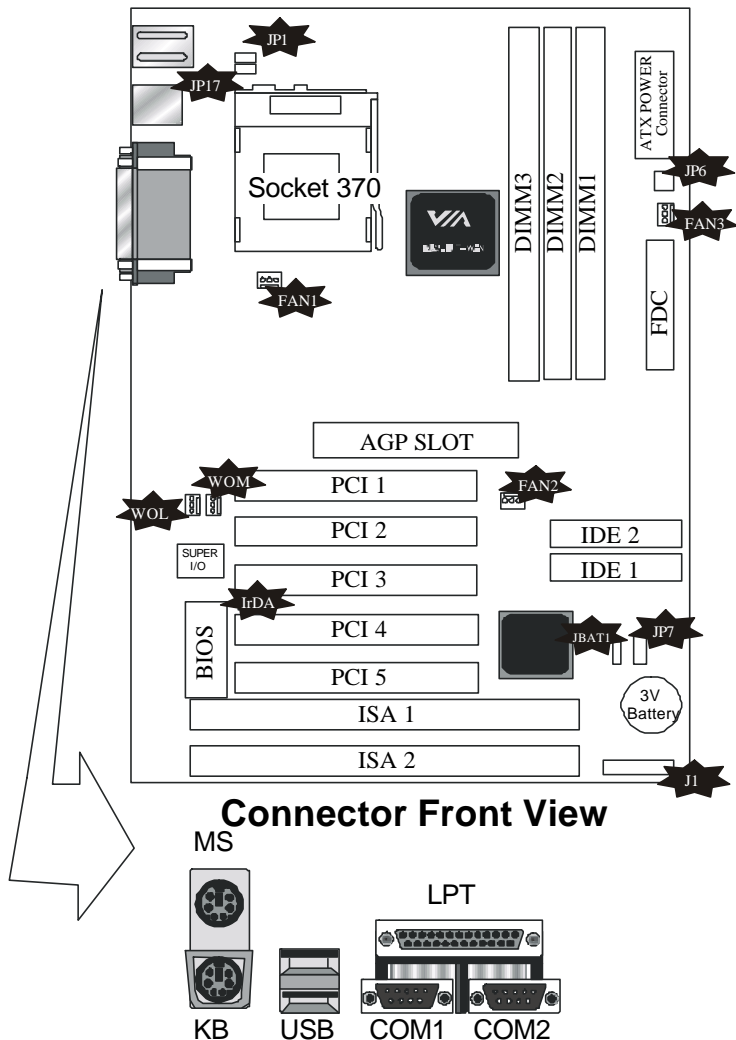
## Setup Guide

### 2.1 Motherboard Layout





## 2.2 Connector & Jumper Reference



## 2.3 The setup steps

refer to the following steps to setup your computer:

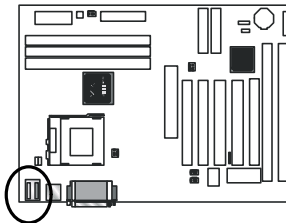
- I. Refer to the Jumper Setup section to set up the jumpers appropriately.
- II. Install the DIMM modules on the motherboard; be sure to install them correctly.
- III. Install the CPU on the motherboard (please refer to the CPU installation manual).
- IV. Choose a case and install the motherboard into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

### 2.3-1 Jumper & Connector Setting

#### PS/2 Keyboard Connector

Use this connector to connect a PS/2 Keyboard.

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



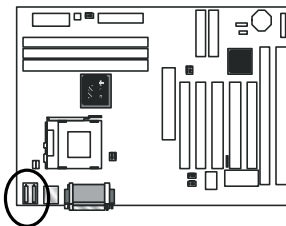
## BVD2A

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### PS/2 Mouse Connector

Use this connector to connect a PS/2 Mouse.

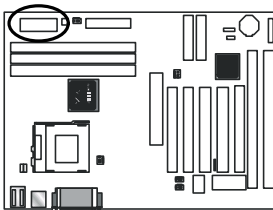
Pin	Description	Pin	Description
1	Mouse Data	2,6	N.C.
3	Ground	4	+5V
5	Mouse Clock		



### ATX Power Supply Connector

This connector allows the motherboard to draw power from the ATX power supply. We recommend using an ATX power supply with a minimum capacity of 250 watt.

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		



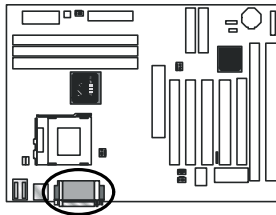
## BVD2A

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### Printer Connector

This Connector is used for connecting a printer or for transferring data.

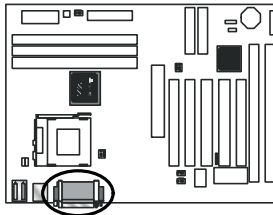
Pin	Signal Name	Pin	Signal Name
1	Strobe-	14	AFD
2	Data Bit 0	15	Error
3	Data Bit 1	16	INIT
4	Data Bit 2	17	SLCTIN
5	Data Bit 3	18	GND
6	Data Bit 4	19	GND
7	Data Bit 5	20	GND
8	Data Bit 6	21	GND
9	Data Bit 7	22	GND
10	ACK	23	GND
11	Busy	24	GND
12	PE	25	GND
13	SLCT	26	GND



## COM1, COM2 –Serial Connectors

These connectors are used for connecting a mouse or other serial devices, and are also used to transfer data between peripheral devices.

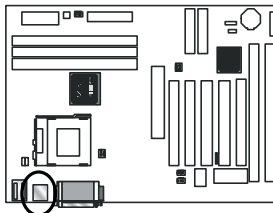
Pin	Signal Name	Pin	Signal Name
1	DCD	6	DSR
2	SIN	7	RTS
3	SOUT	8	CTS
4	DTR	9	RI
5	GND	10	NC



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

These connectors are commonly used for transferring data between the computer and peripheral devices.

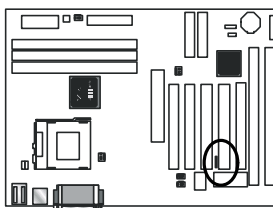
USB1 Pin	Signal Name	USB2 Pin	Signal Name
1	USB VCC 0	1	USB VCC 1
2	USB Data -	2	USB Data -
3	USB Data +	3	USB Data +
4	USB GND 0	4	USB GND 1
5	GND	5	GND



## IrDA - Infrared Connector: IR

This connector is used to connect an infrared device.

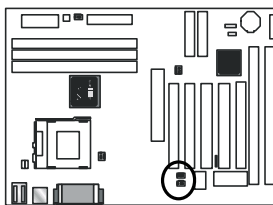
Pin	Signal Name
1	VCC
2	-
3	IRRX
4	GND
5	IRTX



## WOL – Wake-up On LAN Connector

This connector is used to connect an add-in NIC (Network Interface Card). When connected and enabled in the BIOS setup, this function can be used for remotely managing a system on a network. When the LAN controller detects activity on the network card, it will consequently wake up the system.

Pin	Signal Name
1	5VSB
2	GND
3	LID



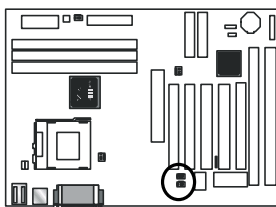
## WOM – Wake-up On Modem Connector

## BVD2A

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This connector is used to connect an add-in Modem Card. When connected and enabled in the BIOS setup, this function can be used for remotely managing a system on a network. When the Modem controller detects activity on the Modem card, it will consequently wake up the system.

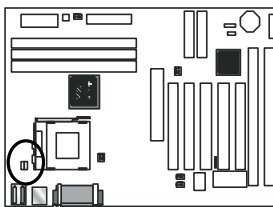
Pin	Signal Name
1	5VSB
2	GND
3	LID



### JP1 & JP17- Select Processor

These connectors are used to select the type of processor you are about to use with this motherboard, this board can accept with both Intel PGA and FCPGA, and Cyrix Joshua processors.

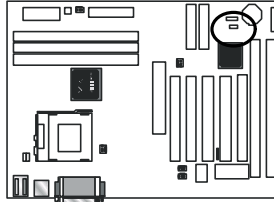
Pin	JP1	JP17
Joshua: 1-2	Short	Short
Intel: 2-3	Short	Short



## JBAT1 – CMOS Clear

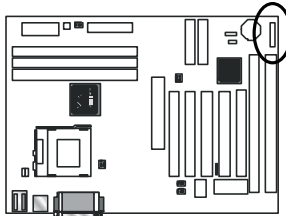
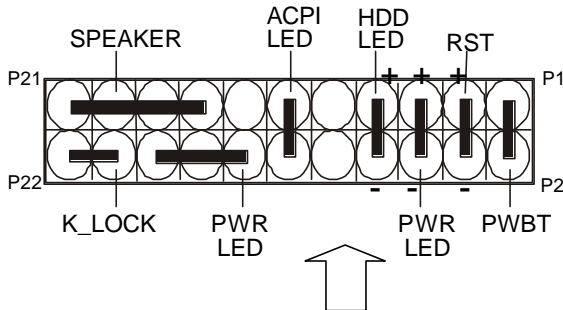
This jumper can be used to clear the current data stored in the CMOS memory.

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



## 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, Reset. .etc. Use the table below to make the connections.

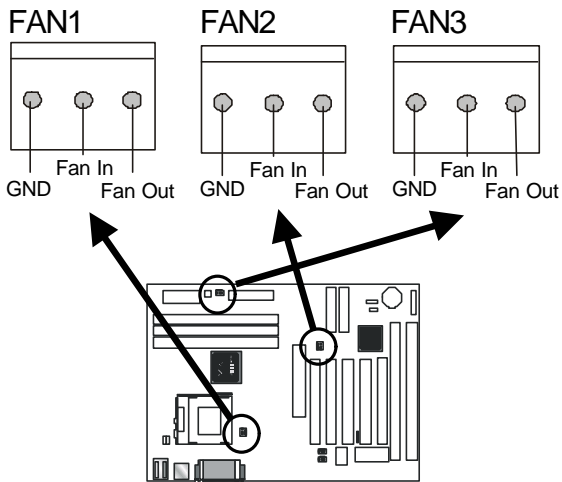




Pin	Name	Description
15,17,19,21	SPEAKER	Case speaker
20,22	K-LOCK	Keyboard Lock
14,16,18	PWR LED	Power LED
11,12	ACPI LED	ACPI LED
9,10	Reserved	Reserved
7,8	HDD LED	Hard Disk LED
5,6	PWR LED	Power LED
3,4	RST	Reset
1,2	PWBT	Power Button

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

These connectors allow the fans of the CPU and the system case to draw 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, 100MHz, and 133 MHz, but not all Intel Pentium® CPUs can support all frequencies. Please refer to your CPU specifications before setting the bus speed on your motherboard.

The BVD2A will auto-detect your CPU type without your having to set any jumpers. You just need to install your CPU and your system will help you to find the CPU type.

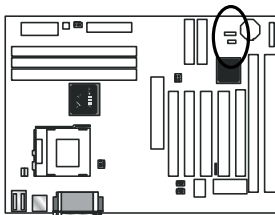
The clock frequency is 66 by default. But you can change the frequency in the BIOS Setup; refer to 3.3 –Chipset Features in Chapter 3. This means that even if your Intel Pentium® CPU doesn't support an external bus speed of 100MHz, you can still set your motherboard's external bus speed to 100MHz.

If you want to change the CPU ratio and clock settings, you can also use the on board jumpers to do it. Refer to the list below — CPU TYPE SELECTION LIST.

**Note:** If you want to use the onboard jumpers to change the CPU ratio and clock settings, make sure the CPU Host/SDRAM clock setting in the BIOS setup is “Default” and the CPU type you are about to install is a non-fixing CPU (refer your CPU specifications for more information).

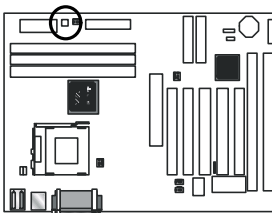
## JP7 - CPU RATIO SELECTION LIST

RATIO	1-1	1-2	1-3	1-4
3.5	Short	Open	Open	Short
4.0	Short	Short	Short	Open
4.5	Short	Open	Short	Open
5.0	Short	Short	Open	Open
5.5	Short	Open	Open	Open
6.0	Open	Short	Short	Short
6.5	Open	Open	Short	Short
7.0	Open	Short	Open	Short
7.5	Open	Open	Open	Short
8.0	Open	Short	Short	Open



## JP6 - BUS SPEED SETTING

CLOCK	1-2	3-4
Auto	Short	Short
100 MHz	Open	Short
133 MHz	Short	Open



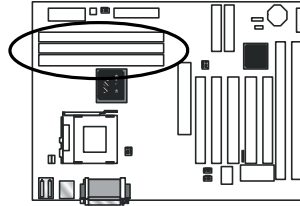
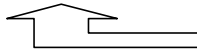
## 2.3-2 Memory installation

No jumper changes are necessary for DRAM setting; the system BIOS will check DRAM type and size automatically. This motherboard contains 3 168-pin DIMM sockets (DIMM1, DIMM2, DIMM3). The motherboard has a table-free (or auto-bank) feature; memory can be installed into any free DIMM bank. The three DIMM Sockets permit system memory expansion from 8MB to 768MB. Each bank provides a 64-bit wide data path. You can install 133MHz or 100MHz 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

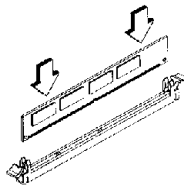
already installed. In some cases, there may be a mix of module types. You can confirm this by checking the configuration screen that appears while the computer is starting up. Press the pause key to temporarily interrupt the start-up messages so that you have more time to read the screen. When you're done, press any key to resume. Remove the lowest performance and smallest size modules and replace them with the upgrades.

168-pin DIMM Module



### How to Install DIMM Modules on Motherboard

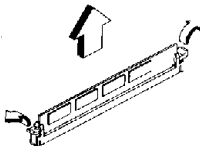
1. The SDRAM sockets are keyed with notches and the DIMMs are keyed with cut-outs so that they cannot be installed incorrectly. Check that the cut-outs on the DIMM edge connector match the notches in the SDRAM socket. In other words, before inserting the DIMM, make sure the pin1 of the DIMM matches with 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 on either side of the socket will be levered upwards and latched on the edges of the DIMM when installed correctly.



Install DIMM

**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.



Remove DIMM

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

<b>DIMM1</b>	<b>DIMM2</b>	<b>DIMM3</b>	<b>TOTAL</b>
8MB	---	---	8MBytes
---	8MB	---	8MBytes
---	---	8MB	8MBytes
8MB	8MB	---	16MBytes
8MB	---	8MB	16MBytes
16MB	---	---	16MBytes
---	---	16MB	16MBytes
8MB	8MB	8MB	24MBytes
16MB	8MB	---	24MBytes
16MB	---	16MB	32MBytes
32MB	---	---	32MBytes
8MB	16MB	16MB	40MBytes
32MB	32MB	---	64MBytes
64MB	---	---	64MBytes
64MB	64MB	---	128MBytes
:	:	:	:
256MB	256MB	256MB	768MBytes

DIMM Type: 3.3V, unbuffered or registered, 64/72-bit Synchronous DRAM with SPD. Supports Single/Double-side 16/32/64/128/256 Mbytes module size with parity or non-parity.

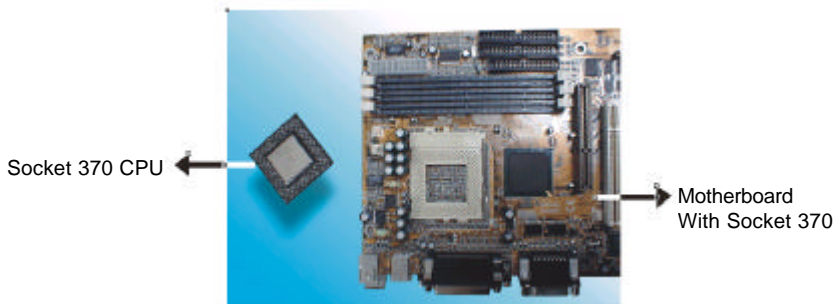
## 2.3-3 How to install the CPU

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.

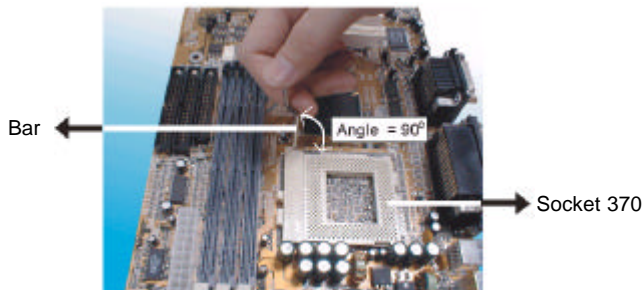
### Referential Steps of installing the Socket 370 CPU

This section is only for CPU installation, the motherboard in the picture is not the **BVD2A**. Regarding the heat-sink, please refer to the instructions supplied.

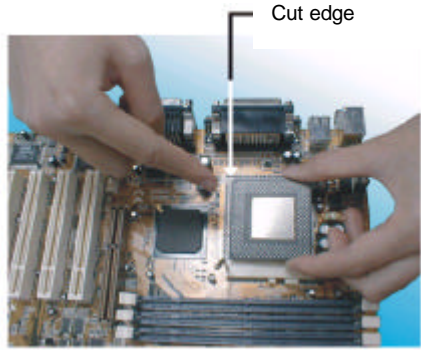
1. Review the CPU and motherboard.



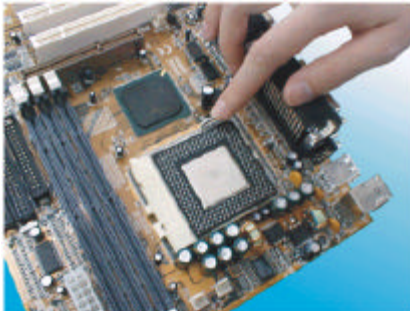
2. Pull the lever sideways away from the socket then raise the lever up to a 90-degree angle.



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 **BVD2A** 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 **BVD2A** 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 an Interface Card***

This section explains how to install new interface cards on your motherboard. It covers installing ISA cards, PCI cards and AGP cards. There are seven expansion card slots on the motherboard, one AGP slot, five PCI slots and two ISA slots. 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.

### **AGP Card and Slot**

The AGP (Accelerated Graphics Port) slot is for an AGP display card. With the Optimum Settings loaded in the BIOS Setup Utility the AGP has a default memory aperture of 4MB, expandable to 256MB.

### **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 9x, 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**

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.

## 2.3-1 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.

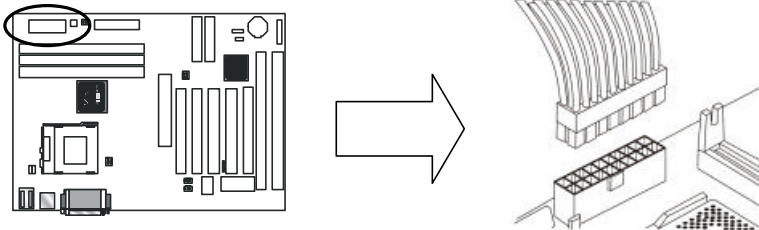


**Caution:** Make sure that the power supply is OFF before connecting or disconnecting any bracket or cable.

### 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.

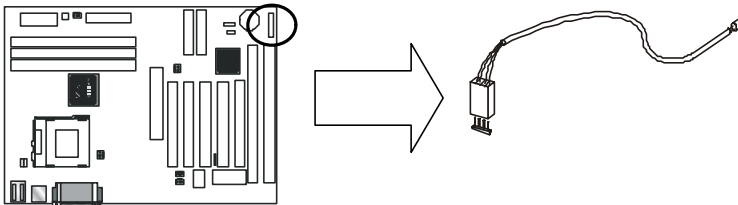
Plug in the power cable to the onboard power connector.



### Front Panel Switch and LED Cables

Normally, the front-panel housing has a power switch, power LED, reset switch, suspend switch, speaker, key lock 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.

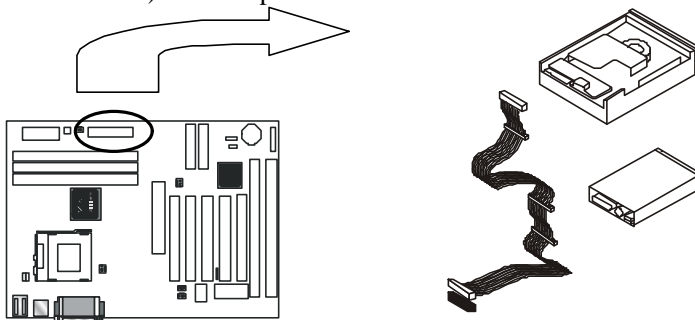


## Floppy Cable

The floppy cable for floppy disk drives is a 34-pin flat cable with 3 connectors classified as follows:

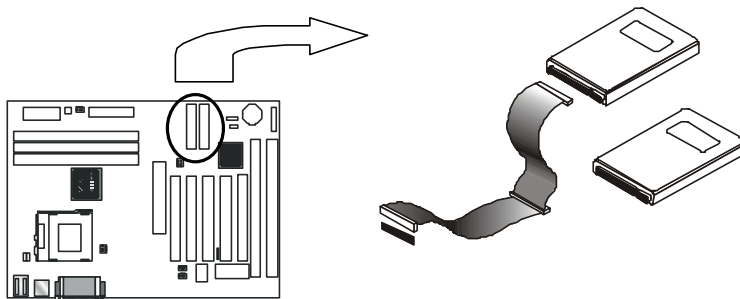
1. Female header (For floppy connector onboard)
2. Female header and Edge connector (For driver B)
3. Female header and Edge connector (For driver A)

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; a primary IDE and a secondary IDE connector. Each channel supports two IDE devices via a 40-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 makes 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 properly. 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 prompts 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 system startup.

### 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 that 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 indicates which option is currently selected. You can use the cursor arrow keys to move the highlight to other options.

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When an option is highlighted, you can execute the option by pressing the **Enter** key. Some options lead to dialog boxes which ask you to verify 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 DEL TO ENTER BIOS SETUP DURING POST (POWER ON SELF TEST)”**

#### **Control Keys**

Up Arrow	Move to previous item
Down Arrow	Move to next item
Left Arrow	Move to the item on the left
Right Arrow	Move to the item on the right
Esc Key	Main Menu: Quit without saving changes to CMOS Status Page setup menu and Option Page Setup Menu: Exit current page and return to Main Menu
PgUp Key	Increase the numeric value or make changes
PgDn Key	Decrease the numeric value or make changes
F1 Key	General help, only for Status Page Setup Menu and Option Setup Menu
F2 Key	Change color to one of 16 available colors
F3 Key	Calendar, only for Status Page Setup Menu
F4 Key	Reserved
F5 Key	Restore the previous CMOS value from BIOS, only for Option Page Setup Menu
F6 Key	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
F7 Key	Load the default value for the highlighted option
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 the Award BIOS CMOS Setup Utility, the Main Menu appears. Use the arrow keys to select among the items and press the **Enter** key to accept the current value or enter a **sub-menu**.

Some options lead to a table 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.

When you are in the main menu, you can exit the utility by pressing the **Escape** key. You can save the current selections and exit the utility by pressing the F10 key. You can change the color scheme of the utility by pressing the F2 key **while** holding down the **Shift** key. When you are in one of the options that display a dialog box, you can return to the main menu by pressing the **Escape** key.

When you are in one of the options that display a table of items, you can return to the main menu by pressing the **Escape** key. For some items, you can display a help message by pressing the F1 key. You can change the color scheme of the utility by pressing the F2 key while holding down the **Shift** key. You can press F5 to discard any changes you have made and return all items to the last saved values. You can press F6 to load the displayed items with a list of fail-safe default values. You can press F7 to load the displayed items with a high-performance list of default values.

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<ul style="list-style-type: none"><li>▶ Standard CMOS Features</li><li>▶ Advanced BIOS Features</li><li>▶ Advanced Chipset Features</li><li>▶ Integrated Peripherals</li><li>▶ Power Management Setup</li><li>▶ PnP/PCI Configurations</li><li>▶ PC Health Status</li></ul>	<ul style="list-style-type: none"><li>▶ 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...	

---

### Standard CMOS Features

This setup page includes information on the basic features of your system.

---

### Advanced BIOS Features

This setup page includes information on some of the more enhanced features of your system.

---

### Advanced Chipset Features

This setup page includes information on some of the special chipset features.

---

### Integrated Peripherals

This setup page includes information on some of the peripheral items and on programmed Input/Output features.

---

### Power Management Setup

This setup page provides power management functions for *Green* products, allowing user defined power saving timeouts for components and peripherals.

---

### PnP/PCI Configurations

This setup page includes information on Plug-and-Play and PCI configurations.

---

### **PC Health Status**

This setup page shows a list of hardware monitoring results.

---

### **Frequency/Voltage Control**

This setup page allows you to define clock and system bus speeds.

---

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

This page allows you to load the BIOS chipset defaults, indicating the minimum values required by the system for the normal operation.

---

### **Load Optimized Defaults**

This page allows you to load optimized BIOS chipset values, for enhanced system operations.

---

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

Use this page to set, change, or disable password protection. It allows you to limit access to the system and/or setup utility.

---

### **Save & Exit Setup**

This option saves all changed CMOS values and exits the setup utility.

---

### **Exit Without Saving**

This option exits the setup utility without first saving any recent modifications you might have made.



### 3.2 Standard CMOS Features

The Standard CMOS Features page displays a table of items, which are used to define some of the basic features of your system.

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Standard CMOS Features

Date (mm:dd:yy)	Fri, May 12 2000	Item Help
Time (hh:mm:ss)	13 : 56 : 13	Menu Level ▶
▶ IDE Primary Master	Press Enter None	Change the day, month, year and century
▶ IDE Primary Slave	Press Enter None	
▶ IDE Secondary Master	Press Enter None	
▶ IDE Secondary Slave	Press Enter None	
Drive A	1.44M, 3.5 in.	
Drive B	None	
Video	EGA/UGA	
Halt On	All,But Keyboard	
Base Memory	640K	
Extended Memory	31744K	
Total Memory	32768K	

↑↓←→: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 hard disk drives on any of the four available IDE channels. (Note that SCSI hard disk drives do not appear here) You can automatically install most currently available 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.

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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 MB, set MODE to Normal. If the drive is larger than 528 MB and it supports Logical Block Addressing, set MODE to LBA- Most high-capacity drives 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 for 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.

---

### **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: All. But Keyboard*

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 option displays a table of items which define more advanced features of your system.

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Advanced BIOS Features

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

↑↓←→: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 can locate and remove problematic programs before any damage is done. When this item is enabled, the Award BIOS will monitor the boot sector and partition table of the hard disk drive at any attempt to modify it. If an attempt is detected, the Anti-Virus program built-in the BIOS will protect your system.



#### WARNING:

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

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Enabled : Activates automatically when the system boots up, if anything attempts to access the boot sector or hard disk partition table, it will cause the above 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 that attempt to access the boot sector table can cause the above warning message.

---

### **CPU Internal Cache**

*Default: Enabled*

Most of the processor cartridges that can be installed in this motherboard have (level 1) internal cache memory. Only enable this item if your processor cartridge has external cache memory.

---

### **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.

---

### **Processor number Feature**

*Default: Enabled*

Each Pentium-III processor cartridge is installed with a unique processor number. This number may be used for verification in internet transactions and e-commerce. If you prefer not to use or distribute the unique processor number, use this item to suppress the processor number.

---

### **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-120*

Use these three items to select the priority and order of the devices that your system will search for an operating system at start-up time.

---

### **Boot Other Device**

*Default: Enabled*

If you enable this item, the system will search all other possible locations for an operating system if it fails to find one in the devices specified under the first, second and third boot devices.

---

### **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: Enabled*

During POST, the BIOS will determine if the Floppy disk drive installed is a 40 or 80 track type. All 360 K types are 40 tracks, while 720K, 1.2M and 1.44M drive types are always 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 NumLock 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.

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

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

<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 pressed 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 MB of memory and you are running the OS/2 operating system. Otherwise, leave this item at the default Non-OS2.

---

### **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 WIN95**      *Default: No*

Set this item to Yes BIOS will report FDD to Win9x. If in standard CMOS setup, set Drive A to none, and set this item to yes. Inside Win9x, My Computer and File manager Disk(A:) will show Removable Disk (A:).

---

### **Video BIOS Shadow**      *Default: Enabled*

This item allows the video BIOS to be copied to system memory for faster performance.


**XXXXX-XXXXX Shadow** *Default: Disabled*

These items allow the BIOS of other devices to be copied to system memory for faster performance.

### 3.4 Advanced Chipset Features

This option displays a table of items, which define timing parameters of the motherboard components including the graphics system, the memory, and the system logic. In general rule you should leave the items on this page at the default values unless you are very familiar with the technical specifications of your hardware. If you change the values, you may introduce fatal errors or recurring instability into your system.

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Advanced Chipset Features

Bank 0/1 DRAM Timing	SDRAM 10ns		Item Help
Bank 2/3 DRAM Timing	SDRAM 10ns		
Bank 4/5 DRAM Timing	SDRAM 10ns		
SDRAM Cycle Length	3		
Bank Interleave	4 Bank		
DRAM Clock	Host CLK		
Memory Hole	Disabled		
P2C/C2P Concurrency	Enabled		
Fast R-W Turn Around	Disabled		
System BIOS Cacheable	Disabled		
Video RAM Cacheable	Disabled		
AGP Aperture Size	64M		
AGP-4X Mode	Enabled		
AGP Driving Control	Auto		
x AGP Driving Value	DA		
AGP Fast Write	Disabled		
OnChip USB	Disabled		
x USB Keyboard Support	Disabled		
CPU to PCI Write Buffer	Enabled		
			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

**Bank 0/1 DRAM Timing** *Default: SDRAM 10ns*

**Bank 2/3 DRAM Timing** *SDRAM 10ns*

**Bank 4/5 DRAM Timing** *SDRAM 10ns*

These items define the timing parameters for Fast Page-mode and EDO RAM. We recommend that you leave these items at the default values. The default value ensures reliability if slower memory is used.

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### **SDRAM Cycle Length**

*Default: 3*

This item defines the number of CPU cycles between SDRAM refresh. The refreshment may be not complete and data can be lost when insufficient time is allowed. We recommend that you leave this item at the default value 3.

---

### **SDRAM Bank Interleave**

*Default: 4 Bank*

This item sets the SDRAM internal multi-bank function, from 2-banks ~ 4-banks.

---

### **DRAM Clock**

*Default: Host CLK*

This item sets your DRAM clock; you can use this item to select the value of DRAM clock. We recommend that you leave this item at the default value Host CLK, which means the DRAM clock duplicates the system clock speed.

---

### **Memory Hole**

*Default: Disabled*

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

---

### **P2C/C2P Concurrency**

*Default: Enabled*

Use this item to enable or disable concurrent memory/PCI and CPU action.

---

### **Fast R-W Turn Around**

*Default: Disabled*

This item sets a timing parameter for CPU access. Since the CPU timing is determined by the system hardware, you can set this item to Disabled.

---

### **System BIOS Cacheable**

*Default: Enabled*

System BIOS segment is cacheable if this item has been enabled.

---

### **Video RAM Cacheable**

*Default: Enabled*

Video RAM segment is cacheable if this item has been enabled.

---

### **AGP Aperture Size (MB)**

*Default: 64*

Select the size of the AGP aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. A host cycle that hits the aperture range is forwarded to the AGP without any translation. The choice is 4, 8, 16, 32, 64, 128, or 256.

---

### **AGP-4X Mode**

*Default: Enabled*

This item allows you to improve video performance by quadrupling the speed of the AGP bus. This function is supported by the mainboard, so we recommend that you set this item to enabled.



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<b>AGP Driving Control</b>	<i>Default: Auto</i>
----------------------------	----------------------

This item can be used to signal driving current on AGP cards auto or Manual. Some AGP cards need stronger than normal driving current in order to operate. We recommend that you set this item to Auto by default.

---

<b>AGP Driving Value</b>	<i>Default: DA</i>
--------------------------	--------------------

When the previous item AGP Driving Control is set to manual, you can define use this item to set the AGP current driving value.

---

<b>AGP Fast Write</b>	<i>Default: Disabled</i>
-----------------------	--------------------------

Use this item to set the speed for writing operations over the AGP bus.

---

<b>Onchip USB</b>	<i>Default: Disabled</i>
-------------------	--------------------------

Use this item to enable the onboard USB support.

---

<b>USB Keyboard Support</b>	<i>Default: Disabled</i>
-----------------------------	--------------------------

If the previous item has been enabled, you can use this item to enable a USB keyboard to be used through the USB port. You might want to disable this for security reasons.

---

<b>CPU to PCI Write Buffer</b>	<i>Default: Enabled</i>
--------------------------------	-------------------------

When this item is enabled, writes from the CPU to the PCI bus are buffered to compensate for the different speeds of the CPU and PCI buses. Leave this item at the default value.

---

<b>PCI Dynamic Bursting</b>	<i>Default: Enabled</i>
-----------------------------	-------------------------

<b>PCI Master 0 WS Write</b>	<i>Default: Enabled</i>
------------------------------	-------------------------

<b>PCI Delay Transaction</b>	<i>Default: Enabled</i>
------------------------------	-------------------------

<b>PCI#2 Access #1 Retry</b>	<i>Default: Enabled</i>
------------------------------	-------------------------

These items determine how the system carries out read/write operations over the PCI bus. These items are normally optimally determined by the system's hardware and chipset, so we recommend that you leave these items at the manufacturers default.

---

<b>AGP Master 1 WS Write</b>	<i>Default: Disabled</i>
------------------------------	--------------------------

<b>AGP Master 1 WS Read</b>	<i>Default: Disabled</i>
-----------------------------	--------------------------

These two items determine how the system carries out read/write operations over the AGP bus. These items are normally optimally determined by the system's hardware and chipset, so we recommend that you leave these items at the manufacturers default.

### 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 IDE Channe10	Enabled	▲   ▼	Item Help
OnChip IDE Channe11	Enabled		
IDE Prefetch Mode	Enabled		
Primary Master PIO	Auto		
Primary Slave PIO	Auto		
Secondary Master PIO	Auto		
Secondary Slave PIO	Auto		
Primary Master UDMA	Auto		
Primary Slave UDMA	Auto		
Secondary Master UDMA	Auto		
Secondary Slave UDMA	Auto		
Init Display First	PCI Slot		
IDE HDD Block Mode	Enabled		
POWER ON Function			
KB Power ON Password	Enter		
Hot Key Power ON	Ctrl-F1		
KBC input clock	8 MHz		
Onboard FDC Controller	Enabled		
Onboard Serial Port 1	3F8/IRQ4		

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

**OnChip IDE Channel0** *Default: Enabled*

**OnChip IDE Channel1** *Enabled*

You can use this item to enable or disable the primary and secondary IDE channels that are built into this motherboard. When one or both channels are enabled (the default value is Both) items appear which allow you to set the PIO (programmable input/output) mode and the UltraDMA mode for master and slave devices on the channels. We recommend that you leave these items at the default value Auto. The system will then automatically use the best performance PIO mode and UltraDMA mode for each device.

**IDE Prefetch Mode** *Default: Enabled*

The built-in IDE drive interfaces support IDE presetting for faster drive accesses. If you use an alternative IDE interface (e.g. an expansion card), disable this field if the alternate IDE interface does not support presetting.

---

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

**Secondary Master/Slave PIO**

PIO - Programmed Input / Output - allows the BIOS to tell the controller what it wants and then let the controller and the CPU to complete the task by themselves. This is simpler and faster. Your system supports five modes, 0- 4, which primarily differ in timing. When **Auto** is selected, the BIOS will select the best available mode.

---

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

**Secondary Master/Slave UDMA**

Auto, will support the Ultra DMA function. Disabled, will not support the Ultra DMA function.

---

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

Use this item to define if your graphics adapter is installed in one of the PCI slots, or if you have installed an AGP graphics adapter into the AC-RP slot.

---

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

This allows your HDD controller to use the fast block mode to transfer data to and from your HDD drive. Enabled IDE controller uses block mode, Disabled IDE controller uses standard mode.

---

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

**KB Power ON Password** *Default: Enter*

**Hot Key Power ON** *Default: Ctrl-F1*

The Power On Function item allows you to power on the system by pressing hot-keys, or typing a password. If you choose Password, you can use the item KB Power On Password to install a power on password. Press Enter to display the Password dialog box. If you set it to Hot Key, you can then use the item Hot Key Power On to choose which hot keys are used to power on the system.

---

**KBC input clock** *Default: 8 MHz*

This item lets you set a frequency for the input clock of the keyboard controller. Leave this item at the default value 8 MHz.

---

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

This item will enable or disable the floppy disk controller.

---

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

User can select serial port IRQ. If set to Auto, system will assign an IRQ for it.

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Note: Set to Auto is not recommended.

---

### **Onboard Serial Port 2**

*Default: 2F8/IRQ3*

User can select serial port IRQ. If set to Auto, system will assign an IRQ for it.

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).

---

### **IR Transmission Delay**

*Default: Enabled*

This item lets you enable a transmission delay for infrared communication.

---

### **Onboard Parallel Port**

*Default: 378/IRQ7*

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

---

### **Parallel Port Mode**

*Default: ECP+EPP*

This item defines the operation of the parallel port. As a default it is set to ECP + EPP. If you are connected to a parallel device that supports the higher-performance EPP (enhanced parallel port) or the ECP (extended capabilities port) make the appropriate changes to this item.

---

### **ECP Mode Use DMA**

*Default: 3*

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

---

### **EPP Mode Select**

*Default: EPP1.7*

Select EPP mode for the port.

### 3.6 Power Management Setup

This option displays a table of items which lets you control the power management of the system. Modern operating systems take care of much of the routine power management. This motherboard supports ACPI (advanced configuration and power interface).

This system supports three levels of power-saving modes; doze mode, standby mode, and suspend mode. Standby mode uses less power than doze mode and suspend mode uses the least power.

The power management in the setup utility lets you specify a timeout for each of the power-saving modes, and a timeout for a hard disk drive power down. A timeout, means a period of time when the system (or the hard disk drive) is inactive. If the timeout completes, the system power-saving mode will execute, or the hard disk drive will power down.

You can resume from the power-saving modes by carrying out any of the activities, which are enabled in the list Reload Global Timer Events. If the hard disk has been powered down it will automation resume to full power when an access to the hard disk is required (this takes just a few seconds).

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Power Management Setup

ACPI function	Enabled	Item Help
▶ Power Management	Press Enter	
PM Control by APM	Yes	Menu Level ▶
Video Off Option	Suspend -> Off	
Video Off Method	U/H SYNC+Blank	
MODEM Use IRQ	3	
Soft-Off by PWRBTN	Instant-Off	
▶ Wake Up Events	Press Enter	

↑↓←→: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 turns on several power saving measures.

---

### **Power Management**

*Default: User Define*

Press **Enter** to display the Power Management sub-menu.

This page 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.; Standby: 1 hr.; Suspend= 1 hr.; HDD Power Down=15min

Max. Power Saving: Maximum power management only available for SL CPU. Doze=1min.; Standby=1min.;Suspend=1 min.; 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 to 15min., and can also be disabled

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.

---

### **PM Control by APM**

*Default: Yes*

Windows 95 and 98 have built-in power management capabilities called APM (advanced power management). When you enable this item, you allow the APM routines in Windows to operate on your system.

---

### **Video Off Option**

*Default: Yes*

This option defines if the video is powered down if the system is put into suspend mode.

---

### **Video Off Method**

*Default: V/H SYNC+Blank*

This determines the manner in which the monitor is blanked.

V/H SYNC+ Blank: This selection will cause the system to turn off the vertical and horizontal sync. Ports and write blanks to the video buffer.

Blank Screen: This option only writes blanks to the video buffer.

DPMS: Initial display power management signaling.

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### **MODEM Use IRQ**

*Default: 3*

This item determines the IRQ in which the MODEM can be detected for power management purposes. Choices are: 3,4,5,7,9, 10,11, or N/A.

---

### **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 do 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 powerbutton. 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.

---

### **Wake Up Events**

*Default: Press Enter*

Press **Enter** to display the Wake Up Events sub-menu.

---

### **VGA**

*Default: OFF*

When the item is enabled, any video active restarts the global timer for standby mode.

---

### **LPT & COM**

*Default: LPT/COM*

If the system is "LPT": The system will auto wake up from standby mode or suspend mode, when the system transfers data by parallel port.  
If the system is "COM": The system will auto wake up from standby mode or suspend mode, when the system transfers data by serial port.  
If the system is "LPT/COM": The system will auto wake up from standby mode or suspend mode, when the system transfers data by parallel port or serial port.

---

### **HDD & FDD**

*Default: ON*

If the item sets "ON", the system will be normal mode from standby mode or suspend mode, when it is reading the data from hard disk or floppy.

---

### **DMA/master**

*Default: OFF*

If the item sets "ON", the system will auto wake up from standby mode or suspend mode, when the DMA is active.

---

### **PowerOn by PCI Card**

*Default: Disabled*

If this item is enabled the system will wake up from standby mode or suspend mode when activity on a PCI card is detected.

---

---

### **Wake Up on LAN/Ring**

*Default: Disabled*

If you enable this item, it allows activity on an add-in card in one of the PCI slots to resume the system from a power-saving mode. It will also wakeup the system whenever there is traffic on an installed fax/modem or network adapter. You might have to connect the fax/modem to a mainboard Wake On Modem connector, and the LAN card to a mainboard Wake On LAN connector, for this feature to work.

---

### **RTC Alarm Resume**

*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.

---

### **Primary INTR**

*Default: ON*

This item acts like a master switch for all the interrupt items that follow. If this item is set to ON, the all the following interrupts can be manually configured to act as resets for the power saving timeouts. If this item is set to OFF, then all the following interrupt items cannot be used to reset the power saving timeouts.

---

### **IRQs Activity Monitoring**

Press **Enter** to display the IRQs Activity Monitoring sub-menu.

These interrupt events can act as triggers to reset the power saving timeouts or other system maintenance tasks. If you set an interrupt event to Primary, any activity on that interrupt will reset the timeouts that use the primary timer (e.g. the power saving modes). If you set an interrupt to Secondary, then any activity on the interrupt will reset those timeouts that use the secondary timer (usually background maintenance tasks). If you set an interrupt event to Disabled, any activity on the interrupt will not reset the timeouts.



### 3.7 PnP/PCI Configurations

The PnP/PCI Configurations page allows you to configure the ISA and PCI devices installed in your system. The following screen appears if you select the option PnP/PCI Configurations setup option from the main menu.

CMOS Setup Utility - Copyright (C) 1984-2000 Award Software  
PnP/PCI Configurations

PNP OS Installed	No	Item Help
Reset Configuration Data	Disabled	
Resources Controlled By	Auto(ESCD)	Menu Level ▶
x IRQ Resources	Press Enter	Select Yes if you are using a Plug and Play capable operating system Select No if you need the BIOS to configure non-boot devices
x DMA Resources	Press Enter	
PCI/UGA Palette Snoop	Disabled	
Assign IRQ For UGA	Enabled	
Assign IRQ For USB	Enabled	

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

#### PNP OS Installed

Default: No

If you have installed a Plug and Play **operating** system such as Windows 95 or 98, you can change this item to Yes. When the item is set to Yes you can use the Device Manager utility in the operating system to make changes to the configuration of expansion cards.

#### Resources Controlled By

Default: Auto<ESCD>

You should leave this item at the default Auto. If you find that you cannot get a particular expansion card to work properly, you might be able to solve the problem by changing this item to Manual, and defining the characteristics of the card in the new items which appear.

If you change this item to Manual, the display will list a series of items that allow you to define the assignments of the system interrupt lines (IRQs) and

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Direct Memory Access (DMA) channels. As default, these items are set to PCI/ISA PnP. If you install an ISA Bus card that does not support PNP, and it 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.

---

### PCI/VGA Palette Snoop

*Default: Disabled*

This item is designed to overcome some problems that can be caused by some non-standard VGA cards. This board includes a built-in VGA system that does not require palette snooping so you must leave this item disabled.

---

### Assign IRQ For VGA

*Default: Enabled*

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

---

### Assign IRQ For USB

*Default: Enabled*

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

## 3.8 PC Health Status

On mainboards which support hardware monitoring, this item lets you set parameters for critical voltages, critical temperatures, and fan speeds.

CMOS Setup Utility - Copyright (C) 1984-2000 Award Software  
PC Health Status

CPU Warning Temperature	Disabled	Item Help
Current System Temp.		Menu Level ▶
Current CPU1 Temperature		
Current CPU2 Temperature		
Current CUFAN1 Speed		
Current CUFAN2 Speed		
Current CUFAN3 Speed		
IN0(V)		
IN1(V)		
IN2(V)		
+ 5 V		
+12 V		
-12 V	-	
- 5 V	-	
VBAT(V)		
5USB(V)		
Shutdown Temperature	Disabled	

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

If this option is active on your system, we recommend that you accept the default values for these items that are installed by the manufacturer.

### 3.9 Frequency/Voltage Control

This item allows you to set the clock speed and system bus for your system. The clock speed and system bus are determined by the kind of processor you have installed in your system.

CMOS Setup Utility - Copyright (C) 1984-2000 Award Software  
Frequency/Voltage Control

Auto Detect DIMM/PCI Clk	Enabled	Item Help
Spread Spectrum	Disabled	
CPU Host/PCI Clock	Default	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*

When this item is enabled, the BIOS will disable the clock generator signal for unused DIMM and PCI slots, in order to reduce EMI (electromagnetic interference).

---

**Spread Spectrum** *Default: Disabled*

When this item is enabled, it can significantly reduce the EMI (electromagnetic interference) that your system generates by modulating the extreme values of the clock generator pulses. Enabling this item might cause problems with timing-critical devices such as SCSI adapters. We recommend that you leave this item at the default value disabled.

---

**CPU Host/PCI Clock** *Default: Default*

Use this item to set the clock frequency speed for the CPU and PCI bus.

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

This option opens a dialog box that lets you install fail-safe defaults for all appropriate items in the whole setup utility. Press the **Y** key and then **Enter** to install the defaults. Press the **N** key and then **Enter** to not install the defaults. The fail-safe defaults place no great demands on the system and are generally stable. If your system is not functioning correctly, try installing the fail-safe defaults as a first step in getting your system working properly again. If you only want to install a fail-safe defaults for a specific option, select and display that option, and then press the **F6** key.

### **3.11 Load Optimized Defaults**

This option opens dialog box that lets you install optimized defaults for all appropriate items in the whole setup utility. Press the **Y** key and then **Enter** to install the defaults. Press the **N** key and then **Enter** to not install the defaults. The optimized defaults place demands on the system that may be greater than the performance level of the components, such as the CPU and the memory. You can cause fatal errors or instability if you install the optimized defaults when your hardware does not support them. If you only want to install setup defaults for a specific option, select and display that option, and then press the **F7** key.

### **3.12 Set Supervisor/User Password**

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, 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***

This allows you to save the new setting values in the CMOS memory and continue with the booting process.

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

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

## Chapter 4

### Software Setup

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

- IDE Bus Master drivers for Win 95/NT.
- 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

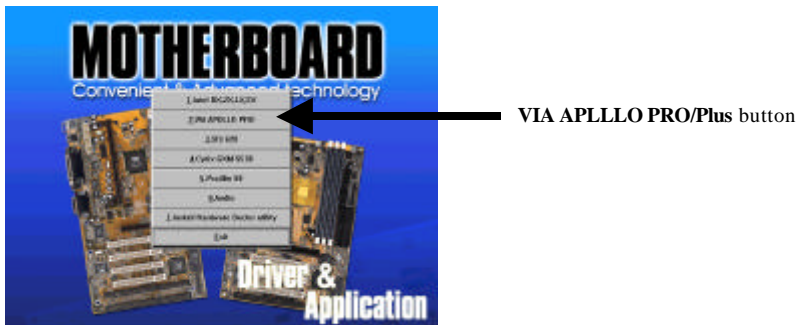
After you have finished the hardware setup, you have to install the IDE Bus Master software of the motherboard, then you can enjoy the advance Motherboard.

*Note: If your system is Win98, please skip this section. Because Windows 98 have been built-in the IDE Bus Master Driver, you don't need to install the software again.*

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 “**VIA APOLLO PRO/Plus**” button.



4. Then you will see the dialog box as following:



You just click the “1. VIA Driver Install” item and follow the instructions to setup these software.

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