

FCC Compliance Statement:

| |
|---|
| <p style="text-align: center;">DECLARATION OF CONFORMITY <small>Per FCC Part 2 Section 2.107(a)</small></p> <p style="text-align: center;">FCC</p> <p>Responsible Party Name: G.B.T. INC. Address: 18305 Valley Blvd., Suite 618 LA Puente, CA 91744 Phone/Fax No: (818) 854-9338 / (818) 854-9339</p> <p>hereby declares that the product Product Name: Mother Board Model Number: GA-6VTXD</p> <p>Conforms to the following specifications: FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109(a), Class B Digital Device</p> <p>Supplementary Information: This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference received, including that may cause undesired operation.</p> <p>Representative Person's Name: <u>ERIC LU</u> Signature: <u>Eric Lu</u> Date: <u>Sep. 12, 2001</u></p> |
|---|

This equipment has been tested and found to comply with 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 residential installations. 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, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television equipment reception, which can be

determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Move the equipment away from the receiver
- Plug the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/television technician for additional suggestions

You are cautioned that any change or modifications to the equipment not expressly approve by the party responsible for compliance could void Your authority to operate such equipment.

This device complies with Part 15 of the FCC Rules. Operation is subjected to the following two conditions 1) this device may not cause harmful interference and 2) this device must accept any interference received, including interference that may cause undesired operation.

Declaration of Conformity

We, Manufacturer/Importer
(full address)

G.B.T. Technology Trading GmbH
Ausschlagler Weg 41, 1F, 20537 Hamburg, Germany

declare that the product
(description of the apparatus, system, installation to which it refers)

Mother Board
GA-6VTXD

is in conformity with
(reference to the specification under which conformity is declared)
in accordance with 89/336 EEC-EMC Directive

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> EN 55011 | Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM high frequency equipment | <input type="checkbox"/> EN 61000-3-2* <input checked="" type="checkbox"/> EN60555-2 | Disturbances in supply systems caused by household appliances and similar electrical equipment "Harmonics" |
| <input type="checkbox"/> EN55013 | Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment | <input type="checkbox"/> EN61000-3-3* <input checked="" type="checkbox"/> EN60555-3 | Disturbances in supply systems caused by household appliances and similar electrical equipment "Voltage fluctuations" |
| <input type="checkbox"/> EN 55014 | Limits and methods of measurement of radio disturbance characteristics of household electrical appliances, portable tools and similar electrical apparatus | <input checked="" type="checkbox"/> EN 50081-1 <input checked="" type="checkbox"/> EN 50082-1 | Generic emission standard Part 1: Residual, commercial and light industry Generic immunity standard Part 1: Residual, commercial and light industry |
| <input type="checkbox"/> EN 55015 | Limits and methods of measurement of radio disturbance characteristics of fluorescent lamps and luminaries | <input type="checkbox"/> EN 55081-2 | Generic emission standard Part 2: Industrial environment |
| <input type="checkbox"/> EN 55020 | Immunity from radio interference of broadcast receivers and associated equipment | <input type="checkbox"/> EN 55082-2 | Generic immunity standard Part 2: Industrial environment |
| <input checked="" type="checkbox"/> EN 55022 | Limits and methods of measurement of radio disturbance characteristics of information technology equipment | <input type="checkbox"/> ENV 55104 | Immunity requirements for household appliances tools and similar apparatus |
| <input type="checkbox"/> DIN VDE 0855 <input type="checkbox"/> part 10 <input type="checkbox"/> part 12 | Cabled distribution systems; Equipment for receiving and/or distribution from sound and television signals | <input type="checkbox"/> EN 50091- 2 | EMC requirements for uninterruptible power systems (UPS) |
- CE marking  (EC conformity marking)

The manufacturer also declares the conformity of above mentioned product with the actual required safety standards in accordance with LVD 73/23 EEC

- | | | | |
|-----------------------------------|---|-------------------------------------|---|
| <input type="checkbox"/> EN 60065 | Safety requirements for mains operated electronic and related apparatus for household and similar general use | <input type="checkbox"/> EN 60950 | Safety for information technology equipment including electrical business equipment |
| <input type="checkbox"/> EN 60335 | Safety of household and similar electrical appliances | <input type="checkbox"/> EN 50091-1 | General and Safety requirements for uninterruptible power systems (UPS) |

Manufacturer/Importer

(Stamp)

Date : Sep. 12, 2001

Signature : Rex Lin
Name : Rex Lin

6VTXD

Dual Socket 370 Server/Workstation Motherboard

USER'S MANUAL

Dual Socket 370 Server/Workstation Motherboard
REV. 1.0 Second Edition
12ME-6VTXD-1002

How This Manual Is Organized

This manual is divided into the following sections:

| | |
|--------------------------------|---|
| 1) Revision History | Manual revision information |
| 2) Item Checklist | Product item list |
| 3) Features | Product information & specification |
| 4) Installation Guide | Instructions on CPU & Memory Installation |
| 5) Performance & Block Diagram | Product performance & block diagram |
| 6) Q-Flash | Q-Flash introduction |
| 7) @BIOS™ | @BIOS™ introduction |
| 8) BIOS Setup | Instructions on setting up the BIOS software |
| 9) Technical Support/RMA Sheet | Document equipment used for after sales service |
| 10) Appendix | General reference |

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Revision History

| Revision | Revision Note | Date |
|----------|---|----------|
| 1.0 | Initial release of the 6VTXD motherboard user's manual. | Sep.2001 |
| 1.0 | Second release of the 6VTXD motherboard user's manual. | Sep.2001 |

The author assumes no responsibility for any errors or omissions that may appear in this document nor does the author make a commitment to update the information contained herein.

Third-party brands and names are the property of their respective owners.

Please do not remove any labels on motherboard, this may void the warranty of this motherboard.

Sep. 10, 2001 Taipei, Taiwan, R.O.C

Item Checklist

- The 6VTXD motherboard
- Cable for IDE / floppy device
- Diskettes or CD for motherboard driver & utility
- 6VTXD user's manual

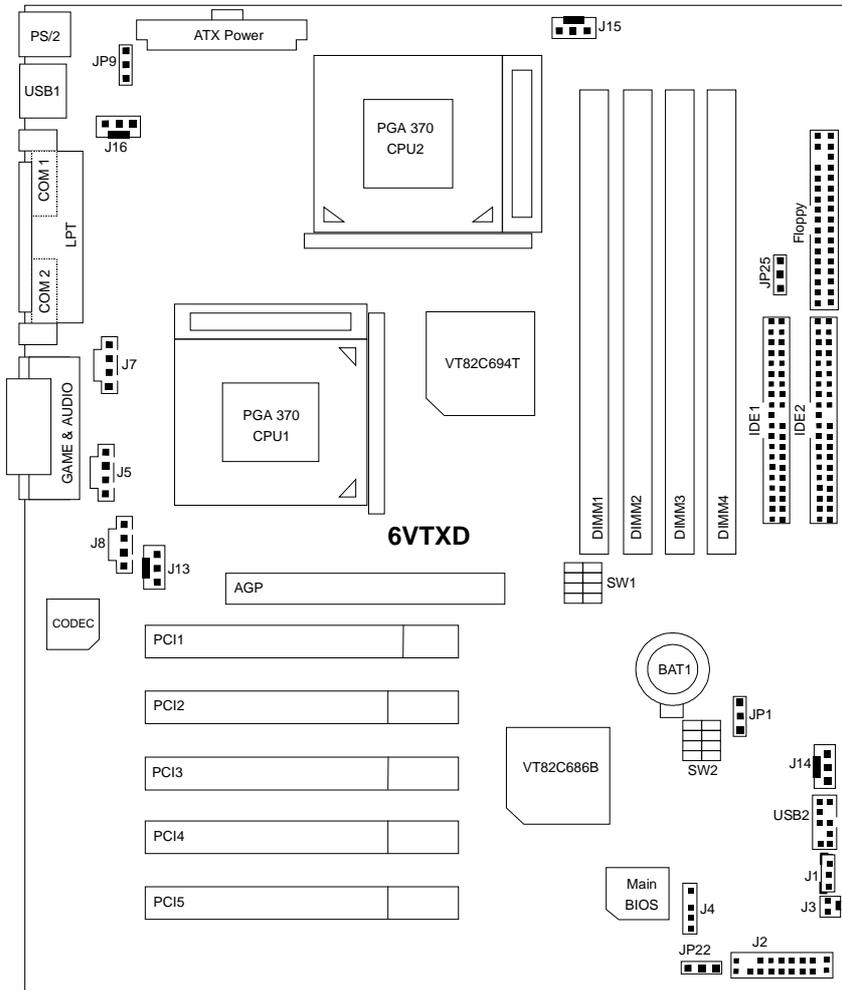
Features Summary

| | |
|------------------|---|
| Form Factor | <ul style="list-style-type: none"> 30.5 cm x 24.4 cm ATX size form factor, 6 layers PCB. |
| CPU | <ul style="list-style-type: none"> 2 Socket 370 processor <ul style="list-style-type: none"> Supports all new PentiumIII processors (FC-PGA & FC-PGA2 package) Supports 100/133MHz system bus frequency Can't Support processor with Vcore above 1.8V L2 cache in CPU (Depend on CPU) |
| Chipset | <ul style="list-style-type: none"> VT82C694T (VIA Apollo Pro 133T) VT82C686B |
| Clock Generator | <ul style="list-style-type: none"> ICS 9248AF-63 100/133 MHz system bus speeds (PCI 33MHz) *112/*124/*142/*152 MHz system bus speeds (PCI >33MHz) (* These speed settings are not guaranteed) |
| Memory | <ul style="list-style-type: none"> 4 168-pin DIMM sockets Supports PC-100 / PC-133 SDRAM and VCM SDRAM Supports up to 2GB DRAM (Max) Supports only 3.3V SDRAM DIMM Supports 72bit ECC type DRAM integrity mode |
| I/O Control | <ul style="list-style-type: none"> VT82C686B |
| Slots | <ul style="list-style-type: none"> 1 AGP slot supports 2X/4X mode & AGP 2.0 compliant 5 PCI slot supports 33MHz & PCI 2.2 compliant |
| On-Board IDE | <ul style="list-style-type: none"> Supports PIO mode 3, 4, UDMA 33/ATA 66/ATA 100 IDE & ATAPI CD-ROM 2 IDE bus master (UDMA 33/ATA 66/ATA 100) IDE ports for up to 4 ATAPI devices |
| Hardware Monitor | <ul style="list-style-type: none"> CPU1 / CPU2 Fan revolution detect CPU1 / CPU2 temperature detect System voltage detect |

To be continued...

| | |
|----------------------|--|
| On-Board Peripherals | <ul style="list-style-type: none">• 1 floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88M bytes• 1 parallel ports supports Normal/EPP/ECP mode• 2 serial ports (COM 1 & COM 2)• 4 USB ports• 1 IrDA connector for IR |
| PS/2 Connector | <ul style="list-style-type: none">• PS/2[®] Keyboard interface and PS/2[®] Mouse interface |
| BIOS | <ul style="list-style-type: none">• Licensed AMI BIOS, 2M bit flash ROM |
| On-Board Sound | <ul style="list-style-type: none">• AC'97 CODEC• Line In / Line Out / Mic In / AUX In / CD In / TEL / Game Port |
| Additional Features | <ul style="list-style-type: none">• Support Wake-On-LAN (WOL)• Support Internal / External Modem Ring On• Includes 4 fan power connectors• Poly fuse for keyboard over-current protection• Support @BIOS™ |

6VTXD Motherboard Layout



Installation Guide

Getting Started

**WARNING!**

Computer motherboards and expansion cards contain very delicate Integrated Circuit (IC) chips. To protect them against damage from static electricity, you should follow some precautions whenever you work on your computer.

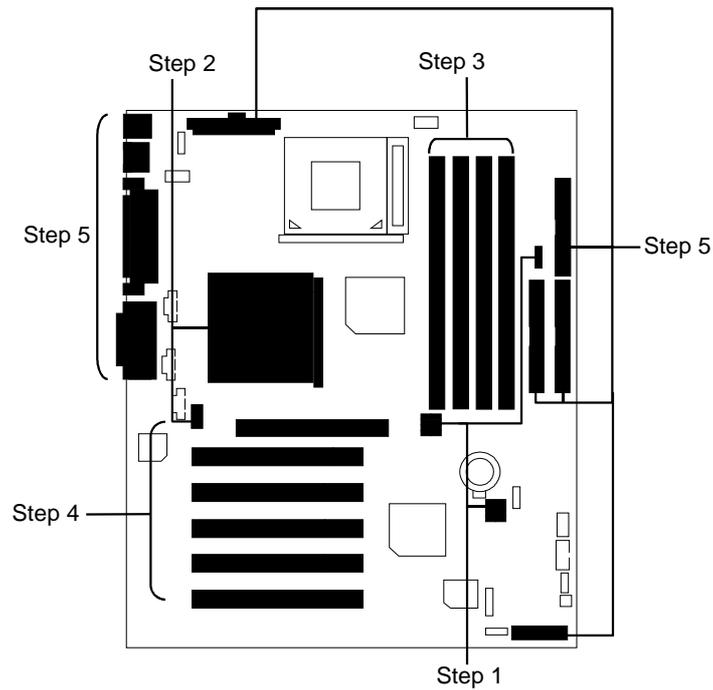
1. Unplug your computer when working on the inside.
2. Use a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case.
3. Hold components by the edges and try not touch the IC chips, leads or connectors, or other components.
4. Place components on a grounded antistatic pad or on the bag that came with the components whenever the components are separated from the system.
5. Ensure that the ATX power supply is switched off before you plug in or remove the ATX power connector on the motherboard.

Installing the motherboard to the chassis...

If the motherboard has mounting holes, but they don't line up with the holes on the base and there are no slots to attach the spacers, do not become alarmed you can still attach the spacers to the mounting holes. Just cut the bottom portion of the spacers (the spacer may be a little hard to cut off, so be careful of your hands). In this way you can still attach the motherboard to the base without worrying about short circuits. Sometimes you may need to use the plastic springs to isolate the screw from the motherboard PCB surface, because the circuit wire may be near by the hole. Be careful, don't let the screw contact any printed circuit write or parts on the PCB that are near the fixing hole, otherwise it may damage the board or cause board malfunctioning.

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

- ▶ Step 1 - Set system jumpers
- ▶ Step 2- Install the Central Processing Unit (CPU)
- ▶ Step 3-Install memory modules
- ▶ Step 4-Install expansion cards
- ▶ Step 5-Connect ribbon cables, cabinet wires, and power supply
- ▶ Step 6-Set up BIOS software
- ▶ Step 7-Install supporting software tools



CPU Speed Setup

The system bus speed is selectable at 100,133MHz. The user can select the system bus speed (**SW1 & JP25**) and change the DIP switch (**SW2**) selection to set up the CPU speed for 500 – 1GHz + processor.

SW1/JP25: O : ON, X : OFF

| 1 | 2 | 3 | 4 | JP25 | CPU (MHz) | PCI (MHz) |
|---|---|---|---|-----------|-----------|-----------|
| X | X | X | X | 1-2 | Force 100 | 33 |
| X | X | X | X | 2-3(Auto) | 100 | 33 |
| O | X | X | X | 1-2 | Force 112 | 37 |
| O | O | X | X | 1-2 | Force 124 | 41 |
| O | O | O | X | NC | Force 133 | 33 |
| O | O | O | X | 2-3(Auto) | 133 | 33 |
| X | O | O | X | NC | Force 142 | 35 |
| O | X | O | X | NC | Force 152 | 38 |

The CPU speed must match with the frequency ratio. It will cause system hanging up if the frequency ratio is higher than that of CPU.

SW2: O : ON, X : OFF

| FREQ. RATIO | DIP SWITCH | | | |
|-------------|------------|---|---|---|
| | 1 | 2 | 3 | 4 |
| X3 | O | X | O | O |
| X3.5 | X | X | O | O |
| X4 | O | O | X | O |
| X4.5 | X | O | X | O |
| X5 | O | X | X | O |
| X5.5 | X | X | X | O |
| X6 | O | O | O | X |
| X6.5 | X | O | O | X |
| X7 | O | X | O | X |
| X7.5 | X | X | O | X |
| X8 | O | O | X | X |
| X8.5 | O | X | O | O |
| X9 | X | X | O | O |
| X9.5 | X | O | O | O |
| X10 | X | O | X | X |

6VTXD Motherboard

| | | | | |
|-------|---|---|---|---|
| X10.5 | O | O | X | O |
| X11 | O | X | X | X |
| X11.5 | X | O | X | O |
| X12 | O | X | X | O |
| X13 | X | X | X | O |
| X14 | O | O | O | X |
| X15 | X | O | O | X |
| X16 | O | X | O | X |

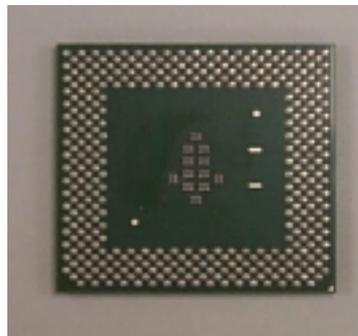
CPU Installation

Please make sure the CPU type and speed is supported by your motherboard.

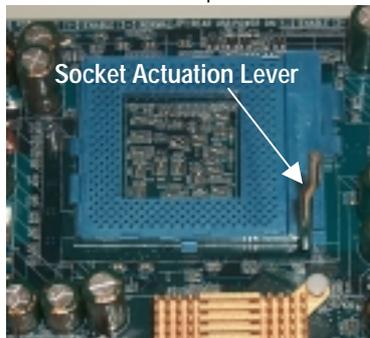
For example: The newest Pentium III processor (FC-PGA2 package).



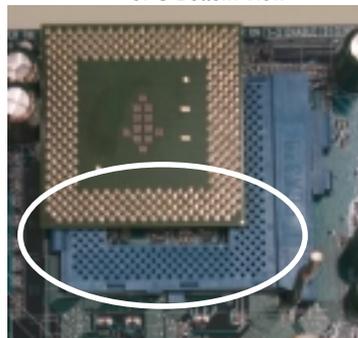
CPU Top View



CPU Bottom View



1. Pull the lever out and lift it up.



2. The notched corner should point toward the end of the lever. The CPU will only fit in the orientation as shown.

▶ CPU Heat Sink Installation:

Beware: Please check that the heat sink is in good contact with the CPU before you turn on your system. **Poor contact will cause over heat with might cause damage to your processor!**



3. Align CPU and insert it

(Please refer to your heatsink installation manual for application of thermal grease to provide better heat conduction between your CPU and heatsink.)



4. Use compliant fan approved by Intel.

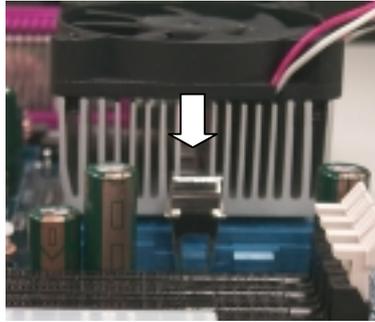


5. Hook one end of the cooler bracket to the CPU socket.

6. Hook the other end of the cooler bracket to the CPU socket.

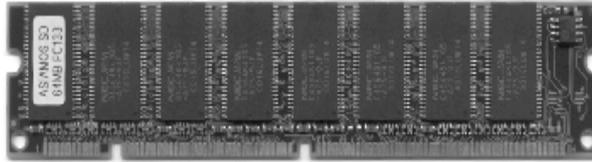
7. Make sure the CPU fan is plugged to the CPU fan connector, than install complete.

▶ (Please refer to the cooler's installation manual for detailed installation steps)

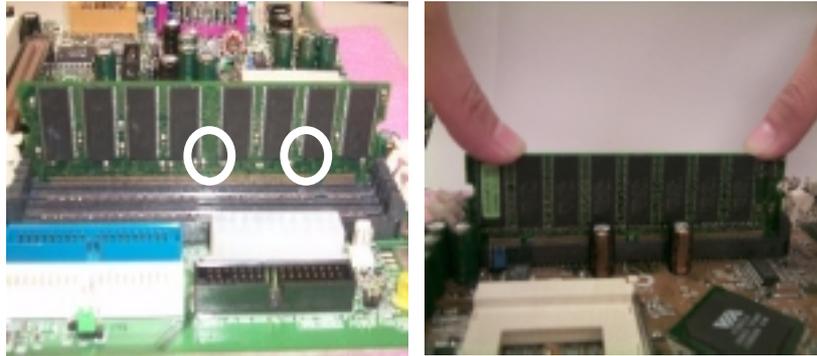


Memory Installation

The motherboard has 4 dual inline memory module (DIMM) sockets support 8 banks. The BIOS will automatically detects memory type and size. To install the memory module, just push it vertically into the DIMM Slot .The DIMM module can only fit in one direction due to the two notch. Memory size can vary between sockets.



SDRAM

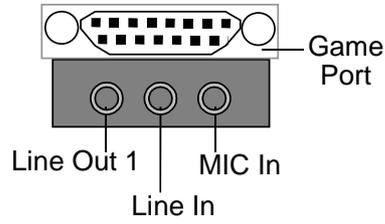
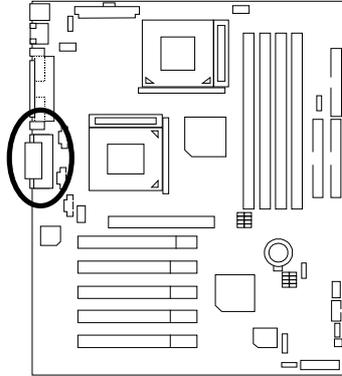


1. The DIMM slot has two notch, so the DIMM memory module can only fit in one direction.
 2. Insert the DIMM memory module vertically into the DIMM slot. Then push it down.
 3. Close the plastic clip at both edges of the DIMM slots to lock the DIMM module.
-  Reverse the installation steps when you wish to remove the DIMM module.

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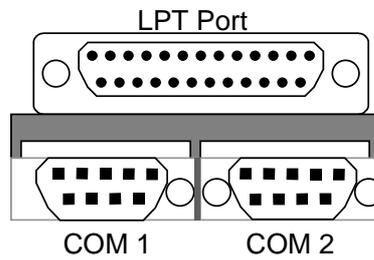
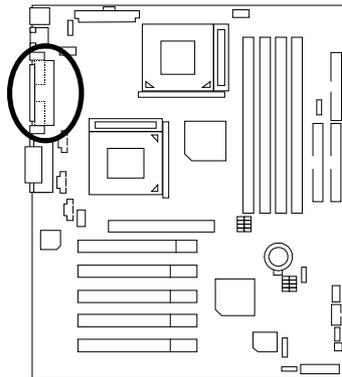
Connectors

Game & Audio Port

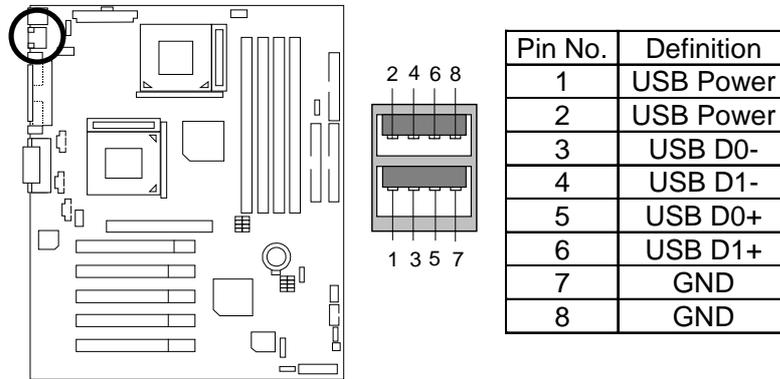


Please note: This motherboard supports standard audio port and game port. After install onboard audio driver. you may connector speaker to line out jack, micro phone to MIC in jack Device like CD-ROM , walkman etc can be connected to line-in jack.

COM 1 / COM 2 / LPT Port

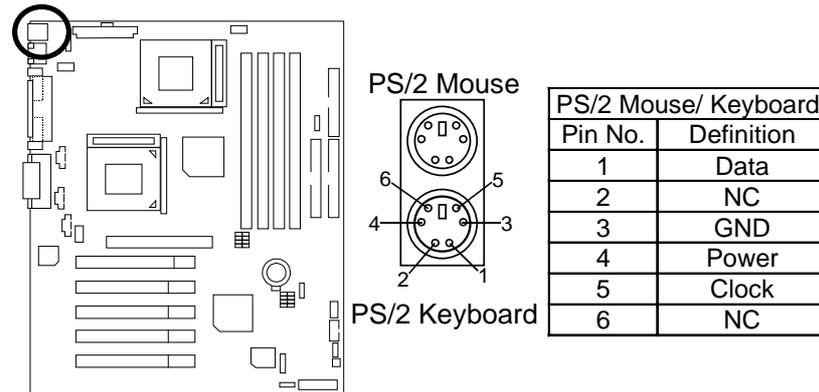


USB1: Rear USB Connector

**Please note:**

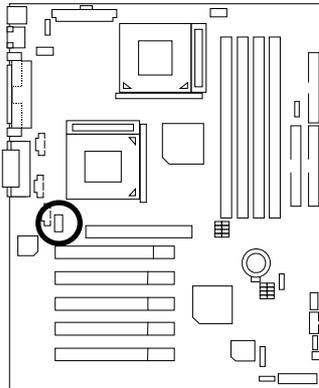
Before you connect your device(s) into USB connector(s), please make sure your device(s) has a standard USB interface like, USB keyboard, mouse, scanner, zip, buzzer... Also make sure your OS supports USB controller (Win 95 w/ USB supplemment, Win98, Windows 2000, Windows ME, Win NT w/ SP 6). If your OS does not support USB controller, please contact OS vendor for passible patch or driver upgrade. For more information please contact your OS or device(s) vendors.

PS/2 Keyboard & PS/2 Mouse Connector

**Please note:**

This mainboard supports standard PS/2 keyboard and PS/2 mouse interface connector.

J13: CPU1 Fan



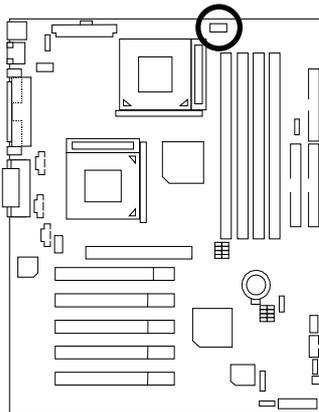
| Pin No. | Definition |
|---------|------------|
| 1 | Control |
| 2 | +12V |
| 3 | SENSE |



Please note:

A proper installation of the CPU cooler is essential to prevent the CPU from running under abnormal condition or damaged by overheating.

J15: CPU2 Fan



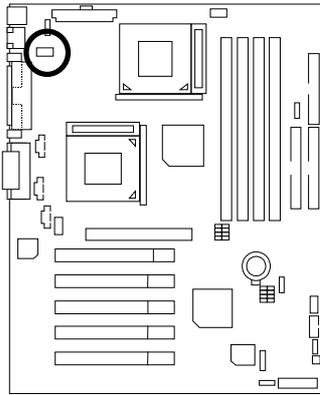
| Pin No. | Definition |
|---------|------------|
| 1 | Control |
| 2 | +12V |
| 3 | SENSE |



Please note:

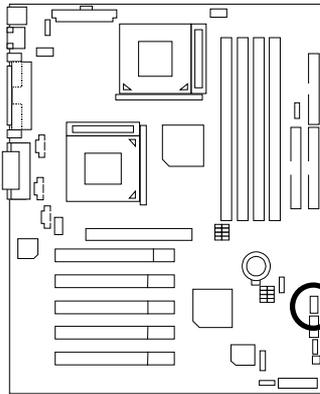
A proper installation of the CPU cooler is essential to prevent the CPU from running under abnormal condition or damaged by overheating.

J16: Power Fan



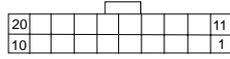
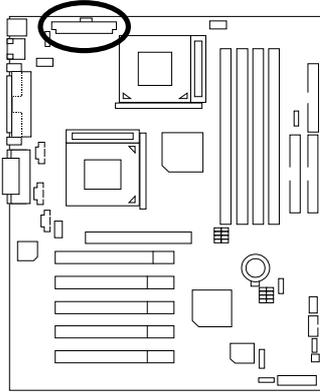
| Pin No. | Definition |
|---------|------------|
| 1 | Control |
| 2 | +12V |
| 3 | NC |

J14: Panel Fan



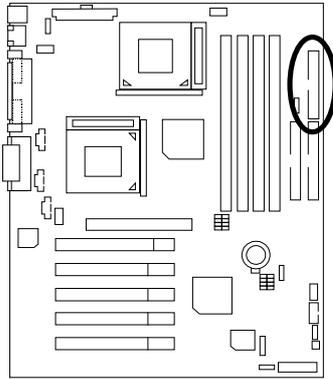
| Pin No. | Definition |
|---------|------------|
| 1 | Control |
| 2 | +12V |
| 3 | NC |

ATX Power



| Pin No. | Definition |
|--------------------|---------------------|
| 3,5,7,13, 15-17 | GND |
| 1,2,11 | 3.3V |
| 4,6,19,20 | VCC |
| 10 | +12V |
| 12 | -12V |
| 18 | -5V |
| 8 | Power Good |
| 9 | 5V SB (stand by+5V) |
| 14 | PS-ON(Soft On/Off) |

Floppy Port

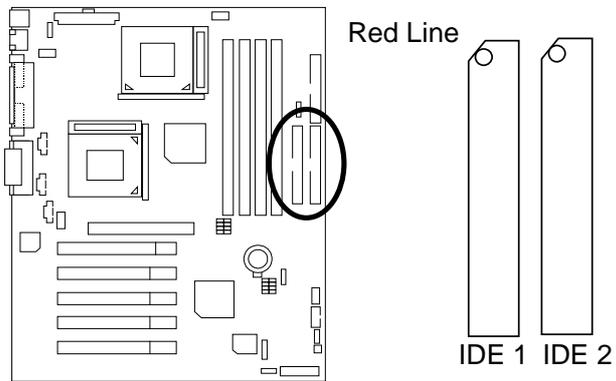


Red Line

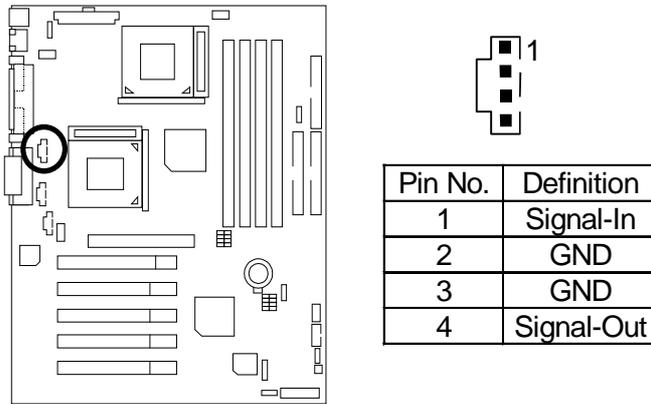


FDD1

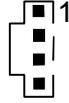
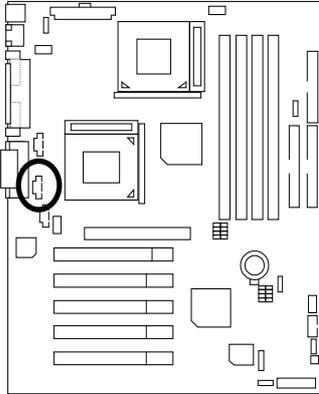
IDE1 (Primary), IDE2 (Secondary) Port



J7 TEL: The connector is for Modem with internal voice connector

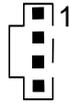
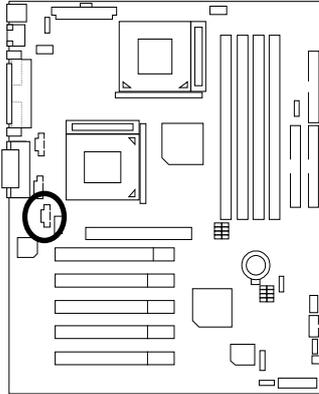


J5: AUX_IN



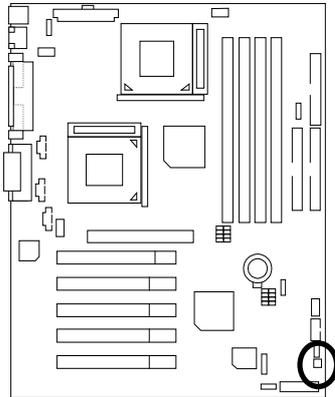
| Pin No. | Definition |
|---------|------------|
| 1 | AUX-L |
| 2 | GND |
| 3 | GND |
| 4 | AUX-R |

J8: CD Audio Line In



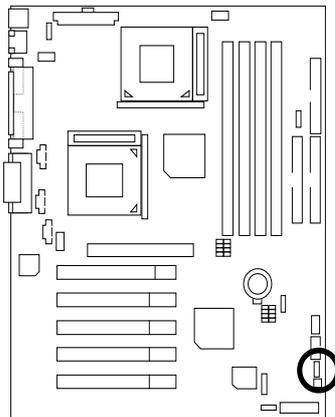
| Pin No. | Definition |
|---------|------------|
| 1 | CD-L |
| 2 | GND |
| 3 | GND |
| 4 | CD-R |

J3: Ring Power On (Internal Modem Card Wake Up)



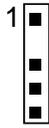
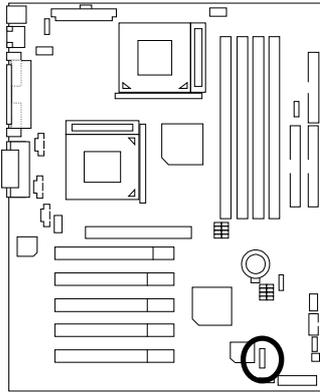
| Pin No. | Definition |
|---------|------------|
| 1 | Signal |
| 2 | GND |

J1: Wake On LAN



| Pin No. | Definition |
|---------|------------|
| 1 | +5V SB |
| 2 | GND |
| 3 | Signal |

J4: IR



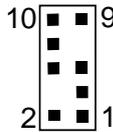
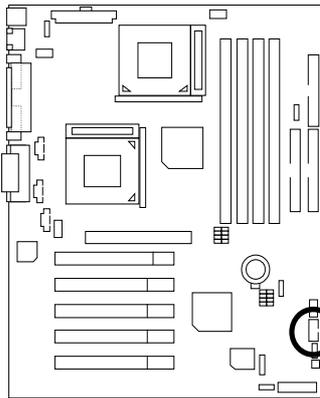
| Pin No. | Definition |
|---------|----------------|
| 1 | VCC (+5V) |
| 2 | NC |
| 3 | IR Data Input |
| 4 | GND |
| 5 | IR Data Output |



Please note:

Be careful with the polarity of the IR connector while you connect the IR. Please contact your nearest dealer for optional IR device.

USB2: Front USB Port



| Pin No. | Definition |
|---------|------------|
| 1 | POWER |
| 2 | GND |
| 3 | USB D2- |
| 4 | NC |
| 5 | USB D2+ |
| 6 | USB D3+ |
| 7 | NC |
| 8 | USB D3- |
| 9 | GND |
| 10 | POWER |

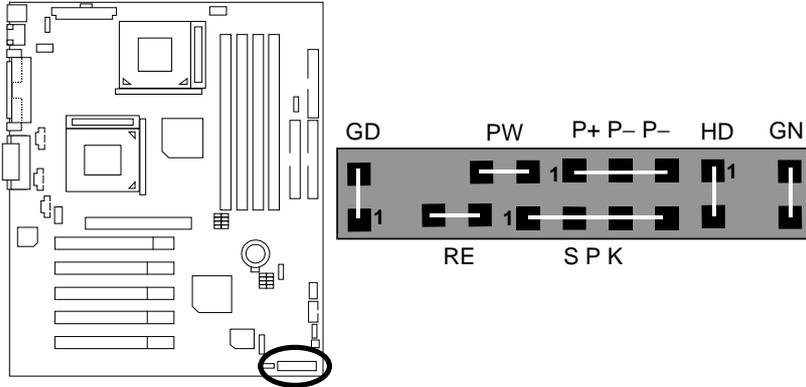


Please note:

Be careful with the polarity of the front panel USB connector. Check the pin assignment while you connect the front panel USB cable. Please contact your nearest dealer for optional front panel USB cable.

Panel And Jumper Definition

J2: 2x11 Pins Jumper

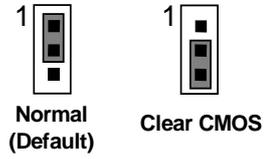
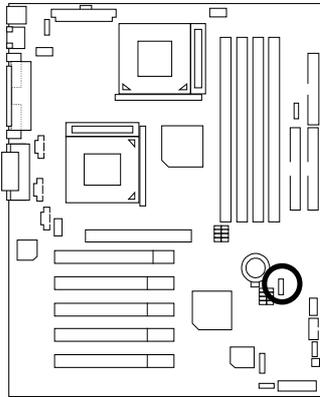


| | |
|-------------------------------|---|
| GN (Green Switch) | Open: Normal Operation Close: Entering Green Mode |
| GD (Green LED) | Pin 1: LED anode(+) Pin 2: LED cathode(-) |
| HD (IDE Hard Disk Active LED) | Pin 1: LED anode(+) Pin 2: LED cathode(-) |
| SPK (Speaker Connector) | Pin 1: VCC(+) Pin 2- Pin 3: NC Pin 4: Data(-) |
| RE (Reset Switch) | Open: Normal Operation Close: Reset Hardware System |
| P+P-P-(Power LED) | Pin 1: LED anode(+) Pin 2: LED cathode(-) Pin 3: LED cathode(-) |
| PW (Soft Power Connector) | Open: Normal Operation Close: Power On/Off |



Please note: Please connect the power LED, PC speaker, reset switch and power switch etc of your chassis front panel to the front panel jumper according to the pin assignment above.

JP1: Clear CMOS Function

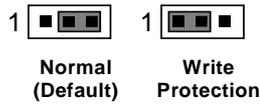
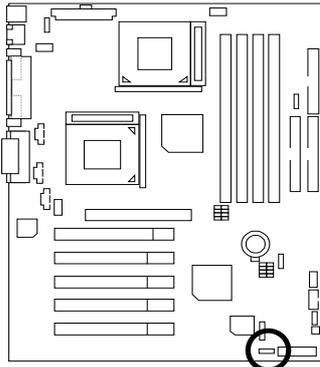


| Pin No. | Definition |
|-----------|------------------|
| 1-2 close | Normal (Default) |
| 2-3 close | Clear CMOS |



Please note:
You may clear the CMOS data to it's default values by this jumper.

JP22: BIOS Write Protection

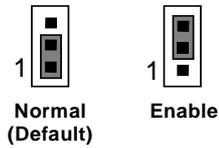
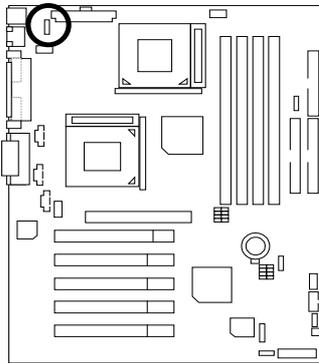


| Pin No. | Definition |
|-----------|------------------|
| 1-2 close | Write Protection |
| 2-3 close | Normal (Default) |



Please note:
To flash/upgrade BIOS on this MB JP22 must be set to 2-3 close. We recommend JP22 to be set to "1-2 close", whenever user does not need to flash/upgrade the BIOS.

JP9: USB Device Wake up Selection

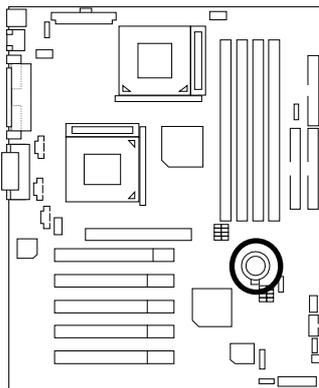


| Pin No. | Definition |
|-----------|---------------------------|
| 1-2 close | Normal (Default) |
| 2-3 close | Enable USB Device Wake up |



Please note: To use "USB Wakeup from S4-S5" function, set BIOS setting "USB Wakeup from S4-S5" to ENABLED and enable jumpers JP9.
 *(Power on the computer and as soon as memory counting starts, press . You will enter BIOS Setup. Select the item "POWER MANAGEMENT SETUP", then select "USB Wakeup from S4-S5". Remember to save the setting by pressing "ESC" and choose the "SAVE & EXIT SETUP" option.)

BAT1: Battery



CAUTION

- ⚠ Danger of explosion if battery is incorrectly replaced.
- ⚠ Replace only with the same or equivalent type recommended by the manufacturer.
- ⚠ Dispose of used batteries according to the manufacturer's instructions.

Performance List

The following performance data list is the testing results of some popular benchmark testing programs.

These data are just referred by users, and there is no responsibility for different testing data values gotten by users. (The different Hardware & Software configuration will result in different benchmark testing results.)

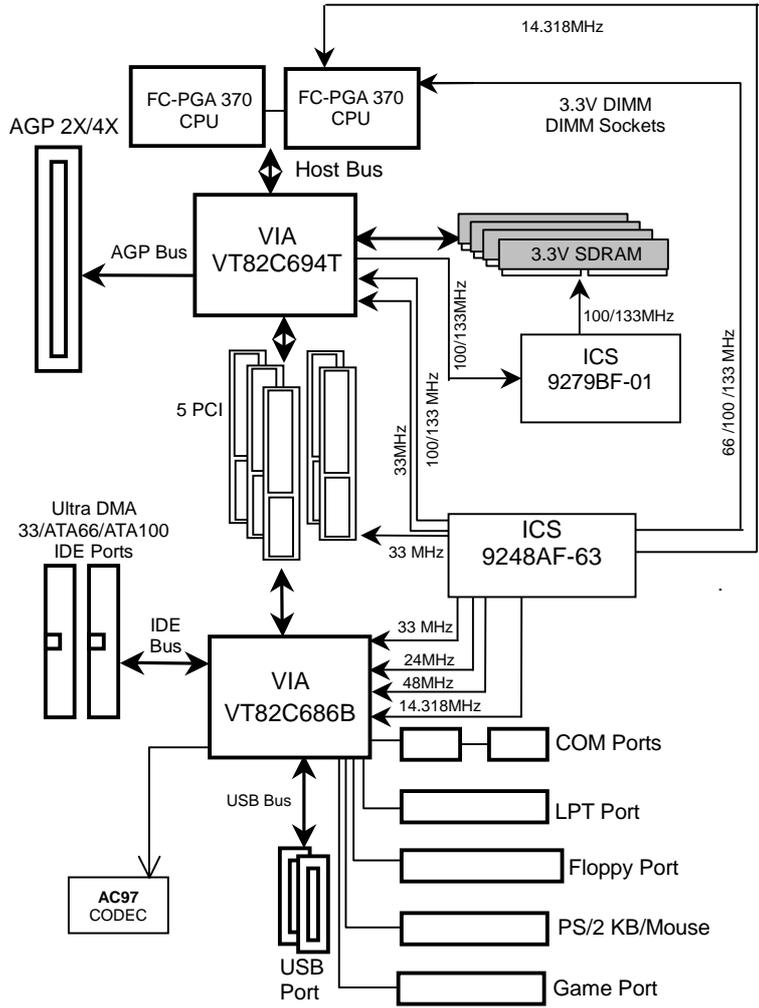
- CPU Intel® Socket 370 New Pentium !!! 1.26GHz x 2
- DRAM 128MB*2 (KingMax PC-150 KSV684T4A2A-06)
- CACHE SIZE 512 KB included in CPU (Intel® New Pentium !!! 1.26GHz)
- DISPLAY GV-GF2010D
- STORAGE Onboard IDE (Quantum AS30000AT)
- O.S. Windows 2000 +SP2
- DRIVER Display Driver at 1024 x 768 x 64k colors x 75Hz.
VUCD 1.8 Release

| | |
|------------------------------------|--|
| Processor | Intel® New Pentium !!! 1.26GHz x 2 (133x9.5) |
| WCPUID 3.0C Clock Frequency | |
| Internal MHz | 1262.43 |
| External MHz | 132.89 |
| SiSoft Sandra 20001 | |
| CPU/FPU Benchmark | 7112/3363 |
| CPU Multi-Media Benchmark | 13809/17146 |
| Drivers Benchmark | 20611 |
| Memory Benchmark | 306/383 |

| Processor | Intel® New Pentium !!! |
|--------------------------|---------------------------|
| | 1.26GHz x 2 (133x9.5) |
| Winstone 2001 | |
| CC Winstone 2001 | 59 |
| Business Winstone 2001 | 44.5 |
| 3D Mark 2001 1.0 | 3067 |
| SPECviewperf 6.12 | |
| Pro CDRS-03 | 12.31 |
| MedMCAD-01 | 18.17 |
| Light-04 | 5.443 |
| DX-06 | 16.86 |
| DRV-07 | 11.93 |
| AwadvS-04 | 50.78 |

◆* If you wish to maximize the performance of your system, please refer to the detail on P.40

Block Diagram



Q-Flash Introduction

A. What's Q-Flash?

Gigabyte's brings you another BIOS upgrade technology. Today, You don't have to follow the inconvenient traditional way of updating BIOS. With Instant BIOS Flash Utility you don't need to boot into DOS or Windows.

You can now easily update BIOS by just pressing F8 during boot up.

B. How to use Q-Flash?

- a. After power on the computer, pressing immediately during POST (Power On Self Test) it will allow you to enter AMI BIOS CMOS SETUP, then press <F8> to enter Flash utility.

| AMIBIOS SIMPLE SETUP UTILITY – VERSION 1.24f (C) 1999 American Megatrends, Inc. All Rights Reserved | |
|---|-------------------------------|
| STANDARD CMOS SETUP | INTEGRATED PERIPHERALS |
| BIOS FEATURES SETUP | HARDWARE MONITOR & MISC SETUP |
| CHIPSET FEATURES SETUP | SUPERVISOR PASSWORD |
| POWER MANAGEMENT SETUP | USER PASSWORD |
| PNP / PCI CONFIGURATION | IDE HDD AUTO DETECTION |
| LOAD FAIL-SAFE DEFAULTS | SAVE & EXIT SETUP |
| LOAD OPTIMIZED DEFAULTS | EXIT WITHOUT SAVING |
| ESC: Quit ↑↓←→: Select Item (Shift)F2: Change Color F5: Old Values F6: Fail-Safe Values F7: Optimized Values F8: Flash Utility F10: Save & Exit | |
| Time, Date, Hard Disk Type... | |

- b. AMI BIOS Flash Utility

| AMI BIOS Flash Utility V1.02 | |
|---|-------------|
| Boot From..... | Main BIOS |
| Main ROM Type..... | SST 39SF020 |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">Load BIOS from Floppy</div> | |
| Enter : Run ↑↓ : Move ESC : Reset F10 : Power Off | |

c. In the A: drive, insert the "BIOS" diskette, then Press Enter to Run.

d. Input BIOS file name in the text box. Press "Enter".

Load XXX.XX

Where XXX.XX is name of the BIOS file.

Are you sure to COPY BIOS?
[Enter] to Continue Or [Esc] to abort..

!! COPY BIOS Completed –Pass !!
Please press any key to continue

Congratulation! You have completed the flashed and now can restart system.

@BIOS™ Introduction

Gigabyte announces @BIOS™ Windows BIOS live update utility



Have you ever updated BIOS by yourself? Or like many other people, you just know what BIOS is, but always hesitate to update it? Because you think updating newest BIOS is unnecessary and actually you don't know how to update it.

Maybe not like others, you are very experienced in BIOS updating and spend quite a lot of time to do it. But of course you don't like to do it too much. First, download different BIOS from website and then switch the operating system to DOS mode. Secondly, use different flash utility to update BIOS. The above process is not a interesting job. Besides, always be carefully to store the BIOS source code correctly in your disks as if you update the wrong BIOS, it will be a nightmare.

Certainly, you wonder why motherboard vendors could not just do something right to save your time and effort and save you from the lousy BIOS updating work? Here it comes! Now Gigabyte announces @BIOS™--the first Windows BIOS live update utility. This is a smart BIOS update software. It could help you to download the BIOS from internet and update it. Not like the other BIOS update software, it's a Windows utility. With the help of "@BIOS™", BIOS updating is no more than a click.

Besides, no matter which mainboard you are using, if it's a Gigabyte's product*, @BIOS™ help you to maintain the BIOS. This utility could detect your correct mainboard model and help you to choose the BIOS accordingly. It then downloads the BIOS from the nearest Gigabyte ftp site automatically. There are several different choices: you could use "Internet Update" to download and update your BIOS directly. Or you may want to keep a backup for your current BIOS, just choose "Save Current BIOS" to save it first. You make a wise choice to use Gigabyte, and @BIOS™ update your BIOS smartly. You are now worry free from updating wrong BIOS, and capable to maintain and manage your BIOS easily. Again, Gigabyte's innovative product erects a milestone in mainboard industries.

For such a wonderful software, how much it costs? Impossible! It's free! Now, if you buy a Gigabyte's motherboard, you could find this amazing software in the attached driver CD. But please remember, connected to internet at first, then you could have a internet BIOS update from your Gigabyte @BIOS™.

6VTXD Motherboard

|  Page Index for BIOS Setup | Page |
|---|------|
| The Main Menu | P.33 |
| Standard CMOS Setup | P.35 |
| BIOS Features Setup | P.38 |
| Chipset Features Setup | P.40 |
| Power Management Setup | P.43 |
| PNP/PCI Configuration | P.46 |
| Load Fail-Safe Defaults | P.48 |
| Load Optimized Defaults | P.49 |
| Integrated Peripherals | P.50 |
| Hardware Monitor & MISC Setup | P.55 |
| Supervisor Password / User Password | P.56 |
| IDE HDD Auto Detection | P.57 |
| Save & Exit Setup | P.58 |
| Exit Without Saving | P.59 |

BIOS Setup

BIOS Setup is an overview of the BIOS Setup Interface. The interface allows users to modify the basic system configuration, which is stored in battery-backed CMOS RAM so that the Setup information can be retained when the power is turned off.

ENTERING SETUP

Power ON the computer and press immediately will allow you to enter Setup.

CONTROL KEYS

| | |
|-----------|--|
| <↑> | Move to previous item |
| <↓> | Move to next item |
| <←> | Move to the item in the left hand |
| <→> | Move to the item in the right hand |
| <Esc> | 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> | Increase the numeric value or make changes |
| <-/ PgDn> | Decrease the numeric value or make changes |
| <F1> | General help, only for Status Page Setup Menu and Option Page Setup Menu |
| <F2> | Reserved |
| <F3> | Reserved |
| <F4> | Reserved |
| <F5> | Restore the previous CMOS values |
| <F6> | Load the file-safe default CMOS value from BIOS default table |
| <F7> | Load the Optimized Defaults |
| <F8> | Flash Utility |
| <F9> | Reserved |
| <F10> | Save all the CMOS changes, only for Main Menu |

GETTING HELP

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu / Option Page Setup Menu

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>.

The Main Menu (For example: BIOS Ver. : F1)

Once you enter AMI BIOS CMOS Setup Utility, the Main Menu (Figure 1) will appear on the screen. The Main Menu allows you to select from nine setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

| AMIBIOS SIMPLE SETUP UTILITY – VERSION 1.24f (C) 1999 American Megatrends, Inc. All Rights Reserved | |
|--|-------------------------------|
| STANDARD CMOS SETUP | INTEGRATED PERIPHERALS |
| BIOS FEATURES SETUP | HARDWARE MONITOR & MISC SETUP |
| CHIPSET FEATURES SETUP | SUPERVISOR PASSWORD |
| POWER MANAGEMENT SETUP | USER PASSWORD |
| PNP / PCI CONFIGURATION | IDE HDD AUTO DETECTION |
| LOAD FAIL-SAFE DEFAULTS | SAVE & EXIT SETUP |
| LOAD OPTIMIZED DEFAULTS | EXIT WITHOUT SAVING |
| ESC: Quit ↑↓←→: Select Item (Shift)F2: Change Color F5: Old Values F6: Fail-Safe Values F7: Optimized Values F8: Flash Utility F10: Save & Exit | |
| Time, Date , Hard Disk Type... | |

Figure 1: Main Menu

- **Standard CMOS Setup**

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

- **BIOS Features Setup**

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

- **Chipset Features Setup**

This setup page includes all the adjustable items of chipset special features.
- **Power Management Setup**

This setup page includes all the adjustable items of Green function features.
- **PNP/PCI Configurations**

This setup page includes all the adjustable configurations of PCI & PnP ISA resources.
- **Load Fail-Safe Defaults**

Load Fail-Safe Defaults option loads preset system parameter values to set the system in its most stable configurations.
- **Load Optimized Defaults**

Load Optimized Defaults option loads preset system parameter values to set the system in its highest performance configurations.
- **Integrated Peripherals**

This setup page includes all onboard peripherals.
- **Hardware Monitor & MISC Setup**

Configure hardware monitor features, control frequency/voltage.
- **Set Supervisor Password**

Set Change or disable password. It allows you to limit access to the system and/or BIOS setup.
- **Set User Password**

Set Change or disable password. It allows you to limit access to the system.
- **IDE HDD auto detection**

Automatically configure hard disk parameters.
- **Save & Exit Setup**

Save CMOS value settings to CMOS and exit setup.
- **Exit Without Saving**

Abandon all CMOS value changes and exit setup.

Standard CMOS Setup

The items in Standard CMOS Setup Menu (Figure 2) are divided into 10 categories. Each category includes none, one or more than one setup items. Use the arrows to highlight the item and then use the <PgUp> or <PgDn> keys to select the value in each item.

| AMIBIOS SETUP – STANDARD CMOS SETUP | | | | | | | |
|--|-------------|-------------|-------------|-------------------------|----------------|--------------|---------------|
| (C) 1999 American Megatrends, Inc. All Rights Reserved | | | | | | | |
| Date (mm/dd/yyyy) : Tue Mar 27, 2001 | | | | | | | |
| Time (hh/mm/ss) : 14:44:35 | | | | | | | |
| | <u>TYPE</u> | <u>SIZE</u> | <u>CYLS</u> | <u>HEAD</u> | <u>PRECOMP</u> | <u>LANDZ</u> | <u>SECTOR</u> |
| Pri Master | : Auto | | | | | | |
| Pri Slave | : Auto | | | | | | |
| Sec Master | : Auto | | | | | | |
| Sec Slave | : Auto | | | | | | |
| Floppy Drive A : 1.44 MB 3½ | | | | Base Memory : 640 Kb | | | |
| Floppy Drive B : Not Installed | | | | Other Memory : 384 Kb | | | |
| Boot Sector Virus Protection : Disabled | | | | Extended Memory : 63 Mb | | | |
| | | | | Total Memory : 64 Mb | | | |
| Month : Jan – Dec | | | | ESC : Exit | | | |
| Day : 01– 31 | | | | ↑↓ : Select Item | | | |
| Year : 1990 – 2099 | | | | PU / PD / + / – :Modify | | | |
| | | | | (Shift) F2 : Color | | | |

Figure 2: Standard CMOS Setup

- **Date**

The date format is <Week> <Month> <Day> <Year>.

| | |
|-------|--|
| Week | The week, from Sun to Sat, determined by the BIOS and is display-only. |
| Month | The month, Jan. Through Dec. |
| Day | The day, from 1 to 31 (or the maximum allowed in the month). |
| Year | The year, from 1990 through 2099. |

- **Time**

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

- **Primary Master / Slave, Secondary Master / Slave**

The category identifies the type of hard disk from drive C to F that has been installed in the computer. There are two settings: Auto, and Manual. Manual: HDD type is user-definable; Auto will automatically detect HDD type.

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 you select User Type, related information will be asked to enter to the following items. Enter the information directly from the keyboard and press <Enter>. Such information should be provided in the documentation form your hard disk vendor or the system manufacturer.

| | |
|----------|----------------------|
| CYLS. | Number of cylinders. |
| HEADS | number of heads. |
| PRECOMP | write precomp. |
| LANDZONE | Landing zone. |
| SECTORS | number of sectors. |

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

- **Floppy Drive A / Floppy Drive B**

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

| | |
|----------------|---|
| None | No floppy drive installed. |
| 360K, 5.25 in. | 5.25 inch PC-type standard drive; 360K byte capacity. |
| 1.2M, 5.25 in. | 5.25 inch AT-type high-density drive; 1.2M byte capacity (3.5 inch when 3 Mode is Enabled). |
| 720K, 3.5 in. | 3.5 inch double-sided drive; 720K byte capacity. |
| 1.44M, 3.5 in. | 3.5 inch double-sided drive; 1.44M byte capacity. |
| 2.88M, 3.5 in. | 3.5 inch double-sided drive; 2.88M byte capacity. |

- **Boot Sector Virus Protection**

If it is set to enable, the category will flash on the screen when there is any attempt to write to the boot sector or partition table of the hard disk drive. The system will halt and the following error message will appear in the mean time. You can run anti-virus program to locate the problem.

| | |
|----------|--|
| Enabled | Activate 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 to appear when anything attempts to access the boot sector or hard disk partition table. (Default Value) |

- **Memory**

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

Base Memory

The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.

The value of the base memory is typically 512 K for systems with 512 K memory installed on the motherboard, or 640 K for systems with 640 K or more memory installed on the motherboard.

Other Memory

This refers to the memory located in the 640 K to 1024 K address space. This is memory that can be used for different applications.

DOS uses this area to load device drivers to keep as much base memory free for application programs. Most use for this area is Shadow RAM.

Extended Memory

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

BIOS Features Setup

| AMIBIOS SETUP – BIOS FEATURES SETUP | |
|--|------------|
| (C) 1999 American Megatrends, Inc. All Rights Reserved | |
| 1st Boot Device | : Floppy |
| 2nd Boot Device | : IDE-0 |
| 3rd Boot Device | : CDROM |
| S.M.A.R.T. for Hard Disks | : Disabled |
| BootUp Num-Lock | : On |
| Floppy Drive Seek | : Enabled |
| Password Check | : Setup |
| Processor Serial Number | : Disabled |
| BIOS Write Protect | : Disabled |
| ESC: Quit ↑↓←→: Select Item F1 : Help PU/PD+/-/: Modify F5 :Old Values (Shift)F2:Color F6 : Load Fail-Safe Defaults F7 : Load Optimized Defaults | |

Figure 3: BIOS Features Setup

- **1st / 2nd / 3rd Boot Device**

| | |
|--------------|--|
| Floppy | Set your boot device priority to Floppy. |
| LS/ZIP A: | Set your boot device priority to LS/ZIP A:. |
| ATAPI ZIP C: | Set your boot device priority to ATAPI ZIP C:. |
| CDROM | Set your boot device priority to CDROM. |
| SCSI | Set your boot device priority to SCSI. |
| NETWORK | Set your boot device priority to NETWORK. |
| IDE-0-IDE-3 | Set your boot device priority to IDE-0-IDE-3. |
| Disabled | Disable this function. |

- **S.M.A.R.T. for Hard Disks**

| | |
|----------|---|
| Enabled | Enable S.M.A.R.T. Feature for Hard Disks. |
| Disabled | Disable S.M.A.R.T. Feature for Hard Disks. (Default Value) |

- **Boot Up Num-Lock**

| | |
|-----|---|
| On | Keypad is number keys. (Default Value) |
| Off | Keypad is arrow keys. |

- **Floppy Drive Seek**

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

| | |
|----------|--|
| Enabled | BIOS searches for floppy disk drive to determine if it is 40 or 80 tracks. Note that BIOS can't differentiate between from 720, 1.2 or 1.44 drive type as they are all 80 tracks. (Default Value) |
| 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 360. |

- **Password Check**

 Please refer to the detail on P.56

| | |
|--------|--|
| Setup | The user must enter correct password in order to access BIOS setup utility. (Default Value) |
| Always | The user must enter correct password in order to access the system and/or BIOS Setup. |

- **Processor Serial Number**

This item will show up when you install the Pentium® !!! processor.

| | |
|----------|---|
| Enabled | Pentium® !!! Processor Serial Number Feature. |
| Disabled | Disable this function. (Default value) |

- **BIOS Write Protect**

| | |
|----------|---|
| Enabled | Enable BIOS Flash Protection. This will prevent BIOS Flash write after POST. |
| Disabled | To flash/upgrade BIOS on this MB, this item must be disable. We recommend this item to be set to "Disabled". (Default Value) |

Chipset Features Setup

 We would not suggest you change the chipset default setting unless you really need it.

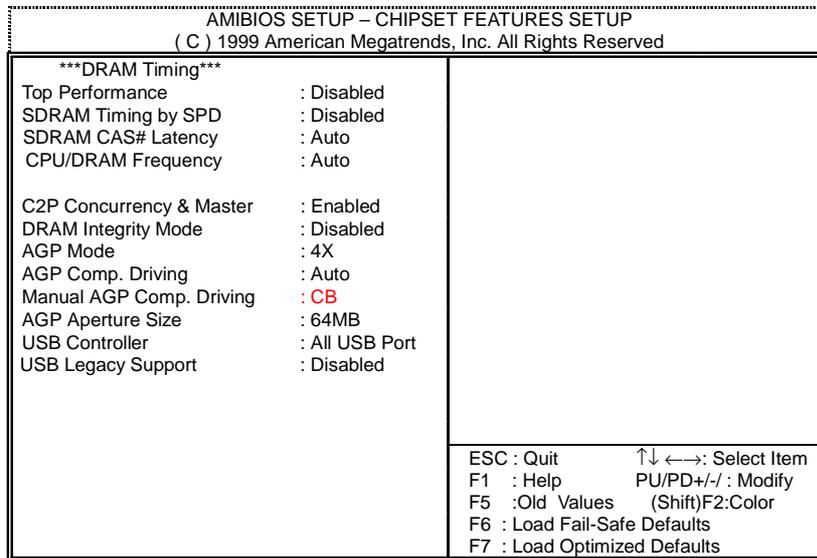


Figure 4: Chipset Features Setup

- **Top Performance**

If you wish to maximize the performance of your system, set "Top Performance" as "Enabled".

| | |
|----------|---|
| Disabled | Disable this function. (Default Value) |
| Enabled | Top Performance Enable. |

- **SDRAM Timing by SPD**

| | |
|----------|--|
| Enabled | Enable SDRAM Timing by SPD. Enable this function, the bios will set SDRAM Frequency/SDRAM CAS#/SDRAM Bank Interleave according to the SPD Data in SDRAM. |
| Disabled | Disable SDRAM Timing by SPD. (Default Value) |

- **SDRAM CAS# Latency**

| | |
|------|--|
| Auto | Detect SDRAM CAS# Latency by SPD. (Default Value) |
| 2 | Set SDRAM CAS# Latency to 2. |
| 3 | Set SDRAM CAS# Latency to 3. |

- **CPU/DRAM Frequency**

1. System Bus Speed: 100MHz

| | |
|------------|--|
| Auto | Set CPU/DRAM Frequency to Auto. (Default Value) |
| 100/100MHz | Set CPU/DRAM Frequency is 100/100MHz. |
| 100/133MHz | Set CPU/DRAM Frequency is 100/133MHz. |

2. System Bus Speed: 133MHz

| | |
|------------|--|
| Auto | Set CPU/DRAM Frequency to Auto. (Default Value) |
| 133/100MHz | Set CPU/DRAM Frequency is 133/100MHz. |
| 133/133MHz | Set CPU/DRAM Frequency is 133/133MHz. |

- **DRAM Integrity Mode**

| | |
|----------|--|
| Disabled | Disable this function. (Default Value) |
| ECC | Single-bit error correction and multi-bit error detection. |

- **AGP Mode**

| | |
|----|--|
| 4X | Set AGP Mode to 4X (Only if the AGP Card support 4X Rate). (Default Value) |
| 1X | Set AGP Mode to 1X. |
| 2X | Set AGP Mode to 2X. |

- **AGP Comp. Driving**

| | |
|--------|---|
| Auto | Set AGP Comp. Driving to Auto. (Default Value) |
| Manual | Set AGP Comp. Driving to Manual. |

If AGP Comp. Driving is Manual.

| | |
|---------------------------|-------|
| Manual AGP Comp. Driving: | 00-FF |
|---------------------------|-------|

- **AGP Aperture Size**

| | |
|-------|------------------------------------|
| 4 MB | Display AGP Aperture Size is 4MB. |
| 8 MB | Display AGP Aperture Size is 8MB. |
| 16 MB | Display AGP Aperture Size is 16MB. |

| | |
|--------|---|
| 32 MB | Display AGP Aperture Size is 32MB. |
| 64 MB | Display AGP Aperture Size is 64MB. (Default Value) |
| 128 MB | Display AGP Aperture Size is 128MB. |
| 256 MB | Display AGP Aperture Size is 256MB. |

- **USB Controller**

| | |
|--------------|--|
| All USB Port | Enable All USB Ports 0,1,2,3. (Default Value) |
| Disabled | Disable USB Controller. |
| USB Port 0&1 | Enable USB Ports 0&1. |
| USB Port 2&3 | Enable USB Ports 2&3. |

- **USB Legacy Support**

| | |
|------------|---|
| Keyboard | Enable USB Legacy Support for USB Keyboard. |
| Keyb+Mouse | Enable USB Legacy Support for USB Keyboard/USB Mouse. |
| Disabled | Disable USB Legacy Support Function. (Default Value) |

Power Management Setup

| AMIBIOS SETUP – POWER MANAGEMENT SETUP (C) 1999 American Megatrends, Inc. All Rights Reserved | | | |
|--|---------------|------------------------------|-------------------|
| USB Wakeup from S4-S5 | : Disabled | RTC Alarm Power On | : Disabled |
| Video Power Down Mode | : Stand By | RTC Alarm Date | : 15 |
| Hard Disk Power Down Mode | : Stand By | RTC Alarm Hour | : 12 |
| Suspend Time Out (Minute) | : Disabled | RTC Alarm Minute | : 30 |
| Display Activity | : Ignore | RTC Alarm Second | : 30 |
| IRQ3 | : Monitor | | |
| IRQ4 | : Monitor | | |
| IRQ5 | : Ignore | | |
| IRQ7 | : Monitor | | |
| IRQ9 | : Ignore | | |
| IRQ10 | : Ignore | | |
| IRQ11 | : Ignore | | |
| IRQ13 | : Ignore | | |
| IRQ14 | : Monitor | | |
| IRQ15 | : Ignore | | |
| Soft-Off by Power Button | : Instant Off | ESC : Quit | ↑↓←→: Select Item |
| AC Back Function | : Soft Off | F1 : Help | PU/PD+/-/: Modify |
| Modem Use IRQ | : 4 | F5 :Old Values | (Shift)F2:Color |
| Modem Ring On/Wake On Lan | : Enabled | F6 : Load Fail-Safe Defaults | |
| PME Event Wake Up | : Enabled | F7 : Load Optimized Defaults | |

Figure 5: Power Management Setup

- **USB Wakeup From S4-S5**

| | |
|----------|---|
| Enabled | Enable USB Wakeup from S4-S5. |
| Disabled | Disable USB Wakeup from S4-S5. (Default Value) |

- **Video Power Down Mode**

| | |
|----------|---|
| Stand By | Set Video Power Down Mode to Stand By. (Default Value) |
| Suspend | Set Video Power Down Mode to Suspend. |
| Disabled | Disable this function. |

- **Hard Disk Power Down Mode**

| | |
|----------|---|
| Stand By | Set Hard Disk Power Down Mode to Stand By. (Default Value) |
| Suspend | Set Hard Disk Power Down Mode to Suspend. |
| Disabled | Disable this function. |

- **Suspend Time Out (Minute.)**

| | |
|----------|---|
| Disabled | Disable Suspend Time Out Function. (Default Value) |
| 1 | Enable Suspend Time Out after 1min. |
| 2 | Enable Suspend Time Out after 2min. |
| 4 | Enable Suspend Time Out after 4min. |
| 8 | Enable Suspend Time Out after 8min. |
| 10 | Enable Suspend Time Out after 10min. |
| 20 | Enable Suspend Time Out after 20min. |
| 30 | Enable Suspend Time Out after 30min. |
| 40 | Enable Suspend Time Out after 40min. |
| 50 | Enable Suspend Time Out after 50min. |
| 60 | Enable Suspend Time Out after 60min. |

- **Display Activity**

| | |
|---------|---|
| Ignore | Ignore Display Activity. (Default Value) |
| Monitor | Monitor Display Activity. |

- **IRQ 3-IRQ 15**

| | |
|---------|--|
| Ignore | Ignore IRQ3 -IRQ15. |
| Monitor | IRQ3-IRQ15 event can wake up the system from sleep state (S1). |

- **Soft-off by Power Button**

| | |
|-------------|--|
| Instant off | The user press the power button once, he can turn off the system. (Default Value) |
| Delay-4sec | Press power button 4 sec to Power off. Enter suspend if button is pressed less than 4 sec. |

- **AC Back Function**

| | |
|----------|---|
| Memory | When AC-power back to the system, the system will return to the Last state before AC-power off. |
| Soft Off | When AC-power back to the system, the system will be in "Off" state. (Default Value) |
| Full On | When AC-power back to the system, the system will be in "On" state. |

- **Modem USE IRQ**

| |
|--|
| 3, 4, (Default Value) 5, 7, N/A |
|--|

- **Modem Ring On / Wake On Lan**

| | |
|----------|---|
| Disabled | Disable Modem Ring On / Wake On LAN function. |
| Enabled | The modem ring / LAN wake up will bring the system out of soft-off or suspend state if this option is set "Enabled". (Default Value) |

- **PME Event Wake up**

| | |
|----------|--|
| Disabled | Disable PME event wake up function. |
| Enabled | The PME event wake up will bring the system out of soft-off or suspend state if this option is set "Enabled". (Default Value) |

- **RTC Alarm Power On**

You can set "RTC Alarm Power On" item to enabled and key in Data/time to power on system.

| | |
|----------|---|
| Disabled | Disable this function. (Default Value) |
| Enabled | Enable alarm function to POWER ON system. |

If the default value is Enabled.

| | |
|-------------------|-----------------|
| RTC Alarm Date: | Every Day, 1~31 |
| RTC Alarm Hour: | 0~23 |
| RTC Alarm Minute: | 0~59 |
| RTC Alarm Second: | 0~59 |

PNP/PCI Configuration

| AMIBIOS SETUP – PNP / PCI CONFIGURATION (C) 1999 American Megatrends, Inc. All Rights Reserved | |
|--|------------|
| Plug and Play Aware O/S | : No |
| Reset Configuration Data | : No |
| VGA Boot from | : AGP |
| PCI AGP Palette Snoop | : Disabled |
| DMA Channel 0 | : PnP |
| DMA Channel 1 | : PnP |
| DMA Channel 3 | : PnP |
| DMA Channel 5 | : PnP |
| DMA Channel 6 | : PnP |
| DMA Channel 7 | : PnP |
| IRQ 3 | : PCI/PnP |
| IRQ 4 | : PCI/PnP |
| IRQ 5 | : PCI/PnP |
| IRQ 7 | : PCI/PnP |
| IRQ 9 | : PCI/PnP |
| IRQ 10 | : PCI/PnP |
| IRQ 11 | : PCI/PnP |
| IRQ 14 | : PCI/PnP |
| IRQ 15 | : PCI/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 | |

Figure 6: PNP/ PCI Configuration

- **Plug and Play Aware O/S**

| | |
|-----|--|
| Yes | Enable Plug and Play Aware O/S function. |
| No | Disable Plug and Play Aware O/S function. (Default Value) |

- **Reset Configuration Data**

Advising BIOS clear PnP configuration data for usable value.

| | |
|-----|---|
| No | Disable this function. (Default Value) |
| Yes | Reset PnP configuration data in order to re-initialize ESCD for PnP device. |

- **VGA Boot from**

| | |
|-----|--|
| AGP | Set VGA Boot from AGP VGA Card. (Default Value) |
| PCI | Set VGA Boot from PCI VGA Card. |

- **PCI/VGA Palette Snoop**

| | |
|----------|---|
| Enabled | For having Video Card on ISA Bus and VGA Card on PCI Bus. |
| Disabled | For VGA Card only. (Default Value) |

- **DMA Channel (0,1,3,5,6,7)**

| | |
|----------|--|
| ISA/EISA | The resource is used by Legacy ISA device. |
| PnP | The resource is used by PnP device. (Default Value) |

- **IRQ (3, 4, 5, 7, 9, 10, 11, 14, 15)**

| | |
|----------|--|
| ISA/EISA | The resource is reserved for Legacy ISA device. |
| PCI/PnP | The resource is reserved for PCI/ PnP device. (Default Value) |

Load Fail-Safe Defaults

| | |
|---|--|
| AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24f (C) 1999 American Megatrends, Inc. All Rights Reserved | |
| STANDARD CMOS SETUP | INTEGRATED PERIPHERALS |
| BIOS FEATURES SETUP | HARDWARE MONITOR & MISC SETUP |
| CHIPSET FEATURES SETUP | SUPERVISOR PASSWORD |
| POWER MANAGEMENT SETUP | USER PASSWORD |
| PNP/PCI CONFIG | Load Fail-Safe Defaults (Y/N)?N ACTION |
| LOAD FAIL-SAFE DEFAULTS | SAVE & EXIT SETUP |
| LOAD OPTIMIZED DEFAULTS | EXIT WITHOUT SAVING |
| ESC : Quit ↑↓←→ : Select Item (Shift) F2 : Change Color F5 : Old Values F6: Fail-Safe Values F7: Optimized Values F8: Flash Utility F10: Save & Exit | |
| Load Fail-Safe Defaults except Standard CMOS SETUP | |

Figure 7: Load Fail-Safe Defaults

- **Load Fail-Safe Defaults**

Fail-Safe defaults contain the most appropriate system parameter values of to configure the system to achieve maximum stability.

Load Optimized Defaults

| AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24f (C) 1999 American Megatrends, Inc. All Rights Reserved | |
|--|---------------------------------|
| STANDARD CMOS SETUP | INTEGRATED PERIPHERALS |
| BIOS FEATURES SETUP | HARDWARE MONITOR & MISC SETUP |
| CHIPSET FEATURES SETUP | SUPERVISOR PASSWORD |
| POWER MANAGE | |
| PNP/PCI CONFIG | Load Optimized Defaults (Y/N)?N |
| LOAD FAIL-SAFE DEFAULTS | SAVE & EXIT SETUP |
| LOAD OPTIMIZED DEFAULTS | EXIT WITHOUT SAVING |
| ESC : Quit ↑↓←→ : Select Item (Shift) F2 : Change Color F5 : Old Values F6 : Fail-Safe Values F7: Optimized Values F8: Flash Utility F10: Save & Exit | |
| Load Optimized Defaults except Standard CMOS SETUP | |

Figure 8: Load Optimized Defaults

- **Load Optimized Defaults**

Optimized defaults contain the most appropriate system parameter values to configure the system to achieve maximum performance.

Integrated Peripherals

| AMIBIOS SETUP – INTEGRATED PERIPHERALS (C) 1999 American Megatrends, Inc. All Rights Reserved | | | |
|--|-------------|------------------------------|------------------------------|
| Enhance ATAPI Performance | : Disabled | MPU-401 I/O Address | : 330h-333h |
| OnBoard IDE | : Both | FM Port (388h-38Bh) | : Disabled |
| IDE1 Conductor Cable | : Auto | Game Port (200h-207h) | : Enabled |
| IDE2 Conductor Cable | : Auto | | |
| OnBoard FDC | : Auto | | |
| OnBoard Serial Port 1 | : Auto | | |
| OnBoard Serial Port 2 | : Auto | | |
| Serial Port 2 Mode | : Normal | | |
| *Duplex Mode | : N/A | | |
| OnBoard Parallel Port | : Auto | | |
| Parallel Port Mode | : ECP | | |
| Parallel Port DMA | : Auto | | |
| Parallel Port IRQ | : Auto | | |
| OnBoard AC'97 Audio | : Auto | | |
| OnBoard Legacy Audio | : Enabled | | |
| Sound Blaster | : Disabled | | |
| SB I/O Base Address | : 220h-22Fh | ESC: Quit | ↑↓ ←→: Select Item |
| SB IRQ Select | : IRQ 5 | F1 : Help | PU/PD+/-/ : Modify |
| SB DMA Select | : DMA 1 | F5 :Old Values (Shift) | F2:Color |
| MPU-401 | : Disabled | F6 : Load Fail-Safe Defaults | F7 : Load Optimized Defaults |

Figure 9: Integrated Peripherals

*This item will be available when "Serial Port 2 Mode" is set to IrDA or ASK IR.

- **Enhance ATAPI Performance**

If you wish to maximize the performance of your ATAPI devices , set "Enhance ATAPI Performance" as "Enabled" . Please note, enabling this function may cause your ATAPI devices become unstable. For power End-User use only.

| | |
|----------|---|
| Disabled | Disable Enhance ATAPI Performance. (Default Value) |
| Enabled | Enhance ATAPI Performance function. |

- **OnBoard IDE**

| | |
|-----------|---|
| Disabled | Disable OnBoard IDE. |
| Both | Both Primary & Secondary IDE channel will be enabled. (Default Value) |
| Primary | Only Primary IDE channel is enable. |
| Secondary | Only Secondary IDE channel is enable. |

- **IDE1 Conductor Cable**

| | |
|-----------|--|
| Auto | Will be automatically detected by BIOS. (Default Value) |
| ATA66/100 | Set IDE1 Conductor Cable to ATA66/100 (Please make sure your IDE device and cable is compatible with ATA66/100). |
| ATA33 | Set IDE1 Conductor Cable to ATA33 (Please make sure your IDE device and cable is compatible with ATA33). |

- **IDE2 Conductor Cable**

| | |
|-----------|--|
| Auto | Will be automatically detected by BIOS. (Default Value) |
| ATA66/100 | Set IDE2 Conductor Cable to ATA66/100 (Please make sure your IDE device and cable is compatible with ATA66/100). |
| ATA33 | Set IDE2 Conductor Cable to ATA33 (Please make sure your IDE device and cable is compatible with ATA33). |

- **OnBoard FDC**

| | |
|----------|--|
| Disabled | Disable this function. |
| Enabled | Enable on board floppy disk controller. |
| Auto | Set the floppy disk controller automatically. (Default Value) |

- **OnBoard Serial Port 1**

| | |
|----------|--|
| Auto | BIOS will automatically setup the port 1 address. (Default Value) |
| 3F8/COM1 | Enable OnBoard Serial port 1 and address is 3F8. |
| 2F8/COM2 | Enable OnBoard Serial port 1 and address is 2F8. |
| 3E8/COM3 | Enable OnBoard Serial port 1 and address is 3E8. |
| 2E8/COM4 | Enable OnBoard Serial port 1 and address is 2E8. |
| Disabled | Disable OnBoard Serial port 1. |

- **OnBoard Serial Port 2**

| | |
|----------|--|
| Auto | BIOS will automatically setup the port 2 address. (Default Value) |
| 3F8/COM1 | Enable OnBoard Serial port 2 and address is 3F8. |
| 2F8/COM2 | Enable OnBoard Serial port 2 and address is 2F8. |
| 3E8/COM3 | Enable OnBoard Serial port 2 and address is 3E8. |
| 2E8/COM4 | Enable OnBoard Serial port 2 and address is 2E8. |
| Disabled | Disable OnBoard Serial port 2. |

- **Serial Port 2 Mode**

(This item allows you to determine which Serial Port 2 Mode of onboard I/O chip)

| | |
|--------|---|
| Normal | Set onboard I/O chip Serial Port 2 to Normal Mode. (Default Value) |
| IrDA | Set onboard I/O chip Serial Port 2 to IrDA Mode. |
| ASK IR | Set onboard I/O chip Serial Port 2 to ASK IR Mode. |

- **Duplex Mode**

| | |
|-------------|---|
| Half Duplex | IR Function Duplex Half. |
| N/A | Disable this function. (Default Value) |
| Full Duplex | IR Function Duplex Full. |

- **OnBoard Parallel port**

| | |
|----------|--|
| 378 | Enable OnBoard LPT port and address to 378. |
| 278 | Enable OnBoard LPT port and address to 278. |
| 3BC | Enable OnBoard LPT port and address to 3BC. |
| Auto | Set OnBoard LPT port to Auto. (Default Value) |
| Disabled | Disable OnBoard LPT port. |

- **Parallel Port Mode**

| | |
|---------|---|
| EPP | Using Parallel port as Enhanced Parallel Port. |
| ECP | Using Parallel port as Extended Capabilities Port. (Default Value) |
| Normal | Normal Operation. |
| EPP+ECP | Using Parallel port as Enhanced Parallel Port & Extended Capabilities Port. |

- **Parallel Port DMA**

| | |
|------|--|
| Auto | Set Auto to parallel port mode DMA Channel. (Default Value) |
| 3 | Set Parallel Port DMA to 3. |
| 1 | Set Parallel Port DMA to 1. |
| 0 | Set Parallel Port DMA to 0. |

- **Parallel Port IRQ**

| | |
|------|---|
| 7 | Set Parallel Port IRQ to 7. |
| Auto | Set Auto to parallel Port IRQ DMA Channel. (Default Value) |
| 5 | Set Parallel Port IRQ to 5. |

- **OnBoard AC'97 Audio**

| | |
|----------|--|
| Auto | Enabled onboard AC'97 audio function. (Default Value) |
| Disabled | Disable this function. |

- **OnBoard Legacy Audio**

| | |
|----------|---|
| Enabled | Enable OnBoard Legacy Audio. (Default Value) |
| Disabled | Disable OnBoard Legacy Audio. |

- **Sound Blaster**

| | |
|----------|---|
| Enabled | Enable Sound Blaster. |
| Disabled | Disable Sound Blaster. (Default Value) |

- **SB I/O Base Address**

| | |
|-----------|--|
| 220h-22Fh | Set SB I/O Base Address to 220h-22Fh. (Default Value) |
| 280h-28Fh | Set SB I/O Base Address to 280h-28Fh. |
| 260h-26Fh | Set SB I/O Base Address to 260h-26Fh. |
| 240h-24Fh | Set SB I/O Base Address to 240h-24Fh. |

- **SB IRQ Select**

| |
|---|
| IRQ 5 / 7 / 9 / 10. (Default Value: 5) |
|---|

- **SB DMA Select**

| |
|--|
| DMA 0 / 1 / 2 / 3. (Default Value: 1) |
|--|

- **MPU-401**

| | |
|----------|---|
| Enabled | Enable MPU-401. |
| Disabled | Disable MPU-401. (Default Value) |

Ps. When Force Feedback joystick is used, MPU-401 needs to be Enable.

- **MPU-401 I/O Address**

| | |
|-----------|--|
| 330h-333h | Set MPU-401 I/O Address to 330h-333h. |
| 300h-303h | Set MPU-401 I/O Address to 300h-303h. (Default Value) |
| 310h-313h | Set MPU-401 I/O Address to 310h-313h. |
| 320h-323h | Set MPU-401 I/O Address to 320h-323h. |

- **FM Port (388h-38Bh)**

| | |
|----------|---|
| Disabled | Disable FM Port (388h-38Bh). (Default Value) |
| Enabled | Enable FM Port (388h-38Bh). |

- **Game Port (200h-207h)**

| | |
|----------|--|
| Disabled | Disable Game Port (200h-207h). |
| Enabled | Enable Game Port (200h-207h). (Default Value) |

Hardware Monitor & MISC Setup

| AMIBIOS SETUP – HARDWARE MONITOR & MISC SETUP (C) 1999 American Megatrends, Inc. All Rights Reserved | |
|--|---------------|
| Current CPU1 Temp. | : 44°C/ 111°F |
| Current CPU2 Temp. | : 29°C/ 84°F |
| Current System Temp. | : 33°C/ 91°F |
| Current CPU1 Fan Speed | : 7031 RPM |
| Current CPU2 Fan Speed | : 0 RPM |
| CPU1 Vcore | : 1.634V |
| CPU2 Vcore | : 1.342V |
| +3.300V | : 3.321V |
| +5.000V | : 5.069V |
| +12.000V | : 12.045V |
| ESC: Quit ↑↓ ←→: Select Item F1 : Help PU/PD+/-: Modify F5 :Old Values (Shift)F2:Color F6 : Load Fail-Safe Defaults F7 : Load Optimized Defaults | |

Figure 10: Hardware Monitor & MISC Setup

- **Current CPU1 Temp. (°C / °F)**
Detect CPU1 Temperature automatically.
- **Current CPU2 Temp. (°C / °F)**
Detect CPU2 Temperature automatically.
- **Current System Temp. (°C / °F)**
Detect System Temperature automatically.
- **Current CPU1 Fan Speed**
Detect CPU1 Fan speed status automatically.
- **Current CPU2 Fan Speed**
Detect CPU2 Fan speed status automatically.
- **Current Voltage (V) CPU1 Vcore/CPU2 Vcore/+3.3V/+5V/+12V**
Detect system's voltage status automatically.

Supervisor / User Password

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

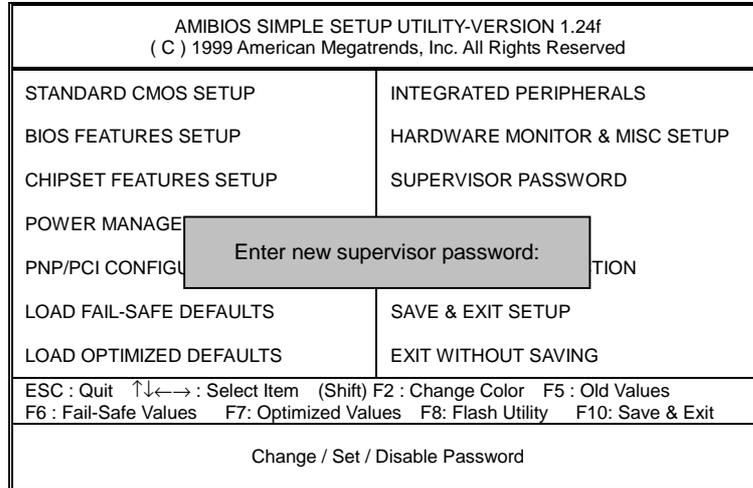


Figure 11: Password Setting

Type the password, up to six characters, and press <Enter>. 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 password, just press <Enter> when you are prompted to enter password. A message **"PASSWORD DISABLED"** will appear to confirm the password being disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

The BIOS Setup program allows you to specify two separate passwords: a **SUPERVISOR PASSWORD** and a **USER PASSWORD**. When disabled, anyone may access all BIOS Setup program function. When enabled, the Supervisor password is required for entering the BIOS Setup program and having full configuration fields, the User password is required to access only basic items.

If you select **"Always"** at **"Password Check"** in BIOS Features Setup Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter Setup Menu.

If you select **"Setup"** at **"Password Check"** in BIOS Features Setup Menu, you will be prompted only when you try to enter Setup.

IDE HDD Auto Detection

| AMIBIOS SETUP – STANDARD CMOS SETUP (C) 1999 American Megatrends, Inc. All Rights Reserved | | | | | | | |
|--|------|------|------|-----------------------|-------|--------|------|
| Date (mm/dd/yyyy) : Tue Mar 27, 2001 Time (hh/mm/ss) : 10:36:24 | | | | | | | |
| TYPE | SIZE | CYLS | HEAD | PRECOMP | LANDZ | SECTOR | MODE |
| Pri Master : Not Installed Pri Slave : Not Installed Sec Master : Not Installed Sec Slave : Not Installed | | | | | | | |
| Floppy Drive A: 1.44 MB 3 ½ | | | | Base Memory : 640 Kb | | | |
| Floppy Drive B: Not Installed | | | | Other Memory: 384 Kb | | | |
| Boot Sector Virus Protection : Disabled | | | | Extended Memory: 63Mb | | | |
| | | | | Total Memory: 64Mb | | | |
| Month: Jan–Dec | | | | ESC : Exit | | | |
| Day: 01 – 31 | | | | ↑↓ : Select Item | | | |
| Year: 1990–2099 | | | | PU/PD/+/- : Modify | | | |
| | | | | (Shift)F2 : Color | | | |

Figure 12: IDE HDD Auto Detection

Type "Y" will accept the H.D.D. parameter reported by BIOS.

Type "N" will keep the old H.D.D. parameter setup. If the hard disk cylinder number is over 1024, then the user can select LBA mode or LARGER mode for DOS partition larger than 528 MB.

Save & Exit Setup

| | |
|--|-------------------------------|
| AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24f (C) 1999 American Megatrends, Inc. All Rights Reserved | |
| STANDARD CMOS SETUP | INTEGRATED PERIPHERALS |
| BIOS FEATURES SETUP | HARDWARE MONITOR & MISC SETUP |
| CHIPSET FEATURES SETUP | SUPERVISOR PASSWORD |
| POWER MANAGE | |
| PNP/PCI CONFIG | |
| LOAD FAIL-SAFE DEFAULTS | SAVE & EXIT SETUP |
| LOAD OPTIMIZED DEFAULTS | EXIT WITHOUT SAVING |
| ESC : Quit ↑↓←→ : Select Item (Shift) F2 : Change Color F5 : Old Values F6 : Fail-Safe Values F7 : Optimized Values F8 : Flash Utility F10: Save & Exit | |
| Save Data to CMOS & Exit SETUP | |

Figure 13: Save & Exit Setup

Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS.

Type "N" will return to Setup Utility.

Exit Without Saving

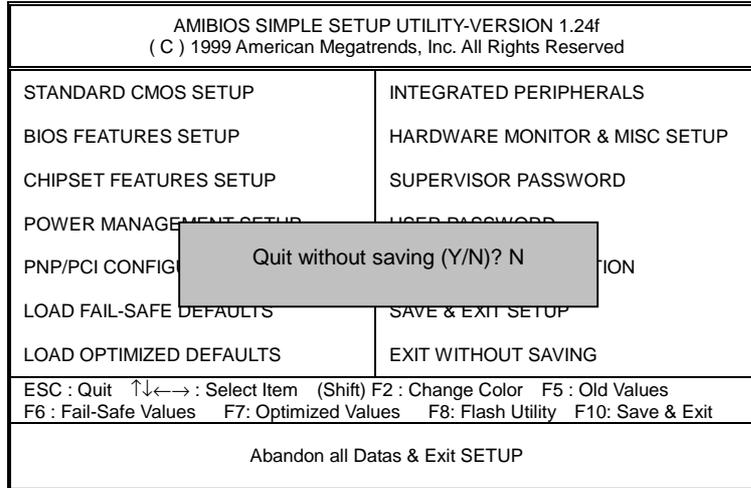


Figure 14: Exit Without Saving

Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS.

Type "N" will return to Setup Utility.

Technical Support/RMA Sheet

| | | |
|-------------------|---------------|------------|
| Customer/Country: | Company: | Phone No.: |
| Contact Person: | E-mail Add. : | |

| | |
|------------------------|---------------|
| Model name/Lot Number: | PCB revision: |
| BIOS version: | O.S./A.S.: |

| Hardware Configuration | Mfs. | Model name | Size: | Driver/Utility: |
|------------------------|------|------------|-------|-----------------|
| CPU | | | | |
| Memory Brand | | | | |
| Video Card | | | | |
| Audio Card | | | | |
| HDD | | | | |
| CD-ROM / DVD-ROM | | | | |
| Modem | | | | |
| Network | | | | |
| AMR / CNR | | | | |
| Keyboard | | | | |
| Mouse | | | | |
| Power supply | | | | |
| Other Device | | | | |
| | | | | |
| | | | | |

 Problem Description:

Appendix

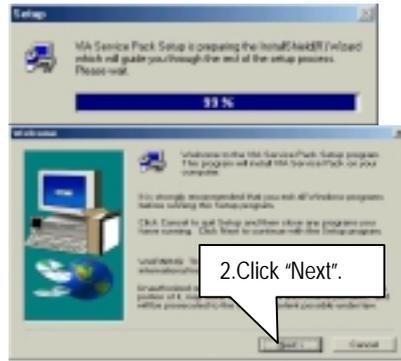
Picture below are shown in Windows ME (VUCD driver version 1.81) Appendix A: VIA Chipsets Driver Installation

A. VIA 4 in 1 Service Pack Driver:

Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.



(1)



(2)



(3)



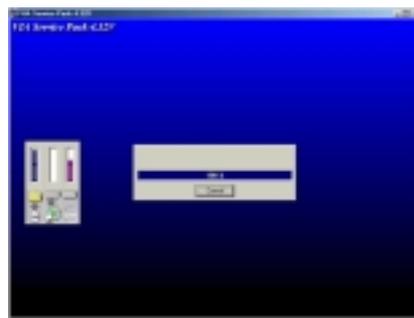
(4)



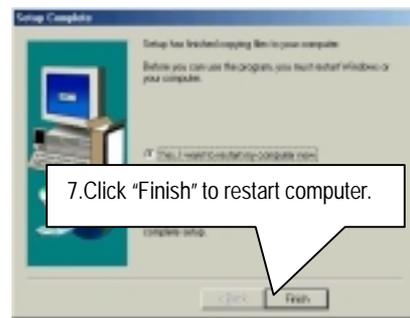
(5)



(6)



(7)



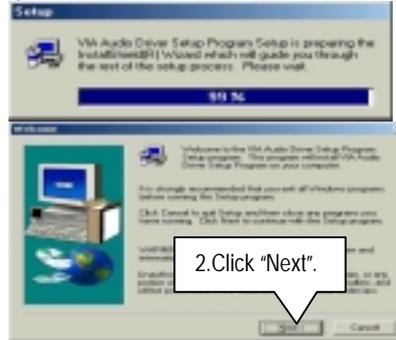
(8)

Appendix B: VIA AC'97 Audio Driver

Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.



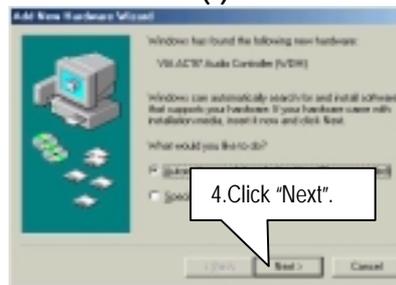
(1)



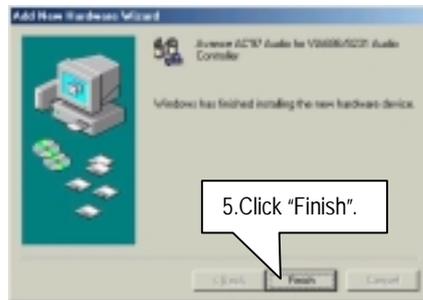
(2)



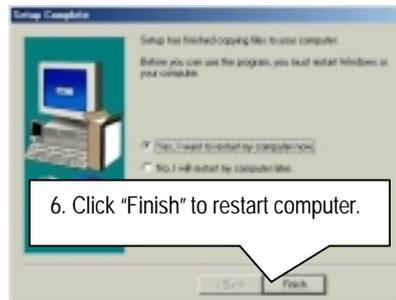
(3)



(4)



(5)

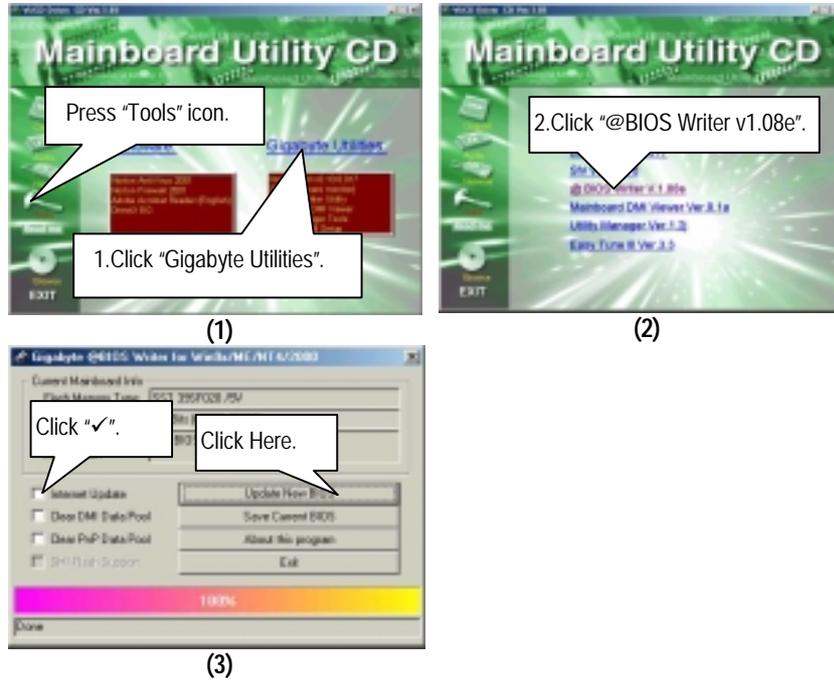


(6)

Appendix C: BIOS Flash Procedure

BIOS update procedure:

If your OS is Win9X, we recommend that you used Gigabyte @BIOS™ Program to flash BIOS.



Methods and steps:

- I. Update BIOS through Internet
 - a. Click "Internet Update" icon
 - b. Click "Update New BIOS" icon
 - c. Select @BIOS™ sever ("Gigabyte @BIOS™ sever 1 in Taiwan" and "Gigabyte @BIOS™ sever 2 in Taiwan" are available for now, the others will be completed soon)
 - d. Select the exact model name on your motherboard
 - e. System will automatically download and update the BIOS.

II. Update BIOS **NOT** through Internet:

- a. **Do not** click "Internet Update" icon
- b. Click "Update New BIOS"
- c. Please select "All Files" in dialog box while opening the old file.
- d. Please search for BIOS unzip file, downloading from internet or any other methods (such as: 6VTXD.F1).
- e. Complete update process following the instruction.

III. Save BIOS

In the very beginning, there is "Save Current BIOS" icon shown in dialog box. It means to save the current BIOS version.

IV. Check out supported motherboard and Flash ROM:

In the very beginning, there is "About this program" icon shown in dialog box. It can help you check out which kind of motherboard and which brand of Flash ROM are supported.

Note:

- a. In method I, if it shows two or more motherboard's model names to be selected, please make sure your motherboard's model name again. Selecting wrong model name will cause the system unbooted.
- b. In method II, be sure that motherboard's model name in BIOS unzip file are the same as your motherboard's. Otherwise, your system won't boot.
- c. In method I, if the BIOS file you need cannot be found in @BIOS™ server, please go onto Gigabyte's web site for downloading and updating it according to method II.
- d. Please note that any interruption during updating will cause system unbooted

Or else you can select flash BIOS in DOS mode.

☛ Please check your **BIOS vendor (AMI or AWARD)**, your **motherboard name** and **PCB version** on the motherboard.

1. Format a bootable system floppy diskette by the command "**format a:/s**" in command mode.
2. Visit the Gigabyte website at [http:// www.gigabyte.com.tw](http://www.gigabyte.com.tw) , Select the BIOS file you need and download it to your bootable floppy diskette.
3. Insert the bootable diskette containing the BIOS file into the floppy diskette driver.
4. Assuming that the floppy diskette driver is A, reboot the system by using the A: driver. At the A: > prompt, run the BIOS upgraded file by executing the Flash BIOS utility and the BIOS file with its appropriate extension.

Example: *(AMI tool) (Where 6vtxd.f1 is name of the BIOS file name)*

```
A:>flashxxx.exe 6vtxd.f1 ↵
```

Example: *(Award tool) (Where 6vtxd.f1 is name of the BIOS file name)*

```
A:>Awdflash.exe 6vtxd.f1 ↵
```

5. Upon pressing the <Enter> key, a flash memory writer menu will appear on screen. Enter the new BIOS file name with its extension filename into the text box after file name to program.
6. If you want to save the old BIOS file(perform as soon as system is operational, this is recommended), select Y to **DO YOU WANT TO SAVE BIOS**, then type the old BIOS filename and the extension after filename to save: This option allows you to copy the contents of the flash memory chip onto a diskette, giving you a backup copy of the original motherboard BIOS in case you need to re-install it. Select N to **DO YOU WANT TO SAVE BIOS**, if you don't want to save the old BIOS file.
7. After the decision to save the old BIOS file or not is made, select Y to **ARE YOU SURE TO PROGRAM** when the next menu appear; wait until a message showing Power Off or Reset the system appears. Then turn off your system.
8. Remove the diskette and restart your system.
9. Hold down <Delete> key to enter BIOS setup. You must select "Load Setup BIOS Default" to activate the new BIOS, then you may set other item from the main menu.

Appendix D: Acronyms

| Acronyms | Meaning |
|----------|---|
| ACPI | Advanced Configuration and Power Interface |
| APM | Advanced Power Management |
| AGP | Accelerated Graphics Port |
| AMR | Audio Modem Riser |
| ACR | Advanced Communications Riser |
| BIOS | Basic Input / Output System |
| CPU | Central Processing Unit |
| CMOS | Complementary Metal Oxide Semiconductor |
| CRIMM | Continuity RIMM |
| CNR | Communication and Networking Riser |
| DMA | Direct Memory Access |
| DMI | Desktop Management Interface |
| DIMM | Dual Inline Memory Module |
| DRM | Dual Retention Mechanism |
| DRAM | Dynamic Random Access Memory |
| DDR | Double Data Rate |
| ECP | Extended Capabilities Port |
| ESCD | Extended System Configuration Data |
| ECC | Error Checking and Correcting |
| EMC | Electromagnetic Compatibility |
| EPP | Enhanced Parallel Port |
| ESD | Electrostatic Discharge |
| FDD | Floppy Disk Device |
| FSB | Front Side Bus |
| HDD | Hard Disk Device |
| IDE | Integrated Dual Channel Enhanced |
| IRQ | Interrupt Request |
| I/O | Input / Output |
| IOAPIC | Input Output Advanced Programmable Input Controller |
| ISA | Industry Standard Architecture |
| LAN | Local Area Network |
| LBA | Logical Block Addressing |
| LED | Light Emitting Diode |
| MHz | Megahertz |
| MIDI | Musical Interface Digital Interface |
| MTH | Memory Translator Hub |
| MPT | Memory Protocol Translator |

To be continued...

| Acronyms | Meaning |
|----------|-----------------------------------|
| NIC | Network Interface Card |
| OS | Operating System |
| OEM | Original Equipment Manufacturer |
| PAC | PCI A.G.P. Controller |
| POST | Power-On Self Test |
| PCI | Peripheral Component Interconnect |
| RIMM | Rambus in-line Memory Module |
| SCI | Special Circumstance Instructions |
| SECC | Single Edge Contact Cartridge |
| SRAM | Static Random Access Memory |
| SMP | Symmetric Multi-Processing |
| SMI | System Management Interrupt |
| USB | Universal Serial Bus |
| VID | Voltage ID |