

# **3VAAV**

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## User Manual V1.0

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Printed in Taiwan.

# Item Checklist

Before you begin installing your motherboard, please make sure that the following materials have been shipped:

This mainboard comes in a sturdy cardboard shipping carton, which should contain the following items:

- The main board.
- This user manual.
- One Floppy disk drive cable.
- One Ultra DMA/66 IDE cable.
- Software utilities.

If you discover damaged or missing items, please contact your retailer.

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# Chapter 1

## Introduction

### 1-1 Introduction

The motherboard is a high-performance, low-cost motherboard which supports the Intel PIII FC-PGA and Socket 370 microprocessor. System memory bank supports 3 DIMM socket. Memory up to 768MB 100MHZ & 133MHZ SDRAM.

On-board I/Os and expansion slot include 1 AGP 2X slot, Stereo sound, ATX power input/output, Super I/O, 2 Ultra DMA/66 EIDE interfaces, 4 USB ports, 4 PCI-bus slots, 1 AMR slot, 2 ISA-bus slots and so on.

### 1-2 Specifications

-  CPU
  - Pentium III / Celeron™ Processor.
  - Celeron™ Socket 370 PPGA packaged Processor.
  - Capacity of 2<sup>nd</sup> level Cache is subject to different CPU model.
  - Coppermine Socket 370 FCPGA packaged Processor.
  - VIA CyrixIII Processor
-  Chipset
  - VIA VT82C693A North Bridge.
  - VIA VT82C686A South Bridge.
-  Clock Generator
  - Supports 66 / 100 / 133 / 133 MHz.
-  Memory
  - 3 x 168-pin DIMM Sockets.
  - Supports 100MHZ & 133MHZ SDRAM Module 16MB~768MB.
  - Supports only 3.3V SDRAM DIMM.
-  Audio
  - SoundBlaster Pro Hardware and Direct Sound Ready AC97 Digital Audio Controller.
  - Hardware SoundBlaster Pro for Windows DOS box and real-mode DOS legacy compatibility.
  - Supports two channel speaker mode.

-  I/O Control
  - MPU-401 game/MIDI port and Sound blaster™16 compatible.
  - Integrated Super I/O Controller in the VT82C686A.
-  Expansion Slot
  - Four 32-bit PCI slots support Master mode.
  - One AGP 2X slot.
  - Two ISA slot.
  - One Audio Modem Riser (AMR) slot.
-  I/O Interface
  - PCI Bus master IDE interface on board with two connectors to support 4 IDE devices in 2 channel, the PCI IDE Controller supports from PIO Mode 0 to Mode 4, Bus master IDE DMA Mode 2 and Ultra DMA 33/66.
  - On board super Multi-I/O chip that support 2 serial port with 16550 Fast UART compatible, 1 parallel port with EPP and ECP capabilities, and a FDD interface.
  - On-board PS/2 mouse Connector.
  - On-board PS/2 Keyboard Connector.
  - 2 On-board USB ports.
  - On-board IrDA connector.
  - Floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88M bytes ,Supports LS-120 floppy disk device.
-  Other Function
  - Support Modem Ring Power On.
  - Supports Keyboard, and WOL (Wake On LAN).
-  Power Supply
  - On board 3.3V, 5V, 5Vstb, PS-ON and 12V 20-pin ATX power connector.
  - Use switching regulator to support CPU core voltage.
-  Hardware Monitor
  - CPU/Power Supply/Chassis Fan Revolution detecting.
  - CPU Fan Control.
  - System Voltage Detect.
  - Display Actual Current Voltage.



BIOS

- Licensed AWARD BIOS, 2M bit FLASH RAM.
- ACPI ready for PC98/Windows 98.
- System BIOS supports ACPI function and Green feature function, DMI, Plug and Play Flash ROM.



Form factor

- ATX Form Factor.
- Dimensions 305mm x 190mm, 4 layers PCB.



DRIVERS & Utility

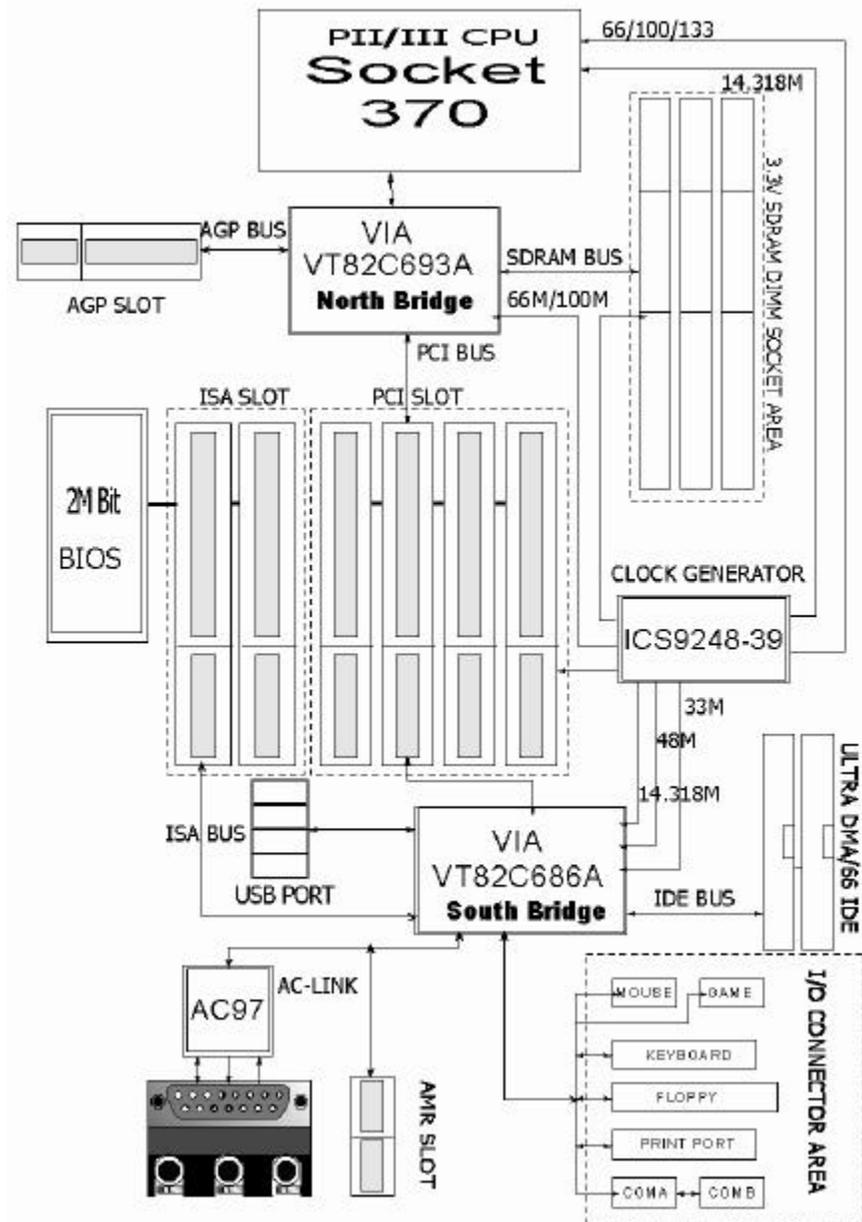
- VIA 4-In-1 VIA SERVICE PACK.
- AC97 audio sound drivers.
- VIA HARDWARE MONITOR Applications.
- DirectX 7.

1-3 PACKAGE CHECKLIST

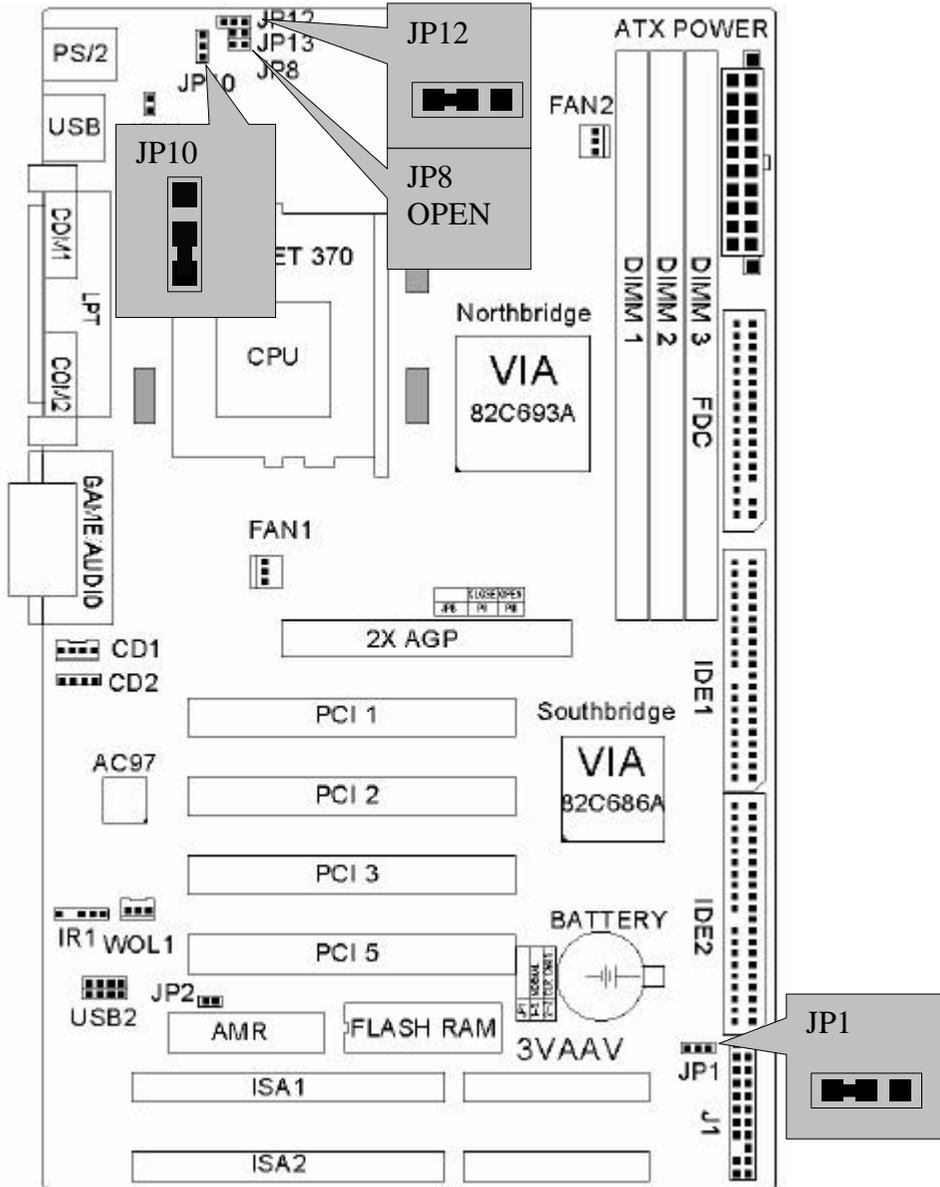
If you discover any item below was damaged or lost, please contact your vendor.

- The main board.
- This user manual.
- One Floppy disk drive cable.
- One Ultra DMA/66 IDE cable.
- CD Title Driver with anti-virus software.

1-4 Block Diagram



**1-5 Main Board Layout with Default Setting**  
**System default support PII&PIII(66MHZ/100MHZ/133MHZ FSB)**



1-5

**1-6 Static Electricity Precautions**

Static electricity can easily damage your motherboard. Observing a few basic precautions can help you safeguard against damage that could result in expensive repairs. Follow the measures below to protect your equipment from static discharge:

-  Keep the motherboard and other system components in their antistatic packaging until you are ready to install them.
-  Touch a grounded surface before you remove any system component from its protective antistatic packaging. A grounded surface within easy reach is the expansion slot covers at the rear of the system case. or any other unpainted portion of the system chassis.
-  During configuration and installation, touch a ground surface frequently to discharge any static electric charge that may build up in your body. Another option is to wear a grounding wrist strap.
-  When handling a motherboard or an adapter card, avoid touching its components. Handle the motherboard and adapter cards either by the edges or by the mounting bracket that attaches to the slot opening in the case.

1-6

# Chapter 2 Installation Procedures

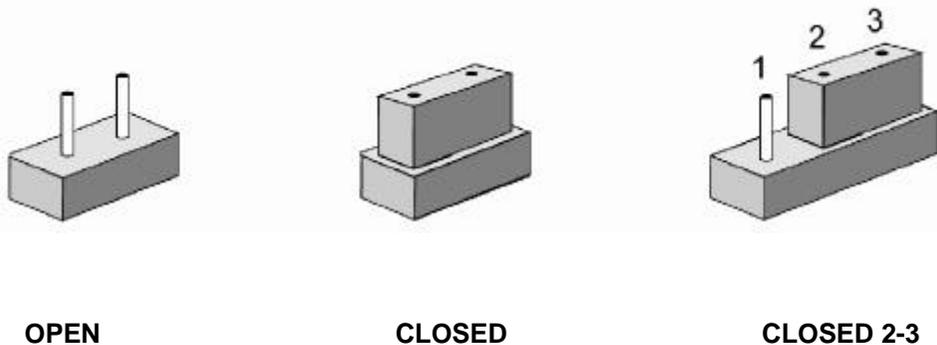
The mainboard has some user-adjustable jumpers on the board that allow you to configure the system for your requirements to the large extent. This chapter contains information on each jumper setting on your mainboard.

To set up your computer, you must complete the following steps:

1. Setting system jumpers.
2. Install RAM modules.
3. Install CPU & FAN.
4. Connect ribbon cables, cabinet wires, and power supply.
5. Set up BIOS.
6. Set up system drivers and utility.

## 2-1 Setting System Jumpers

You may configure your motherboard to match the needs of your applications by setting different jumpers. A jumper is the simplest kind of electrical switch. It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To "close" a jumper, you connect the pins with the clip. To "open" a jumper, you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2, 3. In this case you would connect either pin 1 and 2 or 2 and 3.



2-1

The jumper settings are schematically depicted in this manual as follows:



A pair of needle-nose pliers may be helpful when working with jumpers.

**Note:** When you open the jumper, attach the plastic jumper cap to one of the pins so you won't lose it.

**Warning:** Always completely disconnect the power cord from your board whenever you are working on it. Do not make connections while the power is on because sensitive electronic components can be damaged by the sudden rush of power.

Always ground yourself to remove any static charge before touching the board. Modem electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not in the chassis.

## CPU External Frequency Settings:(JP8)

The Motherboard supports Intel Socket 370 CPUs with 66MHz or 100MHz or 133MHz external frequency. Setting the jumper according to the external frequency of the CPU you are going to install on the motherboard.

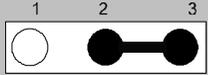
	states	JP8
1	BIOS auto-detect CPU Frequency(66/100MHZ) PII and Celeron and Cyrix MIII CPU setting	
2	BIOS auto-detect CPU Frequency (100/133MHz) PIII setting [Default]	

2-2

**CPU Type Settings:(JP12)**

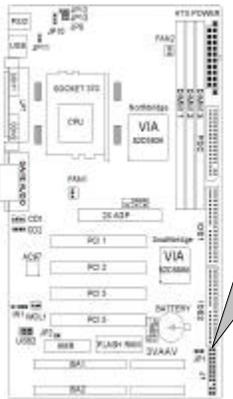
The Motherboard supports Intel III/Socket 370/FCPGA CPUs and Cyrix (JOSHUA) CPUs. Setting the jumper according to the CPU type. you are going to install on the motherboard.



	states	JP12
1	Support Intel Serial CPU [Default]	
2	Support VIA Cyrix MIII CPU Only. (JOSHUA)	

**Clear CMOS:(JP1)**

To clear the data stored in the CMOS, always turn off the computer first, then remove this jumper to 2-3 pin to clear the CMOS. The jumper should be set to 1-2 pin (3V battery back up) before turn on the computer.



	states	JP1
1	Clear CMOS	
2	Normal [Default]	

\* Clear CMOS must be turn off the AC power first.

**Keyboard Power On Selection(JP10)**

The keyboard power on selection function. If your ATX power supply can support 0.7A(700mA)5V standby current(with keyboard require), you can use this function.



	states	JP10
1	Enable this function [Default]	
2	Disable]	

\*If your ATX power supply not support 700mA 5V standby current. Don' t enable this function.

## 2-2 System Memory (DIMM)

The motherboard supports up to 768MB 100MHZ and 133MHZ SDRAM. No hardware or BIOS setup is required after adding or removing the system memory. The chipset does not support ECC, However, ECC memory modules may still be used, but the ECC function will not be available.

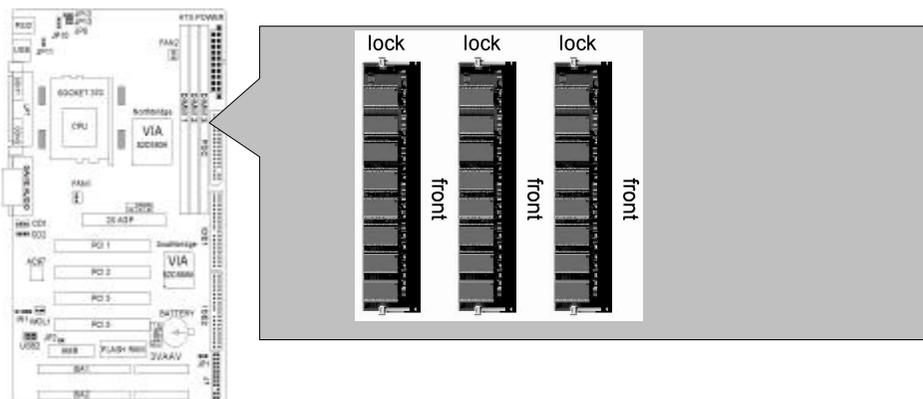
### Note:

- 1.The motherboard uses only Dual Inline Memory Modules (DIMMs). Sockets are available for 3.3Volt (power level) Synchronous Dynamic Random Access Memory (SDRAM).



### Installing system Memory

Insert the DIMM module(s) as shown. Because the number of pins are different on each side of the breaks, the module will be fitted only in the orientation shown. The DIMM must be 3.3V for this motherboard.



## 2-3 Central Processing Unit (CPU)

The Motherboard provides a ZIF Socket 370. The CPU that came with the motherboard should have a fan attached to it to prevent overheating. If this is not the case, then purchase a fan before you turn on your system. Be sure that there is sufficient air circulation across the processor heat sink, or the processor could overheat and damage both the processor and the motherboard.

To install a CPU, first turn off your system and remove its cover. Locate the ZIF socket and open it by first pulling the lever sideways away from the socket then upwards to a 90-degree angle. Insert the CPU with the correct orientation as shown. The notched corner should point towards the end of the lever. Because the CPU has a corner pin for two of the four corners, the CPU will only be fitted in the orientation as shown. The picture is for reference only: you should have a CPU fan that covers the top side of the CPU. With the added weight of the CPU fan, no force is required to insert the CPU. Once completely inserted, close the socket lever while holding down the CPU.

## 2-4 Expansion Cards

Always unplug the power supply when adding or removing expansion cards or other system components. Failure to do so may cause severe damage to both your motherboard and expansion cards.

Expansion Card Installation Procedure The Motherboard has 4 PCI and 1 AMR expansion slots. You may install up to 4 PCI cards and 1 AMR card on this motherboard. To install the PCI cards or AMR card, please follow the following procedure:

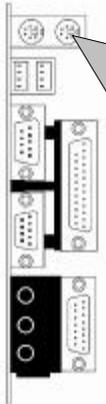
- 1.Read the documentation for your expansion card and make any necessary hardware or software settings for you expansion card, such as jumpers or switches.
- 2.Remove your computer system cover and the bracket plate with screw on the slot you intend to use. Keep the bracket for possible future use.
- 3.Carefully align the card connectors and press firmly.
- 4.Secure the card on the slot with the screw you removed above.
- 5.Replace the computer system cover.
- 6.Setup the BIOS if necessary.
- 7.Install the necessary software drivers for your expansion card.

Note: To install the AMR Card. You should set the "AC97 Modem" as "auto" in the "INTEGRATED PERIPHERALS" of the BIOS Setup.

2-5 External Connectors

1.PS/2 Mouse Connector:

The motherboard provides a mini-DIN mouse connector, which supports a PS/2 style mouse.



**PS/2 Mouse Connector**  
PC99 Color : Green

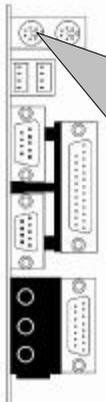
PIN	FUNCTION
1	DATA
2,6	N.C
3	GND
4	+5V
5	CLOCK



2.PS/2 Keyboard Connector:

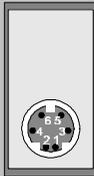
This connector is for a standard keyboard using a PS/2 plug (mini DIN). This connector will not allow standard AT (large DIN) keyboard plugs. You may use a DIN to mini DIN adapter on standard AT keyboards. In some applications, the

keyboard is not present, the standard BIOS will report an error or failure during the Power-On Self Test (POST) after resetting the PC. You may select "All, But Keyboard" under the "Halt On" in "Standard CMOS SETUP" of BIOS SETUP. This allows the system non-keyboard operation without the system halting during the POST.



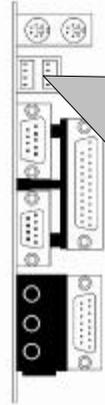
**PS/2 Keyboard Connector**  
PC99 Color : Purple

PIN	FUNCTION
1	DATA
2,6	N.C
3	GND
4	+5V
5	CLOCK



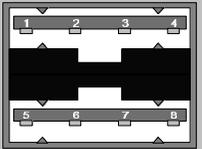
3.Universal Serial BUS (USB) Ports 1 & 2:

There are two USB ports on this motherboard for connecting USB devices.



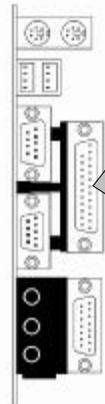
**Universal Serial BUS (USB) Ports 1 & 2**  
PC99 Color : Black

PIN	FUNCTION
1,5	+5V
2,6	USB-
3,7	USB+
4,8	GND

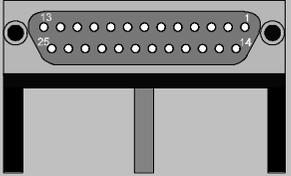


4.Parallel Port Connector:

Normally, the parallel port is used to connect the system to a printer.

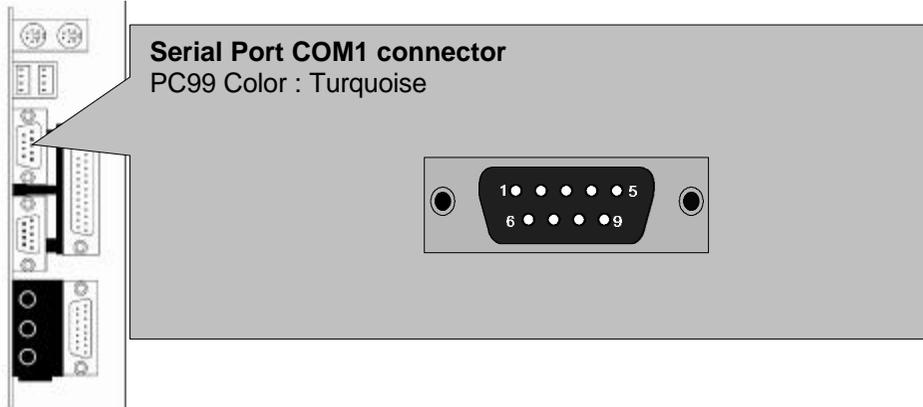


**Parallel Port Connector**  
PC99 Color : Burgundy



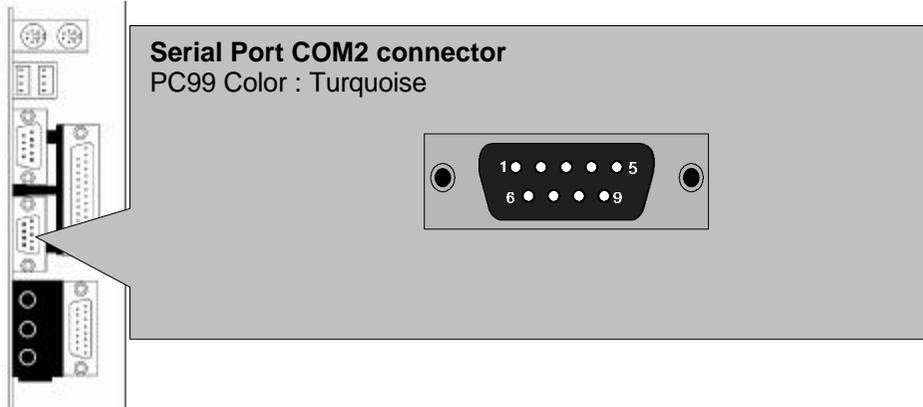
**5. Serial Port COM1 connector:**

The COM1 port is ready for a mouse or other serial devices. A second serial port is available using a serial port bracket connected from the motherboard to an expansion slot opening.



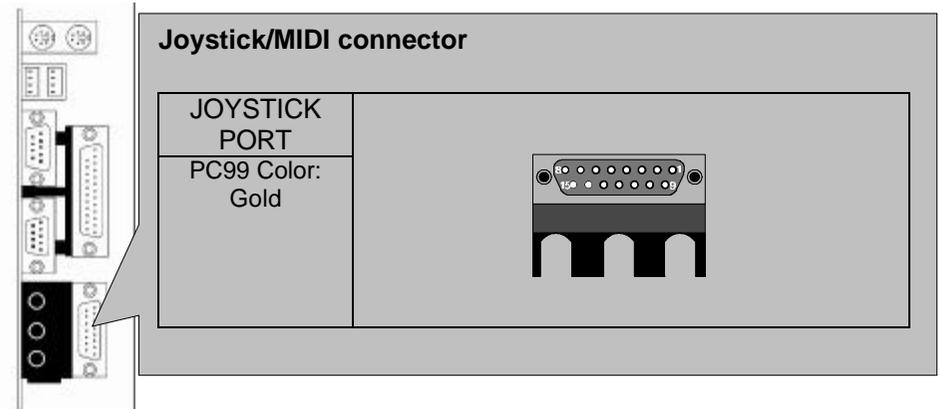
**6. Serial Port COM2 connector:**

The COM2 port is ready for a mouse or other serial devices. A second serial port is available using a serial port bracket connected from the motherboard to an expansion slot opening.



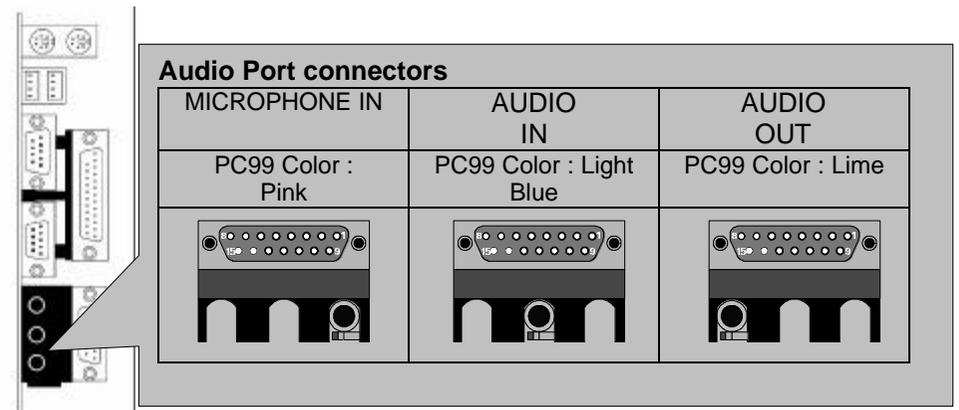
**7. Joystick/MIDI connector:**

You may connect game joysticks or game pads to this connector for playing games. Connect MIDI devices for playing or editing audio.



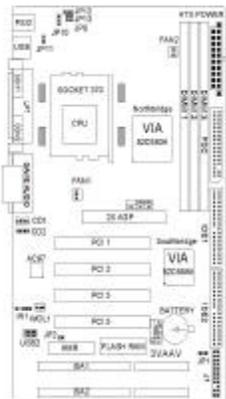
**8. Audio Port connectors:**

The Audio Port Connectors on the motherboard are standard 1/8" GAME-AUDIO connectors. Line Out (lime) can be connected to headphones or POWERED speakers. Line In (light blue) allows tape players or other audio sources to be recorded by your computer or played through the Line Out (lime). Mic (pink) allows microphones to be connected for inputting voice.



### 9.Primary/Secondary IDE Connectors(IDE1 and IDE2)

The motherboard supports up to four IDE devices, including CD-ROM drives, tape backup drives, Hard Disk Drives, and other IDE devices. After connecting the single end to the board, connect the two plugs at the other end to your hard disk(s). If you install two hard disks, you must configure the second drive to Slave mode by setting its jumper accordingly. Please refer to your hard disk documentation for the jumper settings. (Pin 20 is removed to prevent the users inserting the IDE devices in the wrong orientation when using ribbon cables with pin 20 plugged).

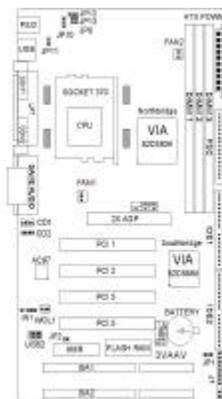


Primary/Secondary IDE Connectors	
Primary IDE Connectors Color : Blue	Secondary IDE Connectors Color : White
 PIN1	 PIN1
NOTE: Orient the red markings on the floppy ribbon cable to pin 1	

Note: Ultra DMA/66 IDE devices must use an 80-wire IDE cable or else devices will automatically be limited to Ultra DMA/33 mode.

### 10.Floppy Disk Drive Connector(FDC)

You can attach up to two floppy drives to the motherboard. After connecting the single end to the board, connect the two plugs on the other end to the floppy drives. The drive A: should be connected on the end and the drive B: in the middle.

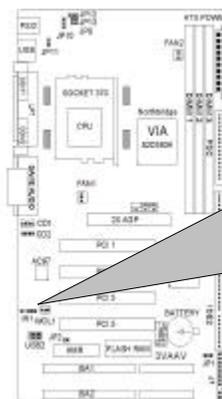


Floppy Disk Drive Connector	
Floppy Disk Drive Connector Color : White	
 PIN1	
NOTE: Orient the red markings on the floppy ribbon cable to pin 1	

Note: Pin 5 is removed to prevent the users inserting the Floppy Disk Drive in the wrong orientation when using ribbon cables with pin 5 plugged.

### 11.Wake-On-LAN(WOL)/Wake-On-Modem(WOM) connectors(JP3)

The Wake-On-LAN and Wake-On-Modem connectors connect to a LAN card and Modem card respectively with a Wake-On-LAN/Wake-On-Modem output. The connectors power up the system when a wakeup packet or signal is received through the LAN card/Modem card.

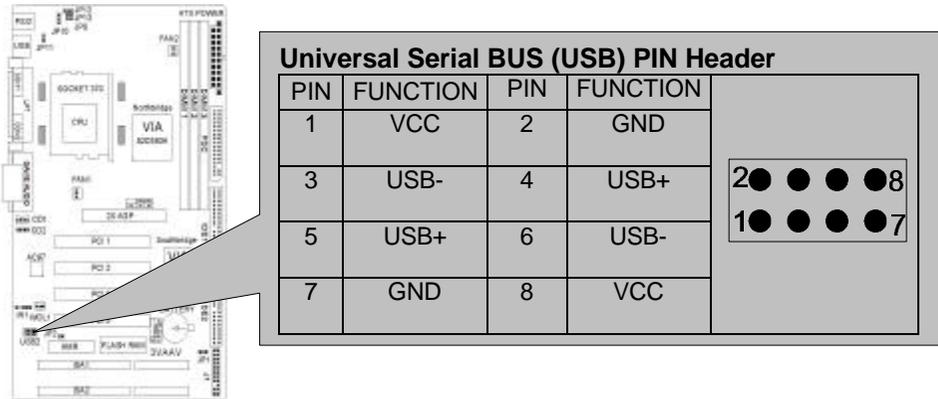


Wake-On-LAN(WOL) connectors	
PIN	FUNCTION
1	SIGNAL
2	GND
3	+5V_SB

NOTE : The ATX power supply supports larger than 720mA 5V Standby current.

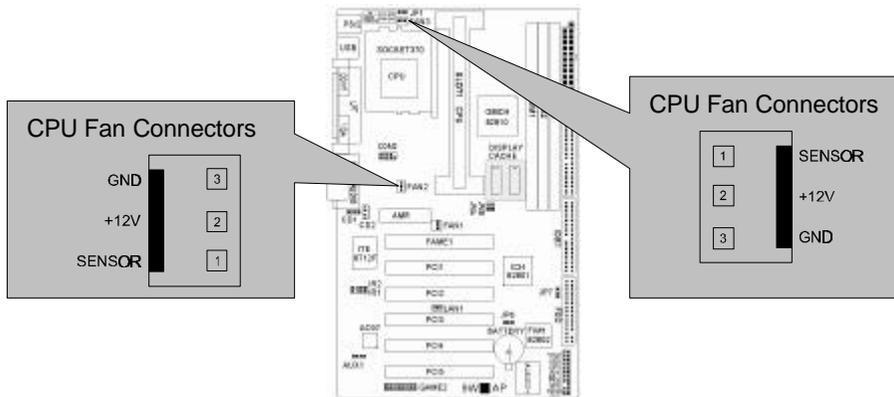
### 12. Universal Serial BUS (USB) PIN Header(USB2)

There are two USB PIN Header on this motherboard for connecting USB devices.



### 13. CPU/Chassis Fan Connectors(FAN1 and FAN2)

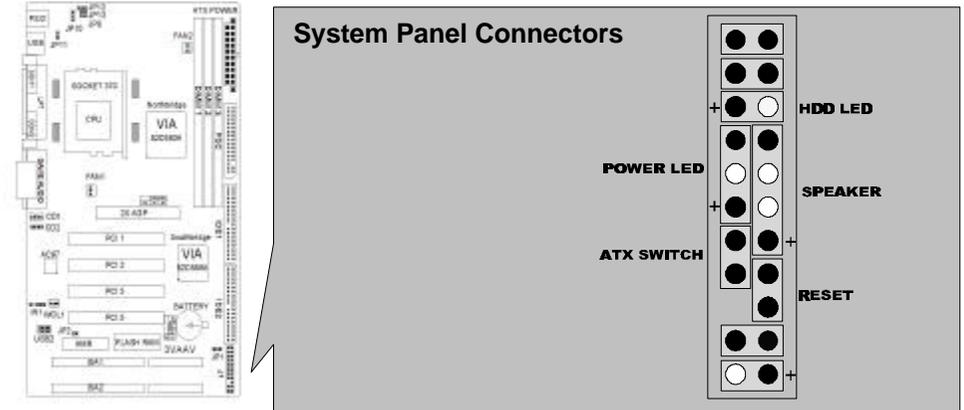
This motherboard provides CPU, Power, and Chassis fan connectors. Orientate the fan so that the heat sink fins allow airflow to go across the onboard heat sink(s) instead of the expansion slots. Depending on the fan manufacturer, the wiring and plug may be different. The red wire should be positive, while the black should be ground. Connect the fan plug to the board taking into consideration the polarity of the connector.



Note: The CPU and motherboard will overheat if there is no airflow across the CPU and onboard heatsink. Damage may occur to the motherboard and the CPU fan if these pins are incorrectly used. These are not jumpers, do not place jumper caps over these pins.

### System Panel Connectors (J1)

Refer to the following figure for item 14 to 18.



#### 14. Power LED Lead

This indicates the status of the system power is turned "ON" or "OFF" The LED will light when the system power is turned on and will go off when the system power is turned off.

#### 15. System Warning Speaker Connector

This 4-pin connector connects to the case-mounted speaker.

#### 16. ATX Power Switch Lead

The system power is controlled by a momentary switch connected to this lead. Pressing the button once will switch the system between ON and SOFT OFF. Pushing the switch while in the ON mode for more than 4 seconds will turn the system off. The Power LED shows the status of the system power.

#### 17. HDD LED Lead

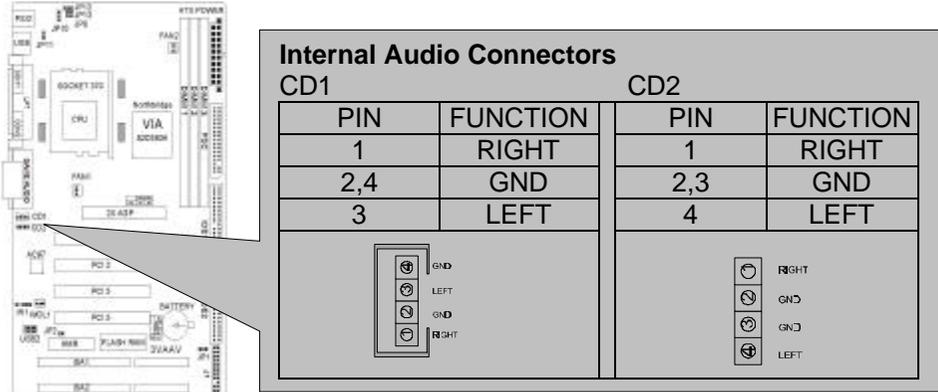
This connector supplies power to the cabinet IDE activity LED. Read and write activity by devices connected to the Primary or Secondary IDE connectors will cause the LED to Light up.

#### 18. Reset Switch Lead

This 2-pin connector connects to the case-mounted reset switch for rebooting your computer without having to turn off your power switch. This is a preferred method of rebooting to extend the life of the system power supply.

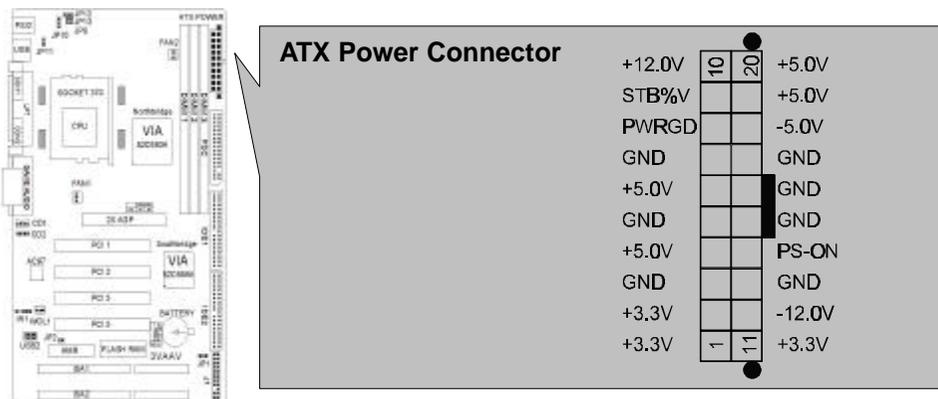
**19. Internal Audio Connectors:**

These connectors allow you to receive stereo audio input from the sound sources such as CD-ROM, TV tuner, and MPEG card.

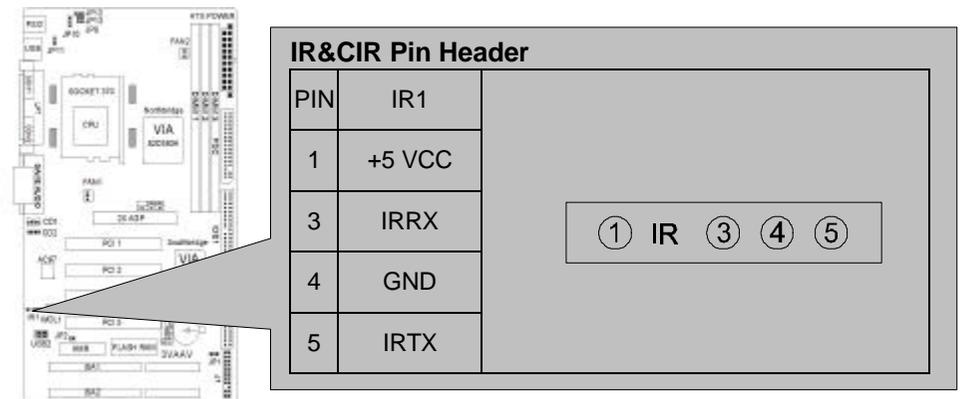


**20. ATX Power Connector:**

This connector connects to an ATX power supply. The plug from the power supply will only insert in one orientation because of the different hole sizes. Find the proper orientation and push down firmly making sure that the pins are aligned.



**21. IR Pin Header:IR1**



**2-6 Power Connection Procedures**

-  After all connections are made, close the system case cover.
-  Be sure that all switches are OFF.
-  Connect the power supply cord to the power supply located on the back of your system case according to your system user manual.
-  Connect the power cord to a power outlet that is equipped with a surge protector.
-  You may then turn ON your devices in the following order:
  - (1) Your monitor
  - (2) External SCSI devices (starting with the last device on the chain)
  - (3) Your system power For ATX power supplies, you need to switch ON the power supply if a switch is provided as well as press the ATX power switch on the front of the case.
-  The power LED on the front panel of the system case will light. For ATX power supplies, the power LED will light when the ATX power switch is pressed. The system will then run power-On tests. While the tests are running, additional messages will appear on the screen. If you do not see anything within 30 seconds from the time you turn on the power, the system

may have failed a power-on test. Check your jumper settings and connections again or call your retailer for assistance.



During power-ON, hold down <Delete> to enter BIOS setup. Follow the instructions in chapter 3 BIOS Setup



To power off you computer, you must first exit or shut down your operating system before switching OFF the power switch. For ATX power supplies, you can press the ATX power switch after exiting or shutting down your operating system. If you use Windows 95/98, click the start button, click shut down, and then click Shut down the computer. The power supply should turn OFF after Windows shuts down. For ATX power supplies, the message " You can now safely turn OFF your computer" will not appear when shutting down the computer.



# Chapter 3

## AWARD BIOS Setup

### 3-1 Introduction

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

The AwardBIOS™ installed in your computer system's ROM (Read Only Memory) is a custom version of an industry standard BIOS. This means that it supports Intel/Cyrix/AMD processors in a standard IBM-AT compatible input/output system. The BIOS provides critical low-level support for standard devices such as disk drives and serial and parallel ports.

The AwardBIOS™ has been customized by adding important, but non-standard, features such as virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

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

#### Starting Setup

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

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

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

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

PRESS F1 TO CONTINUE, DEL TO ENTER SETUP

#### Using Setup

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

Key	Function
Up arrow	Move to 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 and not save changes into 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
+ key	Increase the numeric value or make changes
- key	Decrease the numeric value or make changes
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu
(Shift)F2 key	Change color from total 16 colors. F2 to select color forward, (Shift) F2 to select color backward
F3 key	Calendar, only for Status Page Setup Menu
F4 key	Reserved
F5 key	Restore the previous CMOS value from CMOS, 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
F8 key	Reserved
F9 key	Reserved
F10 key	Save all the CMOS changes, only for Main Menu

#### Navigating through the menu bar

Use the left and right arrow keys to choose the menu you want to be in.

**To display a sub menu**

use the arrow keys to move the cursor to the sub menu you want. Then press <Enter>.

**Getting Help**

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

**In Case of Problems**

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

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

**A Final Note About Setup**

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

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

**3-2 MAIN MENU**

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

ROM PCI/ISA BIOS (2A6L6F69) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP	CPU SPEED SETTING
BIOS FEATURES SETUP	INTEGRATED PERIPHERALS
CHIPSET FEATURES SETUP	PASSWORD SETTING
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD FAIL-SAFE DEFAULTS	EXIT WITHOUT SAVING
LOAD OPTIMIZED DEFAULTS	
Esc : Quit	↑ ↓ ← → : Select Item
F10 : Save & Exit Setup	(Shift)F2 : Change Color

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

**SETUP ITEMS**

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

**STANDARD CMOS FEATURES**

Use this menu for basic system configuration.

**BIOS FEATURES SETUP**

Use this menu to set the Advanced Features available on your system.

**CHIPSET FEATURES SETUP**

Use this menu to change the values in the chipset registers and optimize your system's performance.

**POWER MANAGEMENT SETUP**

Use this menu to specify your settings for power management.

**PNP / PCI CONFIGURATION**

This entry appears if your system supports PNP / PCI.

**LOAD FAIL-SAFE DEFAULTS**

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

**LOAD OPTIMIZED DEFAULTS**

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.

**CPU SPEED SEETING**

Use this menu to specify your settings for CPU/DIMM frequency control.

**INTEGRATED PERIPHERALS**

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

**PASSWORD SETTING**

Use this menu to set User and Supervisor Passwords.

**IDE HDD AUTODETECTION**

Automatically configure hard disk parameters.

**SAVE & EXIT SETUP**

Save CMOS value changes to CMOS and exit setup.

**EXIT WITHOUT SAVE**

Abandon all CMOS value changes and exit setup.

**3-3 STANDARD CMOS SETUP**

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

```

ROM PCI/ISA BIOS (2A6L6FG9)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Date (mm:dd:yy) : Wed, Dec 29 1999
Time (hh:mm:ss) : 13 : 16 : 8

HARD DISKS          TYPE      SIZE  CYLS  HEAD  PRECOMP  LANDZ  SECTOR  MODE
-----
Primary Master    :    0      0      0    0      0      0      0    AUTO
Primary Slave     :    0      0      0    0      0      0      0    AUTO
Secondary Master  :    0      0      0    0      0      0      0    AUTO
Secondary Slave   :    0      0      0    0      0      0      0    AUTO

Drive A : None
Drive B : None

Video  : EGA/VGA
Halt On : All Errors

ESC : Quit          ↑ ↓ → ← : Select Item      PU/PD/+/- : Modify
F1  : Help          (Shift)F2 : Change Color

```

**Date**

The date format is <day>, <date> <month> <year>. Press <F3> to show the calendar.

day	The day, from Sun to Sat, determined by the BIOS and is display-only
date	The date, from 1 to 31 (or the maximum allowed in the month)
month	The month, Jan through Dec.
year	The year, from 1900 through 2099

**Time**

The time format is <hour> <minute> <second>. The time is calculated based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

**Primary Master/Primary Slave/Secondary Master/Secondary Slave**

The categories identify the types of 2 channels that have been installed in the computer. There are 45 predefined types and 4 user definable types are for Enhanced IDE BIOS. Type 1 to Type 45 are predefined. Type user is user-definable.

Press PgUp or PgDn to select a numbered hard disk type or type the number and press <Enter>. Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category. If your hard disk drive type is not matched or listed, you can use Type "User" to define your own drive type manually.

If you select Type "User", you will need to know the information listed below. Enter the information directly from the keyboard and press <Enter>. This information should be included in the documentation from your hard disk vendor or the system manufacturer.

If the controller of HDD interface is ESDI, the selection shall be "Type 1".  
 If the controller of HDD interface is SCSI, the selection shall be "None".  
 If you select Type "Auto", BIOS will Auto-Detect the HDD & CD-ROM Drive at the POST stage and showing the IDE for HDD & CD-ROM Drive.

TYPE	drive type
CYLS.	number of cylinders
HEADS	number of heads
PRECOMP	write precom
LANDZONE	landing zone
SECTORS	number of sectors
MODE	mode type

If a hard disk has not been installed select NONE and press <Enter>.

**Drive A Type / Drive B Type**

The category identifies the types of floppy disk drive A or drive B that have been installed in the computer.

None	No floppy drive installed
360K, 5.25 in	5-1/4 inch PC-type standard drive; 360 kilobyte capacity
1.2M, 5.25 in	5-1/4 inch AT-type high-density drive; 1.2 megabyte capacity
720K, 3.5 in	3-1/2 inch double-sided drive; 720 kilobyte capacity
1.44M, 3.5 in	3-1/2 inch double-sided drive; 1.44 megabyte capacity
2.88M, 3.5 in	3-1/2 inch double-sided drive; 2.88 megabyte capacity

**Video**

The category selects the type of video adapter used for the primary system monitor. Although secondary monitors are supported, you do not have to select the type in Setup.

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

**Halt On**

The category determines whether the computer will stop if an error is detected during power up.

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

**Memory**

The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

**Base Memory**

The POST will determine the amount of base (or conventional) memory installed in the system. The value of the base memory is typically 512K for systems with 512K memory installed on the motherboard, or 640K for systems with 640K or more memory installed on the motherboard.

**Extended Memory**

The BIOS determines how much extended memory is present during the POST. This is the amount of memory located above 1MB in the CPU's memory address map.

**Other Memory**

This refers to the memory located in the 640K to 1024K address space. This is memory that can be used for different applications. DOS uses this area to load device drivers in an effort to keep as much base memory free for application programs. The BIOS is the most frequent user of this RAM area since this is where it shadows RAM

**3-4 BIOS FEATURES SETUP**

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.

ROM PCI/ISA BIOS (2A6L6FG9) BIOS FEATURES SETUP AWARD SOFTWARE, INC.			
Virus Warning	: Disabled	Video BIOS Shadow	: Enabled
CPU Internal Cache	: Enabled	C8000-CBFFF Shadow	: Disabled
External Cache	: Enabled	CC000-CFFFF Shadow	: Disabled
CPU L2 Cache ECC Checking	: Enabled	D0000-D3FFF Shadow	: Disabled
Processor Number Feature	: Enabled	D4000-D7FFF Shadow	: Disabled
Quick Power On Self Test	: Enabled	D8000-DBFFF Shadow	: Disabled
Boot From LAN First	: Disabled	DC000-DFFFF Shadow	: Disabled
Boot Sequence	: A,C,SCSI		
Swap Floppy Drive	: Disabled		
Boot Up Floppy Seek	: Disabled		
Boot Up NumLock Status	: On		
IDE HDD Block Mode	: Enabled		
Gate A20 Option	: Fast		
Memory Parity/ECC Check	: Disabled		
Typeomatic Rate Setting	: Disabled		
Typeomatic Rate (Chars/Sec)	: 6	ESC : Quit	↑↓←→ : Select Item
Typeomatic Delay (Msec)	: 250	F1 : Help	PU/PD/+/- : Modify
Security Option	: Setup	F5 : Old Values (Shift)F2 : Color	
PCI/VGA Palette Snoop	: Disabled	F6 : Load Fail-Safe Defaults	
OS Select For DRAM > 64MB	: Non-OS2	F7 : Load Optimized Defaults	

**Virus Warning**

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 BIOS will halt the system and the following error message will appear. Afterwards, if necessary, you will be able to run an anti-virus program to locate and remove the problem before any damage is done.

<p><b>! WARNING !</b> Disk boot sector is to be modified Type "Y" to accept write or "N" to abort write Award Software, Inc.</p>
--

Enabled	Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.
Disabled	No warning message will appear when anything attempts to access the boot sector or hard disk partition table.

**NOTE: Many disk diagnostic programs which attempt to access the boot sector table can cause the above warning message. If you will be running such a program, we recommend that you first disable Virus Protection beforehand.**

#### CPU Internal Cache/External Cache

These two categories speed up memory access. However, it depends on CPU/chipset design. The default value is enable.

Enabled	Enable cache
Disabled	Disable cache

#### Quick Power On Self Test

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

Enabled	Enable quick POST
Disabled	Normal POST

#### CPU L2 Cache ECC Checking

This item allows you to Enable/Disable CPU L2 Cache ECC checking. The choice: Enabled, Disabled.

#### Processor Number Feature

The item is used to Enable/Disabled the Processor Number Feature. The choice: Enabled, Disabled.

#### Quick Power On Self Test

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

Enabled	Enable quick POST
Disabled	Normal POST

#### Boot From LAN First

This item allows you to select Enable/Disable power up your system through your Network by sending a wake-up frame or a signal. The choice: Enabled/Disabled.

#### Boot Sequence

This category determines which drive to search first for the disk operating system (i.e., DOS). Default value is A,C,SCSI.

C,A,SCSI (D,A,SCSI) (E,A,SCSI) (F,A,SCSI)	System will first search for hard disk drive then floppy disk drive and the next is SCSI drive.
A,C,SCSI	System will first search for floppy disk drive then hard disk drive and the next is SCSI drive.
CDROM, C, A	System will first search for CDROM drive, then hard disk drive and the next is floppy disk drive.
C, CDROM, A	System will first search for hard disk drive, then CDROM drive, and the next is floppy disk drive.
SCSI,A,C	System will first search for SCSI drive then floppy disk drive and the next is hard disk drive.
SCSI,C,A	System will first search for SCSI drive then hard disk drive and the next is floppy disk drive.
C only	System will search for hard disk drive only.

#### Swap Floppy Drive

This item allows you to determine whether enable the swap floppy drive or not. The choice: Enabled/Disabled.

#### Boot Up Floppy Seek

During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360K type is 40 tracks while 760K, 1.2M and 1.44M 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**

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

On	Keypad is number keys
Off	Keypad is arrow keys

**IDE HDD Block Mode**

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

The choice: Enabled, Disabled.

**Gate A20 Option**

This entry allows you to select how the gate A20 is handled. The gate A20 is a device used to address memory above 1 Mbytes. Initially, the gate A20 was handled via a pin on the keyboard. Today, while keyboards still provide this support, it is more common, and much faster, for the system chipset to provide support for gate A20.

Normal	keyboard
Fast	chipset

**Memory Parity/ECC Check**

This item allows you to Enable/Disable Memory Parity/ECC check.

The choice: Enabled/Disabled.

**Typematic Rate Setting**

This determines if the typematic rate is to be used. When disabled, continually holding down a key on your keyboard will generate only one 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.

Enabled	Enable typematic rate
Disabled	Disable typematic rate

**Typematic Rate(Chars/Sec)**

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

6	6 characters per second
8	8 characters per second
10	10 characters per second
12	12 characters per second
15	15 characters per second
20	20 characters per second
24	24 characters per second
30	30 characters per second

**Typematic Delay (Msec)**

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

250	250 msec
500	500 msec
750	750 msec
1000	1000 msec

**Security Option**

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

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

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

**PCI / VGA Palette Snoop**

It determines whether the MPEG ISA/VESA VGA Cards can work with PCI/VGA or not.

Enabled	When PCI/VGA working with MPEG ISA/VESA VGA Card.
Disabled	When PCI/VGA not working with MPEG ISA/VESA VGA Card.

**OS Select for DRAM > 64MB**

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

**Video BIOS Shadow**

Determines whether video BIOS will be copied to RAM. However, it is optional depending on chipset design. Video Shadow will increase the video speed.

Enabled	Video shadow is enabled
Disabled	Video shadow is disabled

**C8000 - CBFFF Shadow/DC000 - DFFFF Shadow**

These categories determine whether option ROMs will be copied to RAM. An example of such option ROM would be support of on-board SCSI.

Enabled	Optional shadow is enabled
Disabled	Optional shadow is disabled

**3-5 CHIPSET FEATURES SETUP**

ROM PCI/ISA BIOS (2A6LGF69)  
CHIPSET FEATURES SETUP  
AWARD SOFTWARE, INC.

```
Bank 0/1 DRAM Timing : SDRAM 10ns
Bank 2/3 DRAM Timing : SDRAM 10ns
Bank 4/5 DRAM Timing : SDRAM 10ns
SDRAM Cycle Length  : 3
DRAM Clock           : Host CLK
Memory Hole          : Disabled
Read Around write    : Disabled
Concurrent PCI/Host  : Disabled
System BIOS Cacheable : Disabled
Video RAM Cacheable  : Disabled
AGP Aperture Size    : 64M
AGP-2X Mode          : Enabled
OnChip USB           : Enabled
USB Keyboard Support : Disabled
OnChip Sound         : Enabled
OnChip Modem         : Enabled
```

```
ESC : Quit      F10 : Select Item
F1  : Help      PU/PD/+/- : Modify
F5  : Old Values (Shift)F2 : Color
F6  : Load Fail-Safe Defaults
F7  : Load Optimized Defaults
```

The parameters in this screen are for system designers, service personnel, and technically competent users only. Do not reset these values unless you understand the consequences of your changes.

NOTE: This chapter describes all fields offered by Award Software in this screen. Your system board designer may omit or modify some fields.

**Bank 0/1, 2/3, 4/5 DRAM Timing**

The DRAM timing of Bank 0/1, 2/3, 4/5, 6/7 in this field is set by the system board manufacturer, depending on whether the board has fast paged DRAMs or EDO (extended data output) DRAMs.

The Choice: SDRAM 10ns,SDRAM 8ns,Normal, Medium, Fast, Turbo.

**SDRAM Cycle Latency**

This field sets the CAS latency timing.

The Choice: 2, 3.

**DRAM Clock**

This item allows you select DRAM clock.

The choice: Host CLK,HCLK-33M,HCLK+33M.

**Memory Hole**

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

15M-16M	Memory hole supported.
Disabled	Memory hole not supported.

**Read Around Write**

DRAM optimization feature: If a memory read is addressed to a location whose latest write is being held in a buffer before being written to memory, the read is satisfied through the buffer contents, and the read is not sent to the DRAM.

The choice: Enabled, Disabled.

**Concurrent PCI/Host**

When disable, CPU bus will be occupied during the entire PCI operation period.

The choice: Enabled, Disabled.

**System BIOS Cacheable**

This item allows you enable/disable system BIOS cacheable.

The choice: Enabled, Disabled.

**Video RAM Cacheable**

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

Enabled	Video RAM access cached
Disabled	Video RAM access not cached

**AGP Aperture Size(MB)**

Select the size of the Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation. See [www.agpforum.org](http://www.agpforum.org) for AGP information.

The choice: 4, 8, 16, 32, 64, 128, 256

**AGP-2X Mode**

This item allows you select AGP speed.

The choice: Enabled, Disabled.

**OnChip USB**

This should be enabled if your system has a USB installed on the system board and you wish to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature.

The choice: Enabled, Disabled.

**USB Keyboard Support**

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

The choice: Enabled, Disabled.

**OnChip Sound**

This item allow you to Enable/Disable onchip AC97 sound.

The choice: Enabled, Disabled.

**OnChip Modem**

This item allow you to Enable/Disable onchip modem.

The choice: Enabled, Disabled.

### 3-6 POWER MANAGEMENT SETUP

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

ROM PCI/ISA BIOS (2A6LGF69) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.			
ACPI function	: Enabled	Primary INTR	: ON
Power Management	: User Define	IRQ3 (COM 2)	: Primary
PM Control by APM	: Yes	IRQ4 (COM 1)	: Primary
Video Off After	: Suspend	IRQ5 (LPT 2)	: Primary
Video Off Method	: V/H SYNC+Blank	IRQ6 (Floppy Disk)	: Primary
MODEM Use IRQ	: 3	IRQ7 (LPT 1)	: Primary
Soft-Off by PWRBTN	: Instant-Off	IRQ8 (RTC Alarm)	: Disabled
PWRON After PW-Fail	: Off	IRQ9 (IRQ2 Redir)	: Secondary
HDD Power Down	: Disable	IRQ10 (Reserved)	: Secondary
Doze Mode	: Disable	IRQ11 (Reserved)	: Secondary
Suspend Mode	: Disable	IRQ12 (PS/2 Mouse)	: Primary
VGA	: OFF	IRQ13 (Coprocessor)	: Primary
LPT & COM	: LPT/COM	IRQ14 (Hard Disk)	: Primary
HDD & FDD	: ON	IRQ15 (Reserved)	: Disabled
PCI Master	: OFF		
Modem Ring Resume	: Disabled	ESC : Quit	↑↓←→ : Select Item
RTC Alarm Resume	: Disabled	F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values (Shift)F2 : Color	
		F6 : Load Fail-Safe Defaults	
		F7 : Load Optimized Defaults	

#### ACPI function

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

The choice: Enabled, Disabled.

#### Power Management

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

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

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

Disable (default)	No power management. Disables all four modes
Min. Power Saving	Minimum power management. Doze Mode = 1 hr. Standby Mode = 1 hr., Suspend Mode = 1 hr., and HDD Power Down = 15 min.
Max. Power Saving	Maximum power management -- <b>ONLY AVAILABLE FOR SL CPU'S</b> . Doze Mode = 1 min., Standby Mode = 1 min., Suspend Mode = 1 min., and HDD Power Down = 1 min.
User Defined	Allows you to set each mode individually. When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

#### PM Control by APM

When enabled, an Advanced Power Management device will be activated to enhance the Max. Power Saving mode and stop the CPU internal clock. If the Max. Power Saving is not enabled, this will be preset to *No*. The choice: Enabled, Disabled.

#### Video Off After

Selects the power-saving modes during which the monitor goes blank:

NA	Monitor remains on during power-saving modes.
Suspend	Monitor blanked when system enters Suspend mode.
Doze	Monitor blanked when system enters any power saving mode.

#### Video Off Method

This determines the manner in which the monitor is blanked.

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

**MODEM Use IRQ**

This determines the IRQ in which the MODEM can use.  
The choice: 3, 4, 5, 7, 9, 10, 11, NA.

**Soft-Off by PWRBTN**

When Enabled, turning the system off with the on/off button places the system in a very low-power-usage state, with only enough circuitry receiving power to detect power button activity or Resume by Ring activity.  
The Choice: Instant-Off, Delay 4 Sec.

**PWRON After PW-Fail**

A traditional ATX system should remain at power off stage when AC power resumes from power failure. This design is inconvenient for a network server or workstation, without an UPS, that needs to keep power-on. This item is used to solve this problem. Selecting On lets the system can automatically power-on after AC power resumes; in the other hand, the system will power-off if you select Off. If Former-Sts option is selected, the system will power-on or power-off based on the original state.  
The Choice: off, on, Former-Sts.

**HDD Power Down**

When enabled and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.  
The Choice:Disable,1-15Min.

**Doze Mode**

When enabled and after the set time of system inactivity, the CPU clock will run at slower speed while all other devices still operate at full speed.  
The Choice:Disable,10Sec-1Hour.

**Suspend Mode**

When enabled and after the set time of system inactivity, all devices except the CPU will be shut off.  
The Choice:Disable,10Sec-1Hour.

**VGA**

When set to On (default), any event occurring at a VGA port will awaken a system which has been powered down.  
The Choice: ON,OFF.

**LPT & COM**

When set to LPT/COM(default), any event occurring at a COM(serial)/LPT (printer) port will awaken a system which has been powered down.  
The Choice: LPT/COM,NONE,LPT,COM.

**HDD & FDD**

When set to On (default), any event occurring at a hard or floppy drive port will awaken a system which has been powered down.  
The Choice: ON,OFF.

**PCI Master**

When set to *On* (default), any event occurring at will awaken a system which has been powered down.  
The Choice: ON,OFF.

**Modem Ring Resume**

When set to Enabled, any event occurring to the Modem Ring will awaken a system which has been powered down.  
The Choice: Enabled, Disabled.

**RTC Alarm Resume**

When *Enabled*, you can set the date and time at which the RTC (real-time clock) alarm awakens the system from Suspend mode  
The choice: Enabled, Disabled.

**Primary INTR**

When set to *On* (default), any event occurring at will awaken a system which has been powered down.  
The Choice: ON,OFF.

The following is a list of IRQ's, Interrupt ReQuests, which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service.

As above, the choices are *On* and *Off*. *Off* is the default.

When set *On*, activity will neither prevent the system from going into a power management mode nor awaken it.

IRQ3 (COM 2 )

IRQ4 (COM 1)

IRQ5 (LPT 2)

IRQ6 (Floppy Disk)

IRQ7 (LPT 1)

IRQ8 (RTC Alarm)

IRQ9 (IRQ2 Redir)

IRQ10 (Reserved)

IRQ11 (Reserved)

IRQ12 ( PS / 2 Mouse )

IRQ13 (Coprocesor)

IRQ14 (Reserved)

IRQ15 (Reserved)

### 3-7 PNP/PCI CONFIGURATION

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

ROM PCI/ISA BIOS (2A6LGF69) PNP/PCI CONFIGURATION AWARD SOFTWARE, INC.	
PNP OS Installed : No	PCI Delay Transaction : Disabled
Resources Controlled By : Manual	Assign IRQ For USB : Disabled
Reset Configuration Data : Disabled	Assign IRQ For VGA : Disabled
IRQ-3 assigned to : PCI/ISA PnP	
IRQ-4 assigned to : PCI/ISA PnP	
IRQ-5 assigned to : PCI/ISA PnP	
IRQ-7 assigned to : PCI/ISA PnP	
IRQ-9 assigned to : PCI/ISA PnP	
IRQ-10 assigned to : PCI/ISA PnP	
IRQ-11 assigned to : PCI/ISA PnP	
IRQ-12 assigned to : PCI/ISA PnP	
IRQ-14 assigned to : PCI/ISA PnP	
IRQ-15 assigned to : PCI/ISA PnP	
DMA-0 assigned to : PCI/ISA PnP	
DMA-1 assigned to : PCI/ISA PnP	
DMA-3 assigned to : PCI/ISA PnP	
DMA-5 assigned to : PCI/ISA PnP	
DMA-6 assigned to : PCI/ISA PnP	
DMA-7 assigned to : PCI/ISA PnP	
ESC : Quit	↑↓←→ : Select Item
F1 : Help	PU/PD/+/- : Modify
F5 : Old Values (Shift)F2 : Color	
F6 : Load Fail-Safe Defaults	
F7 : Load Optimized Defaults	

#### PNP OS Installed

Select Yes if the system operating environment is Plug-and-Play aware (e.g., Windows 95).

The Choice: Yes , No.

#### Resource Controlled by

The Award Plug and Play BIOS can automatically configure all the boot and Plug and Play-compatible devices. If you select Auto, all the interrupt request (IRQ) and DMA assignment fields disappear, as the BIOS automatically assigns them.

The choice: Auto and Manual.

#### Reset Configuration Data

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new

add-on and the system reconfiguration has caused such a serious conflict that the operating system cannot boot.

The choice: Enabled and Disabled.

#### **IRQ n Assigned to**

When resources are controlled manually, assign each system interrupt as one of the following types, depending on the type of device using the interrupt:

Legacy ISA Devices compliant with the original PC AT bus specification, requiring a specific interrupt (such as IRQ4 for serial port 1).

PCI/ISA PnP Devices compliant with the Plug and Play standard, whether designed for PCI or ISA bus architecture.

#### **DMA n Assigned to**

When resources are controlled manually, assign each system DMA channel as one of the following types, depending on the type of device using the interrupt:  
Legacy ISA Devices compliant with the original PC AT bus specification, requiring a specific DMA channel  
PCI/ISA PnP Devices compliant with the Plug and Play standard, whether designed for PCI or ISA bus architecture.

#### **PCI Delay Transaction**

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

The choice: Enabled, Disabled.

#### **Assign IRQ For USB/VGA/ACPI**

Name the interrupt request (IRQ) line assigned to the USB/VGA/ACPI (if any) on your system. Activity of the selected IRQ always awakens the system.

The choice: Enabled, Disabled.

### **3-8 Defaults Menu**

Selecting "Defaults" from the main menu shows you two options which are described below

#### **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) ?**  Y  N

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

#### **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) ?**  Y  N

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

## 3-9 CPU SPEED SEETING

ROM PCI/ISA BIOS (2A6LGF69) CPU FEATURES SETUP AWARD SOFTWARE, INC.	
CPU Ratio	: 8 3
Auto Detect DIMM/PCI Clk	: Disabled
Spread Spectrum	: Disabled
CPU Host Clock (CPU/PCI)	: Default
Current CPU Temp.	:
Current System Temp.	:
Current CPUFAN1 Speed	:
Current CPUFAN2 Speed	:
Vcore :	2.5V :
3.3V :	5V :
1.2V :	:
ESC : Quit      ↑↓ : Select Item F1 : Help      PU/PD/+/- : Modify F5 : Old Values (Shift)F2 : Color F6 : Load Fail-Safe Defaults F7 : Load Optimized Defaults	

**CPU Clock Ratio**

This item allows you to select The CPU ratio.  
The choice:3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8.

**Auto Detect DIMM/PCI Clk**

This item allow you to Enable/Disable system auto detect DIMM/PCI clock.  
The choice: Enabled, Disabled.

**Spread Spectrum**

This item allows you to Enable/Disable the spread spectrum modulate.  
The choice: Enabled, Disabled.

**CPU Host Clock(CPU/PCI)**

This item allows you to select the CPU,DIMM and PCI Frequency.  
The choice: Default,66/33,75/37,83/41,100/33,103/34,112/37,124/41,133/44,  
124/31,133/33,140/35,150/37 MHz

The option provides fan rotations, Voltages, and temperature of the system.

## 3-10 INTERGRATED PERIPHERALS

ROM PCI/ISA BIOS (2A6LGF69) INTEGRATED PERIPHERALS AWARD SOFTWARE, INC.	
OnChip IDE Channel0	: Enabled
OnChip IDE Channel1	: 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
Keyboard Power On	: Disabled
Onboard FDD Controller	: Enabled
Onboard Serial Port 1	: Auto
Onboard Serial Port 2	: Auto
UART 2 Mode	: Standard
Onboard Parallel Port	: 378/IRQ7
Onboard Parallel Mode	: Normal
Onboard Legacy Audio	: Enabled
Sound Blaster	: Disabled
SB I/O Base Address	: 220H
SB IRQ Select	: IRQ 5
SB DMA Select	: DMA 1
MPU-401	: Disabled
MPU-401 I/O Address	: 330-333H
Game Port (200-207H)	: Enabled
ESC : Quit      ↑↓ : Select Item F1 : Help      PU/PD/+/- : Modify F5 : Old Values (Shift)F2 : Color F6 : Load Fail-Safe Defaults F7 : Load Optimized Defaults	

**OnChip IDE Channel0/ Channel1**

The chipset contains a PCI IDE interface with support for two IDE channels. Select Enabled to activate the first and/or second IDE interface. Select Disabled to deactivate an interface, if you install a primary and/or secondary add-in IDE interface.

The choice: Enabled, Disabled.

**IDE Prefetch Mode**

The onboard IDE drive interfaces supports IDE prefetching, for faster drive accesses. If you install a primary and/or secondary add-in IDE interface, set this field to Disabled if the interface does not support prefetching.

The choice: Enabled, Disabled.

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

The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

The choice: AUTO, Mode 0-Mode 4.

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

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

The Choice: Auto, Disabled

**Init Display First**

This item allows you to decide to active PCI Slot or AGP first

The choice: PCI Slot, AGP.

**Keyboard Power On**

If enable this item, you can boot up the system by power button and the wake-up Key on Keyboard 98 .

The Choice: Enabled, Disabled.

**Onboard FDD Controller**

This should be enabled if your system has a floppy disk drive (FDD) installed on the system board and you wish to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature.

The Choice: Enabled, Disabled.

**Onboard Serial Port 1/Port 2**

This item allows you to determine access onboard serial port 1/port 2 controller with which I/O address.

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

**UART 2 Mode**

This item allows you to determine which Infra Red (IR) function of onboard I/O chip.

The Choice: Standard, ASKIR, HPSIR.

**Onboard Parallel Port**

Select a logical LPT port name and matching address for the physical parallel (printer) port.

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

**Onboard Parallel Mode**

Select an operating mode for the onboard parallel (printer) port. Normal EPP (Extended Parallel Port) ECP (Extended Capabilities Port) CEP+EPP PC AT parallel port Bidirectional port Fast, buffered port Fast, buffered, bidirectional port.

Select Normal unless you are certain your hardware and software both support EPP or ECP mode.

The choices : SPP, ECP/EPP, ECP, EPP/SPP.

**ECP Mode Use DMA**

Select a DMA channel for the port.

The choices : 3, 1.

**Parallel Port EPP Type**

Select EPP port type 1.7 or 1.9.

The choices : EPP1.7, EPP1.9

**3-11 PASSWORD SETTING**

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

**supervisor password** : can enter and change the options of the setup menus.

**user password** : just can only enter but do not have the right to change the options of the setup menus. When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

**ENTER PASSWORD:**

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

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

**PASSWORD DISABLED.**

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

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

You determine when the password is required within the BIOS Features Setup Menu and its Security option (see Section 3). If the Security option is set to "System", the password will be required both at boot and at entry to Setup. If set to "Setup", prompting only occurs when trying to enter Setup.

**3-12 IDE HDD AUTO DETECTION**

This option detects the parameters of an IDE hard disk drive, and automatically enters them into the Standard CMOS Setup screen.

These 4 IDE drivers can be detected, with parameters for each listed inside the block. Press **<Y>** to accept the H.D.D. parameter reported by BIOS or press **<N>** to keep the old H.D.D. parameter setup and to the next drive, If the hard disk cylinder NO. is over 1024, then the user can select LBA mode or LARGE mode for DOS partition larger than 528 MB.

**3-13 Exit Selecting****SAVE & EXIT SETUP**

Pressing **<Enter>** on this item asks for confirmation:

**SAVE to CMOS and EXIT (Y/N)?** **Y**

Pressing "Y" stores the selections made in the menus in CMOS – a special section of memory that stays on after you turn your system off. The next time you boot your computer, the BIOS configures your system according to the Setup selections stored in CMOS. After saving the values the system is restarted again.

**EXIT WITHOUT SAVING**

Pressing **<Enter>** on this item asks for confirmation:

**Quit without saving (Y/N)?** **Y**

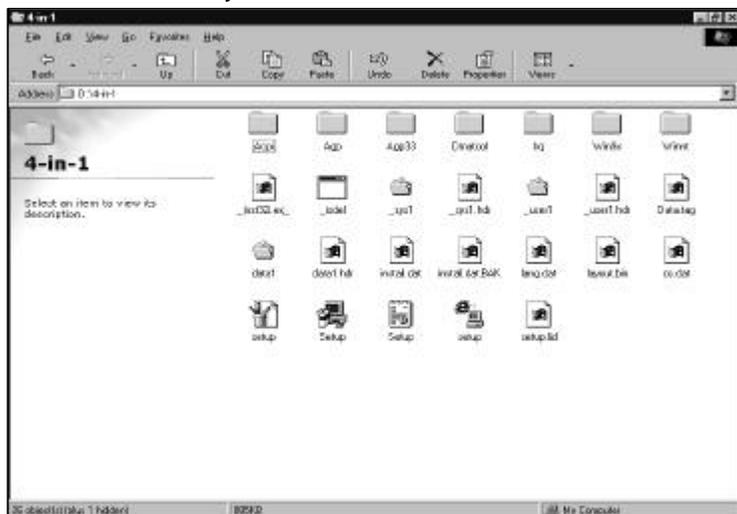
This allows you to exit Setup without storing in CMOS any change. The previous selections remain in effect. This exits the Setup utility and restarts your computer.

# Chapter 4

## Software Driver Install

### 4-1 UPDATED PRODUCT INFORMATION

1. Enter the 4IN1 subdirectory and double-click SETUP.EXE.

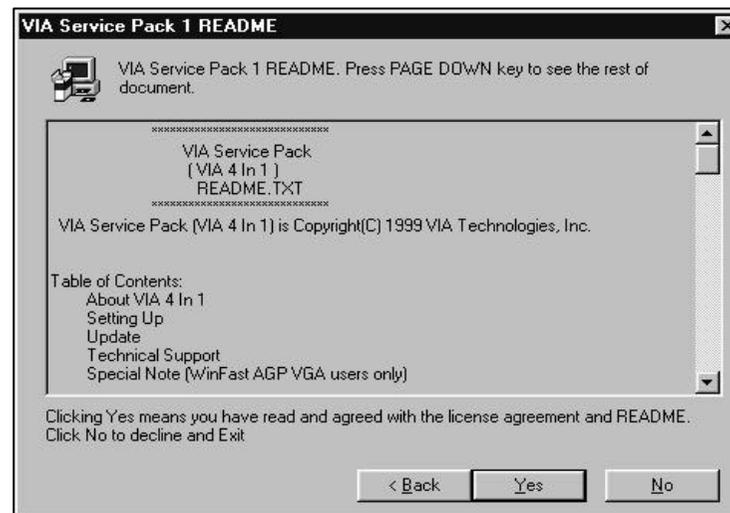


2. Click "Next" at the Welcome screen.



4-1

3. Read the license agreement and click "Yes" to continue.



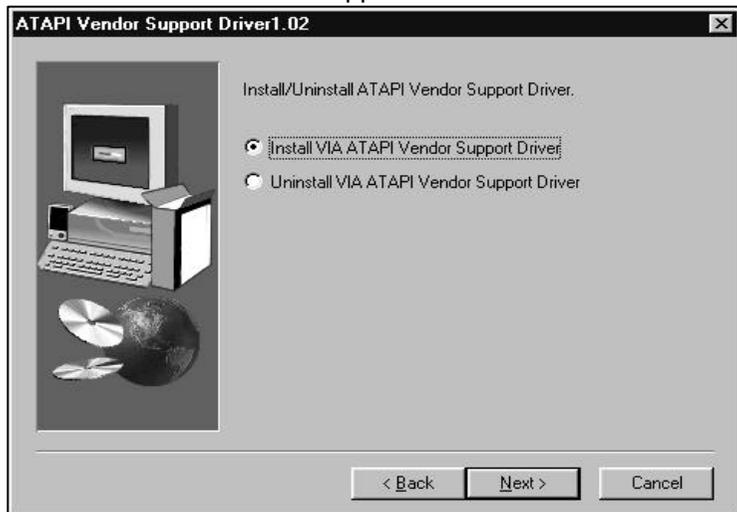
4. Select all driver to install and click "NEXT" to continue



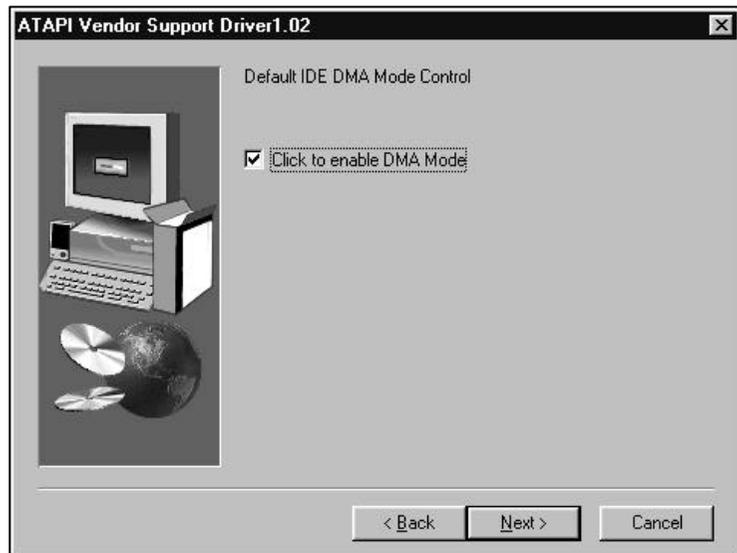
*\* If you are using Windows®98 SE, you do not need to install the 4-in-1 driver as the IRQ Routing Driver and the ACPI Registry are already incorporated into the operating system. Users with Windows®98 SE may update the IDE Busmaster and AGP drivers by installing them individually.*

4-2

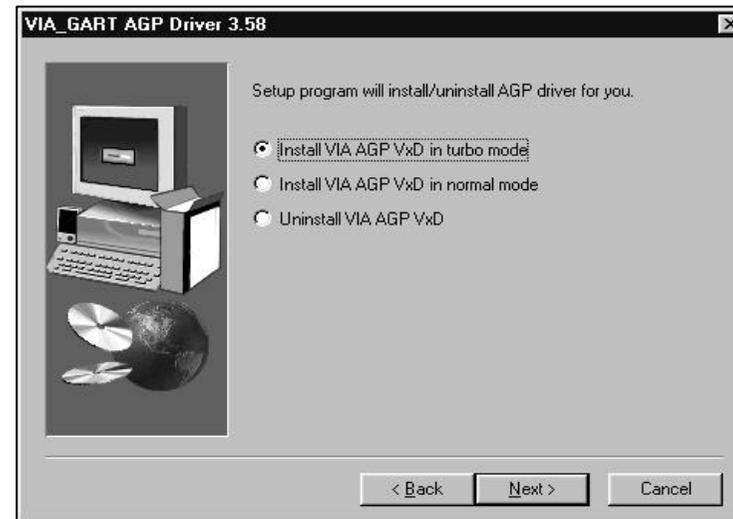
5. Select "Install VIA ATAPI Vendor Support Driver" and click "NEXT" to continue.



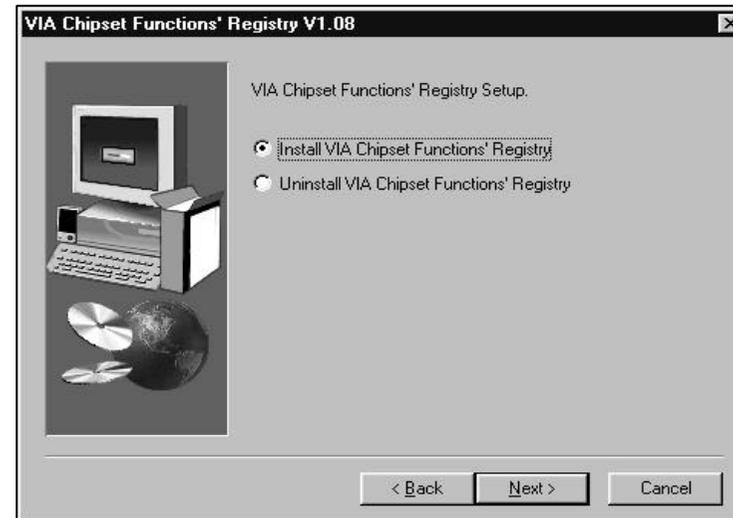
6. Select "Click to enable DMA Mode" and click "NEXT" to continue.



7. Select "Install VIA AGP VxD in turbo mode" and click "NEXT" to continue.



8. Select "Install VIA Chipset Functions' Registry" and click "NEXT" to continue.





3. Select "install" and click "NEXT" to continue.

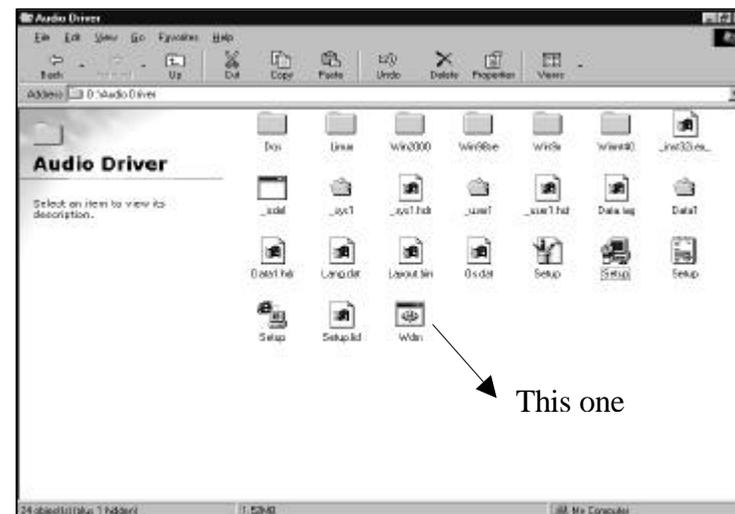


4. Choose the "Yes" to reboot option and click "Finish" to restart your computer. The driver should now be loaded.



4-3 Install Audio Driver(WDM MODE)

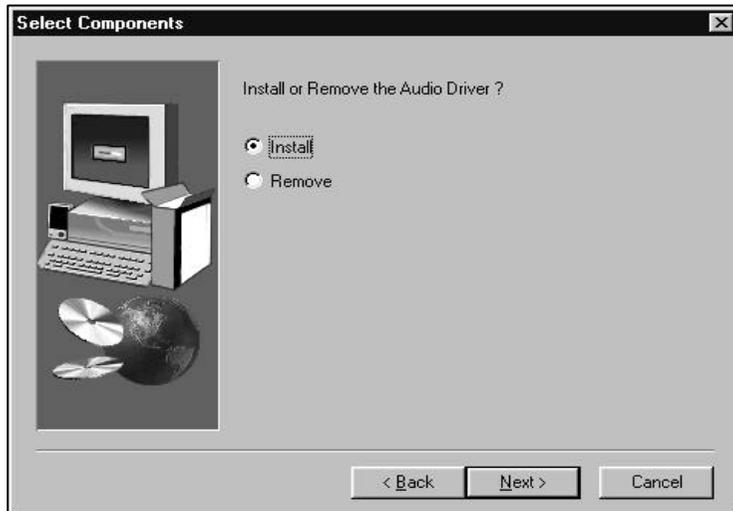
2. To install with the latest Driver /application, please run WDM.BAT file (included in the "Audio Driver" subdirectory), double-click WDM.EXE.



2. Click "Next" at the Welcome screen.



3. Select "install" and click "NEXT" to continue.



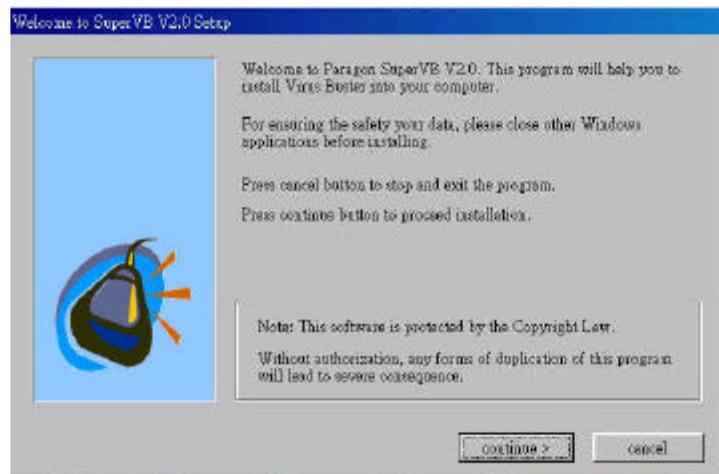
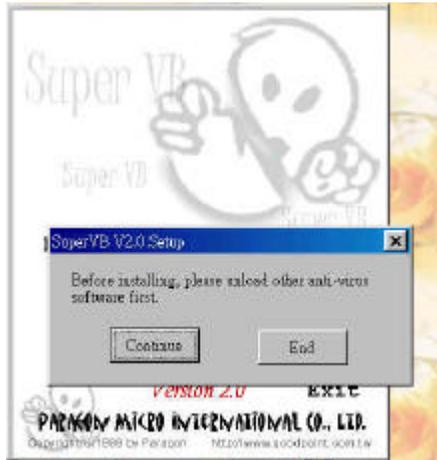
4. Choose the "Yes" to reboot option and click "Finish" to restart your computer. The driver should now be loaded.



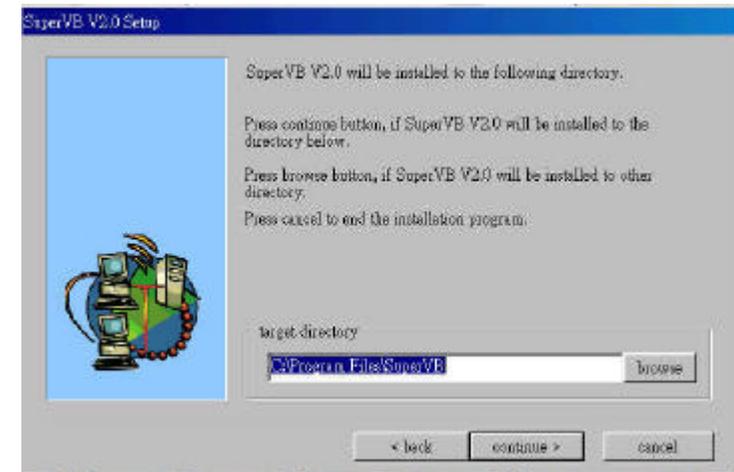
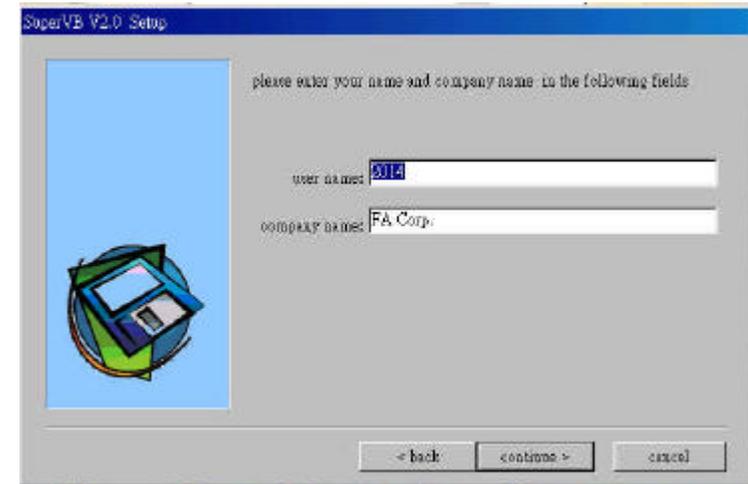
# Chapter 5 Anti-Virus software installation

## 5-1 Anti-Virus software installation

Put CD title driver into CD ROM, then choose "Anti-Virus software" on the main menu, follow each instruction on the screen as the followings.



5-1



5-2

