



When you installing AGP card, please make sure the following notice is fully understood and practiced. If your AGP card has "AGP 4X notch"(show below), please make sure your AGP card is AGP 4X (1.5V).



Do not use AGP 2X card (3.3V) in this motherboard. It will burn and damage the motherboard due to Intel® 845 / Intel® 850 chipset can't support AGP 2X(3.3V).

Example 1: Diamond Vipper V770 golden finger is compatible with 2X/4X mode AGP slot. It can be switched between AGP 2X (3.3V) or 4X (1.5V) mode by adjusting the jumper. The factory default for this card is 2X(3.3V). If you install this card in GA-8IRE (or any AGP 4X only) motherboards without switching the jumper to 4X mode (1.5V), it will burn the motherboard.

Example 2: Some ATi Rage 128 Pro graphics cards made by "Power Color", the graphics card manufacturer & some SiS 305 cards, their golden finger is compatible with 2X/4X mode AGP slot, but they support 2X (3.3V) only. If you install these cards in Intel® 845 / Intel® 850 based motherboards, they will burn the motherboard.

Note : Although Gigabyte's AG32S graphics card is based on ATi Rage 128 Pro chip, the design of AG32S is compliance with AGP 4X (1.5V) specification. Therefore, AG32S will work fine with Intel® 845 / Intel® 850 based motherboards.



- 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.
- Due to rapid change in technology, some of the specifications might be out of date before publication of this booklet.



WARNING: Never run the processor without the heatsink properly and firmly attached. **PERMANENT DAMAGE WILL RESULT!**

Misuz guzda: Ne fadarj manāis nevietā izpildot darbus, kas ir izstrādātas detaļās ar viļņveida izstrādājumiem, kas izraisa **PERMANENTU KĀRĀTĒRĀTĪBU!**

Achtung: Der Prozessor darf nur in fester, geschlossener Version, wenn der Wärmeabnehmer ordnungsgemäß und fest angebracht ist. **DIES HAT EINEN PERMANENTEN SCHADEN ZUR FOLGE!**

Advertencia: Nunca haga funcionar el procesador sin el disipador de calor instalado correctamente y firmemente. **SE PRODUCIRÁ UN DAÑO PERMANENTE!**

Atēns: Nācien izpilda darbus, kas ir izstrādāti tā, kā tas ir paredzēts, un izpildot tos, ja nav pareizi uzstādīti un fiksēti, var izraisīt **PERMANENTU KĀRĀTĒRĀTĪBU!**

警告: 散热器未正确安装在散热器上之前，不要运行处理器，这可能导致永久损坏!

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경고: 열교환기를 올바르게 설치하지 않고 작동시키면 영구적인 손상을 초래할 수 있습니다. 영구적인 손상을 초래할 수 있습니다.

警告: 散热器未正确安装在散热器上之前，不要运行处理器，这可能导致永久损坏!

Declaration of Conformity

We, Manufacturer/Importer
(full address)

G.B.T. Technology Trading 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-8IRE

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"/> EN 60555-2	Disturbances in supply systems cause by household appliances and similar electrical equipment "Harmonics"
<input type="checkbox"/> EN 55013	Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment	<input type="checkbox"/> EN 61000-3-3* <input checked="" type="checkbox"/> EN 60555-3	Disturbances in supply systems cause 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 emission 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"/> EN50091-2	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	
<input type="checkbox"/> EN 60335	Safety of household and similar electrical appliances	<input type="checkbox"/> EN 50091-1	

Manufacturer/Importer

(Stamp)

Date : Apr. 30, 2002

Signature:
Name:

Timmy Huang
Timmy Huang

DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2.1077(a)



Responsible Party

G.B.T. INC.

Name:

Address: 17358 Railroad Street

City of Industry, CA 91748

Phone/Fax No: (818) 854-9338/(818) 854-9339

hereby declares that the product

Product Name: Motherboard

Model Number: GA-8IRE

Conforms to the following specifications:

FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109
(a), Class B Digital Device

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 and (2) this device must accept any interference received, including that may cause undesired operation.

Representative Person's Name: ERIC LU

Signature: Eric Lu

Date: Apr. 30, 2002

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
BBS	BIOS Boot Specification
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

to be continued.....

Acronyms	Meaning
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
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

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:

GA-8IRE
P4 Titan DDR Motherboard

USER' S MANUAL

Pentium® 4 Processor Motherboard

Rev. 2001

12ME-8I RE-2001

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Item Checklist

- The GA-8IRE motherboard
- IDE cable x 1/ Floppy cable x 1
- CD for motherboard driver & utility
- GA-8IRE user' s manual
- Quick PC Installation Guide



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 to 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.

Chapter 1 Introduction

Features Summary

Form Factor	<ul style="list-style-type: none"> 30.5cm x 22.8cm ATX size form factor, 4 layers PCB.
CPU	<ul style="list-style-type: none"> Socket 478 for Intel® Micro FC-PGA2 Pentium® 4 processor Support Intel® Pentium® 4 (Northwood, 0.13μm) processor Intel Pentium®4 400MHz FSB 2nd cache depend on CPU
Chipset	<ul style="list-style-type: none"> Chipset 82845 HOST/AGP/Controller 82801BA(ICH2) I/O Controller Hub
Memory	<ul style="list-style-type: none"> 3 184-pin DDR DIMM sockets Supports PC1600 DDR or PC2100 DDR DIMM Supports up to 2GB DRAM (Max) Supports only 2.5V DDR DIMM Supports 64bit ECC type DRAM integrity mode
I/O Control	<ul style="list-style-type: none"> IT8702
Slots	<ul style="list-style-type: none"> 1 AGP slot 4X (1.5V) device support 5 PCI slot supports 33MHz & PCI 2.2 compliant
On-Board IDE	<ul style="list-style-type: none"> 2 IDE bus master (DMA33/ATA66/ATA100) IDE ports for up to 4 ATAPI devices Supports PIO mode3,4 (UDMA 33/ATA66/ATA100) IDE & ATAPI CD-ROM
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 port supports Normal/EPP/ECP mode 2 Serial ports (COMA&COMB) 4 x USB (Rear USB x 2, Front USB x 2) 1 Front Audio connector
On-Board Sound	<ul style="list-style-type: none"> Sigmatel STAC9721T CODEC Line In/Line Out/Mic In/CD In/AUX_IN/Game Port
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 AWARD BIOS, 2M bit FWH

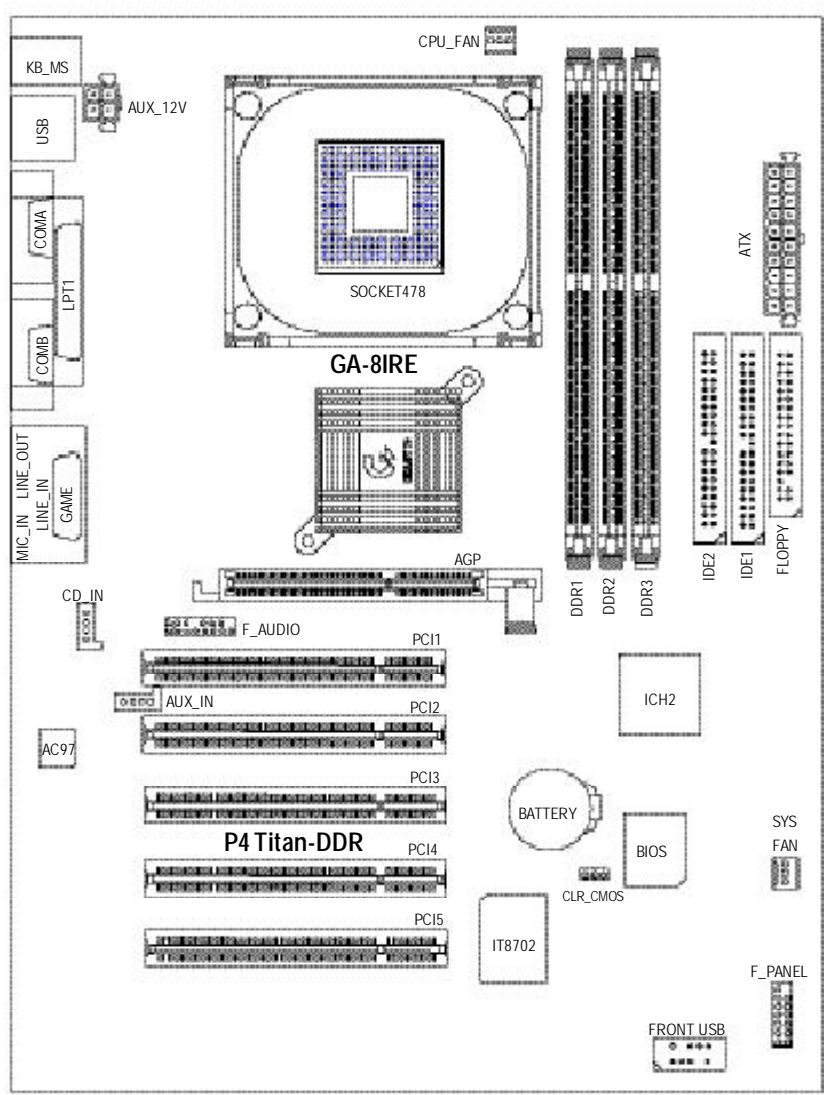
to be continued.....

Additional Features	<ul style="list-style-type: none">• PS/2 Keyboard power on by password• PS/2 Mouse power on• External Modem wake up• STR(Suspend-To-RAM)• AC Recovery• USB KB/Mouse wake up from S3• Supports @BIOS• Supports EasyTuneIII
Jumper less Overclocking	<ul style="list-style-type: none">• Over Clock (CPU/DDR/AGP) by BIOS



Please set the CPU host frequency in accordance with your processor' s specifications. We don' t recommend you to set the system bus frequency over the CPU' s specification because these specific bus frequencies are not the standard specifications for CPU, chipset and most of the peripherals. Whether your system can run under these specific bus frequencies properly will depend on your hardware configurations, including CPU, Chipsets, SDRAM, Cards....etc.

GA-8IRE Motherboard Layout

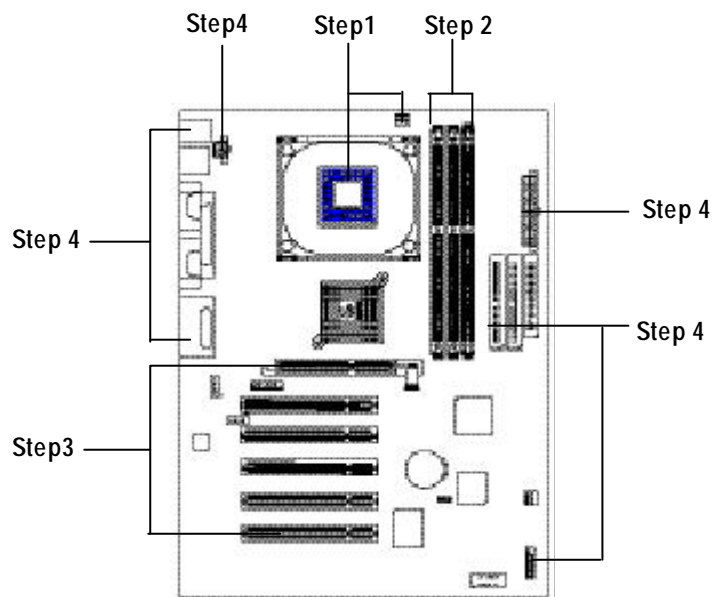


Chapter 2 Hardware Installation Process

E

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

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

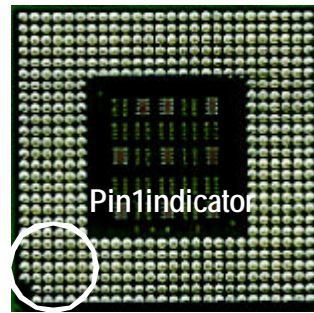


Step 1: Install the Central Processing Unit (CPU)

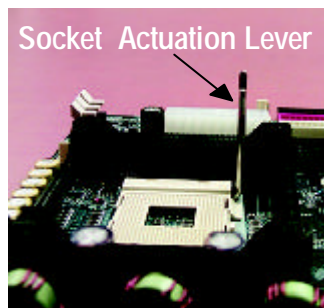
Step 1-1 CPU Installation



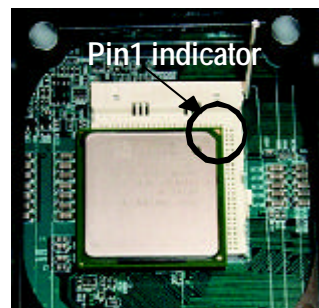
CPU Top View



CPU Bottom View



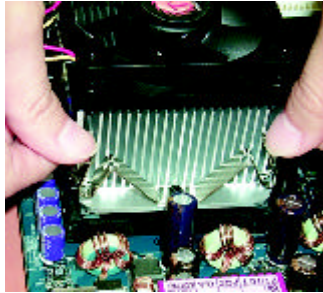
1. Pull up the CPU socket lever and up to 90-degree angle.
3. Press down the CPU socket lever and finish CPU installation.



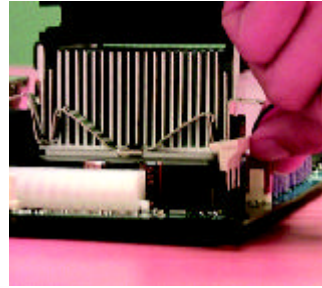
2. Locate Pin 1 in the socket and look for a (golden) cut edge on the CPU upper corner. Then insert the CPU into the socket.

- ⚠ Please make sure the CPU type is supported by the motherboard.
- ⚠ If you do not match the CPU socket Pin 1 and CPU cut edge well, it will cause improper installation. Please change the insert orientation.

Step 1-2 : CPU Heat Sink Installation



1. Hook one end of the cooler bracket to the CPU socket first.



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

- Please use Intel approved cooling fan.
- We recommend you to apply the thermal tape to provide better heat conduction between your CPU and heatsink.
(The CPU cooling fan might stick to the CPU due to the hardening of the thermal paste. During this condition if you try to remove the cooling fan, you might pull the processor out of the CPU socket along with the cooling fan, and might damage the processor. To avoid this from happening, we suggest you to either use thermal tape instead of thermal paste, or remove the cooling fan with extreme caution.)
- Make sure the CPU fan power cable is plugged in to the CPU fan connector, this completes the installation.
- Please refer to CPU heat sink user's manual for more detail installation procedure.

Step 2: Install memory modules

The motherboard has 3 dual inline memory module (DIMM) sockets, but it can only support a maximum of 4 banks of DDR memory. DDR slot 1 uses 2 banks, DDR slot 2&3 share the remaining 2 banks. Please refer to the following tables for possible memory configurations supported. 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 notch. Memory size can vary between sockets.

Total Memory Sizes With Unbuffered DDR DIMM

Devices used on DIMM	1 DIMM x 64 / x 72	2 DIMMs x 64 / x 72	3 DIMMs x 64 / x 72
64 Mbit (2Mx8x4 banks)	128 MBytes	256 MBytes	256 MBytes
64 Mbit (1Mx16x4 banks)	32 MBytes	64 MBytes	96 MBytes
128 Mbit (4Mx8x4 banks)	256 MBytes	512 MBytes	512 MBytes
128 Mbit (2Mx16x4 banks)	64 MBytes	128 MBytes	196 MBytes
256 Mbit (8Mx8x4 banks)	512 MBytes	1 GBytes	1 GBytes
256 Mbit (4Mx16x4 banks)	128 MBytes	256 MBytes	384 MBytes
512 Mbit (16Mx8x4 banks)	1 GBytes	2 GBytes	2 GBytes
512 Mbit (8Mx16x4 banks)	256 MBytes	512 MBytes	768 MBytes

Notes: Double-sided x16 DDR memory devices are not support by Intel 845 chipset.

DDR1	DDR2	DDR3
S	S	S
D	S	S
D	D	X
D	X	D
S	D	X
S	X	D

D: Double Sided DIMM S: Single Sided DIMM
X: Not Use



DDR



1. The DIMM slot has a 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.

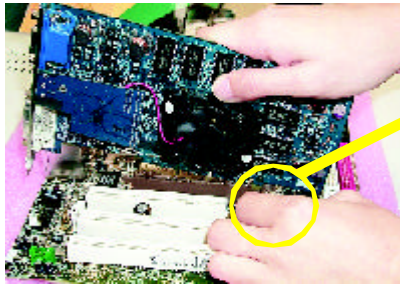


When STR/DIMM LED is ON, do not install/remove DIMM from socket.

Please note that the DIMM module can only fit in one direction due to the two notches. Wrong orientation will cause improper installation.
Please change the insert orientation.

Step 3: Install expansion cards

1. Read the related expansion card's instruction document before install the expansion card into the computer.
2. Remove your computer's chassis cover, screws and slot bracket from the computer.
3. Press the expansion card firmly into expansion slot in motherboard.
4. Be sure the metal contacts on the card are indeed seated in the slot.
5. Replace the screw to secure the slot bracket of the expansion card.
6. Replace your computer's chassis cover.
7. Power on the computer, if necessary, setup BIOS utility of expansion card from BIOS.
8. Install related driver from the operating system.



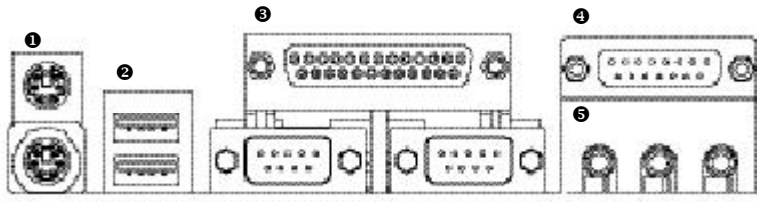
AGP Card



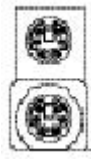
Please carefully pull out the small white-drawable bar at the end of the AGP slot when you try to install/ Uninstall the AGP card. Please align the AGP card to the onboard AGP slot and press firmly down on the slot . Make sure your AGP card is locked by the small white- drawable bar.

Step 4: Connect ribbon cables, cabinet wires, and power supply

Step 4-1 : I/O Back Panel Introduction



❶ PS/2 Keyboard and PS/2 Mouse Connector

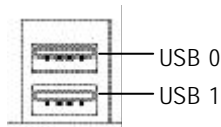


PS/2 Mouse Connector
(6 pin Female)

PS/2 Keyboard Connector
(6 pin Female)

➤ This connector supports standard PS/2 keyboard and PS/2 mouse.

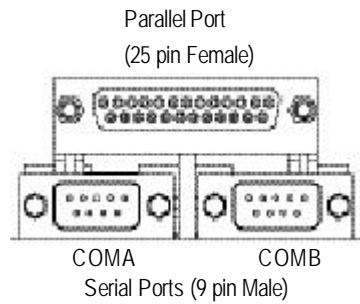
❷ USB Connector



➤ Before you connect your device(s) into USB connector(s), please make sure your device(s) such as USB keyboard, mouse, scanner, zip, speaker..etc. Have a standard USB interface. Also make sure your OS (Win 95 with USB supplement, Win98, Windows 2000, Windows ME, WinNT with SP 6) supports USB controller. If your OS does not support USB controller, please contact OS vendor for possible patch or driver upgrade. For more information please contact your OS or device(s) vendors.

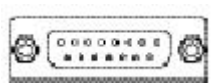


③ Parallel Port and Serial Ports (COMA/COMB)



➤ This connector supports 2 standard COM ports and 1 Parallel port. Device like printer can be connected to Parallel port ; mouse and modem etc can be connected to Serial ports.

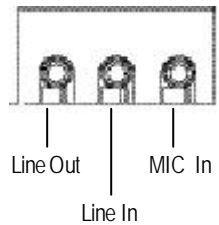
④ Game /MIDI Ports



Joystick/ MIDI (15 pin Female)

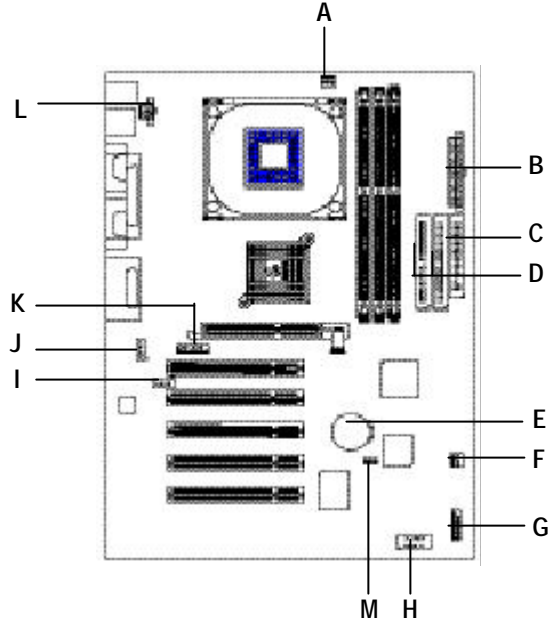
➤ This connector supports joystick, MIDI keyboard and other relate audio devices.

⑤ Audio Connectors



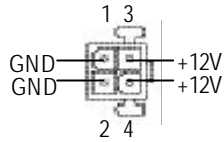
➤ After install onboard audio driver, you may connect speaker to Line Out jack, micro phone to MIC In jack. Device like CD-ROM , walkman etc can be connected to Line-In jack.

Step 4-2 :Connectors Introduction



A) CPU_FAN	G) F_PANEL
B) ATX	H) FRONT_USB
C) FLOPPY	I) AUX_IN
D) IDE1/IDE2	J) CD_IN
E) BATTERY	K) F_AUDIO
F) SYS_FAN	L) AUX_12V
M) CLR_CMOS	

L) AUX_12V(+12V Power Connector)



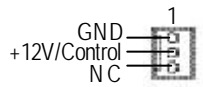
➤ This connector (ATX +12V) supplies the CPU operation voltage (V_{core}).
If this " ATX+ 12V connector" is not connected, system cannot boot.

A) CPU_FAN (CPU Fan Connector)

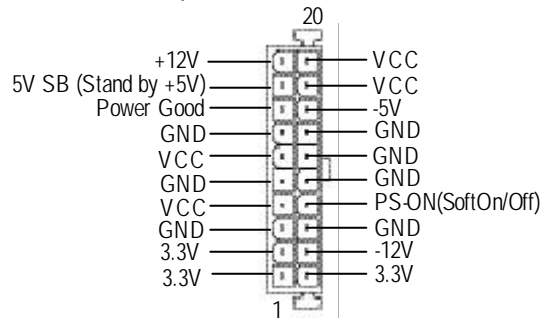


➤ Please note, a proper installation of the CPU cooler is essential to prevent the CPU from running under abnormal condition or damaged by overheating. The CPU fan connector supports Max. current up to 600mA .

F) SYS_FAN (System Fan Connector)

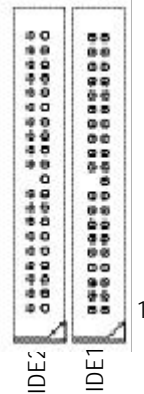


B) ATX (ATX Power Connector)



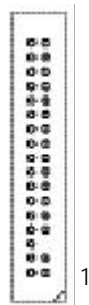
➤ AC power cord should only be connected to your power supply unit after ATX power cable and other related devices are firmly connected to the mainboard.

D) IDE1 / IDE2 Connector (Primary/Secondary)

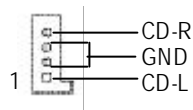


- Important Notice:
Please connect first harddisk to IDE1
and connect CDROM to IDE2.

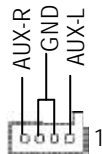
C) FLOPPY (Floppy Connector)



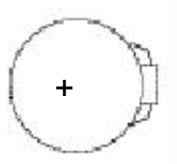
J) CD_IN (CD Audio Line In Connector)



I) AUX_IN (AUX In Connector)



E) BATTERY (BAT)

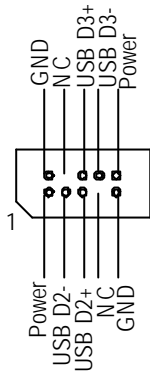


CAUTION

- ❖ 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.

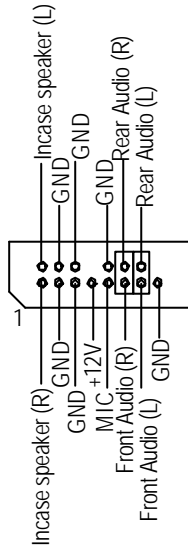
H) FRONT_USB (Front USB Connector)

➤ 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.

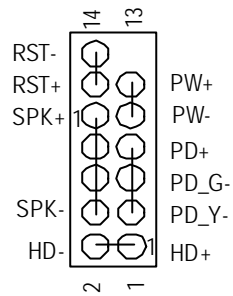


K) F_AUDIO (F_AUDIO Connector)

➤ If you want to use Front Audio connector, you must remove 11-12, 13-14 Jumper. In order to utilize the front audio header, your chassis must have front audio connector. Also please make sure the pin assignment on the cable is the same as the pin assignment on the MB header. To find out if the chassis you are buying support front audio connector, please contact your dealer



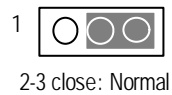
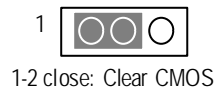
G) F_PANEL (2x7 pins jumper)



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(-)
RST (Reset Switch)	Open: Normal Operation Close: Reset Hardware System
PD+/PD_G-/PD_Y-(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 connect the power LED, PC speaker, reset switch and power switch etc of your chassis front panel to the F_PANEL connector according to the pin assignment above.

M) CLR_CMOS (Clear CMOS Function)



- Please note: You may clear the CMOS data to its default values by this jumper.

"#" Default doesn't include the "Shunter" to prevent from improper use this jumper. To clear CMOS, temporarily short 1-2 pin.

Chapter 3 BIOS Setup

BIOS Setup is an overview of the BIOS Setup Program. The program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

ENTERING SETUP

After power on the computer, pressing immediately during POST (Power On Self Test) it will allow you to enter standard BIOS CMOS SETUP.

If you require more advanced BIOS settings, please go to "Advanced BIOS" setting menu. To enter Advanced BIOS setting menu, press "Ctrl+F1" key on the BIOS screen.

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

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

CMOS Setup Utility-Copyright (C) 1984-2002 Award Software	
<ul style="list-style-type: none"> ▶Standard CMOS Features ▶Advanced BIOS Features ▶Integrated Peripherals ▶Power Management Setup ▶PnP/PCI Configurations ▶Frequency/Voltage Control Top Performance 	<ul style="list-style-type: none"> Load Fail-Safe Defaults Load Optimized Defaults Set Supervis or Password Set User Password Save & Exit Setup Exit Without Saving
ESC:Quit	↑↓→←: Select Item
F8: Q-Flash	F10:Save & Exit Setup
Time, Date, Hard Disk Type...	

Figure 1: Main Menu

- **Standard CMOS Features**
This setup page includes all the items in standard compatible BIOS.
- **Advanced BIOS Features**
This setup page includes all the items of Award special enhanced features.
- **Integrated Peripherals**
This setup page includes all onboard peripherals.
- **Power Management Setup**
This setup page includes all the items of Green function features.
- **PnP/PCI Configurations**
This setup page includes all the configurations of PCI & PnP ISA resources.
- **Frequency/Voltage Control**
This setup page is control CPU' s clock and frequency ratio.
- **Top Performance**
If you wish to maximize the performance of your system, set "Top Performance" as "Enabled".
- **Load Fail-Safe Defaults**
Fail-Safe Defaults indicates the value of the system parameters which the system would be in safe configuration.
- **Load Optimized Defaults**
Optimized Defaults indicates the value of the system parameters which the system would be in best performance configuration.
- **Set Supervisor password**
Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.
- **Set User password**
Change, set, or disable password. It allows you to limit access to the system.
- **Save & Exit Setup**
Save CMOS value settings to CMOS and exit setup.
- **Exit Without Saving**
Abandon all CMOS value changes and exit setup.

Load Optimized Default

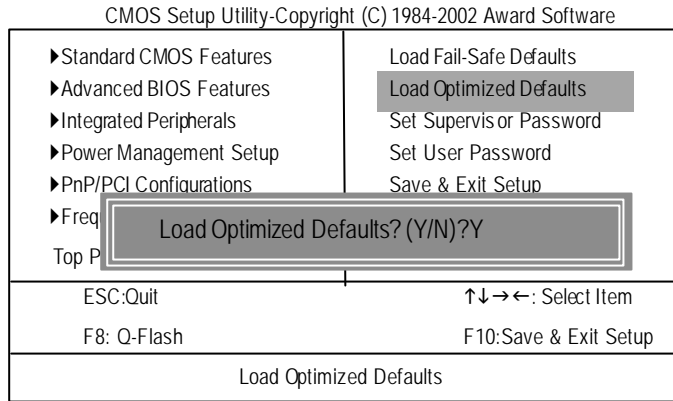


Figure 10: Load Optimized Defaults

☞ Load Optimized Defaults

Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.

To Load Optimized, move cursor, by pressing the arrow keys on the keyboard, to highlight the optimized default and press enter key then press "Y" if you decide to load this option.

Save & Exit Setup

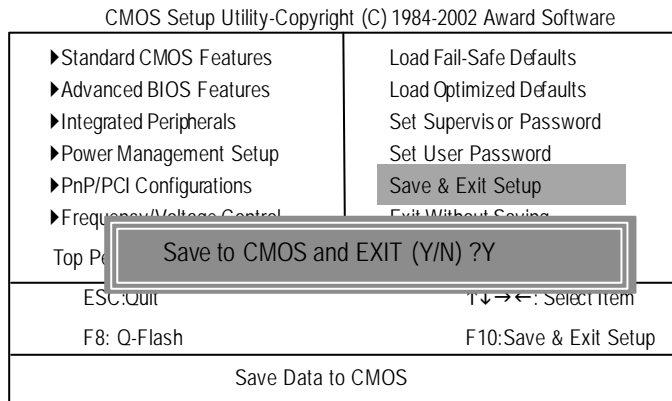


Figure 12: Save & Exit Setup

☞ To save exit the BIOS setting screen press F10, and press "Y" if you want to save setting. By typing "N" or "ESC" will take you back to setup screen.



If you want to realize the BIOS setup information in detail, please download this manual from Gigabyte web <http://www.gigabyte.com.tw>.

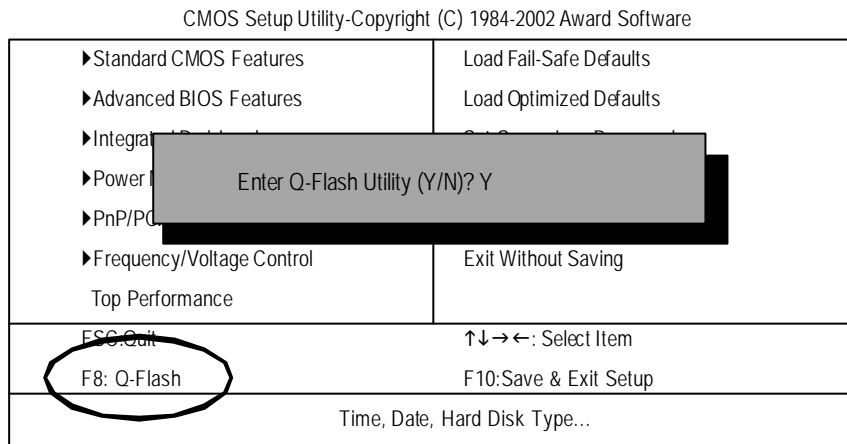
Q-Flash Introduction

A. What is Q-Flash Utility?

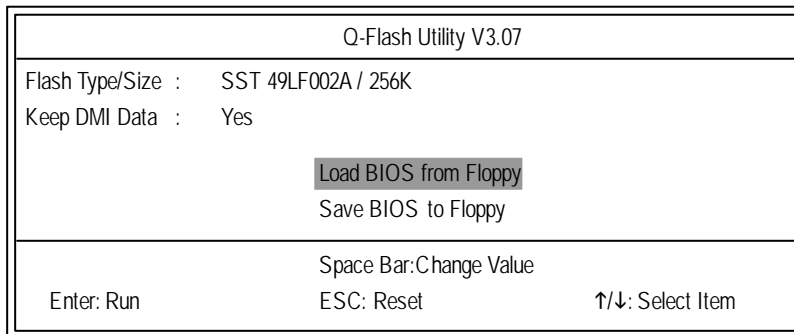
Q-Flash utility is a pre-O.S. BIOS flash utility enables users to update its BIOS within BIOS mode, no more fooling around any OS.

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 AWARD BIOS CMOS SETUP, then press <F8> to enter Q-Flash utility.



b. Q-Flash Utility



Load BIOS From Floppy


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

1 File(s) found	
XXXX.XX	256K
Total Size: 1.39M Free Size: 1.14M	
F5: Refresh	DEL: Delete ESC: Return Main

Where XXXX.XX is name of the BIOS file.

 Press Enter to Run.

Are you sure to update BIOS?
[Enter] to continue Or [ESC] to abort...

 Press Enter to Run.

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

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

Chapter 4 Driver Installation

Picture below are shown in Windows ME (IUCD driver version 2.0)

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.

A. Installing Intel 845 Chipset Driver

Please install this driver as the first priority. this item installs the chipset driver utility that enables Plug-n-Plug INF support for Intelchipset component.

B. Installing Sound Driver

Click this item to install sound driver.



A: Intel 845 Chipset Driver Installation

Follow the setup that showing on the screen to install the Utility.



1. Click " Intel Chipset Software Installation Utility" Item.

B: Sound Driver Installation



Chapter 5 BIOS Flash Procedure

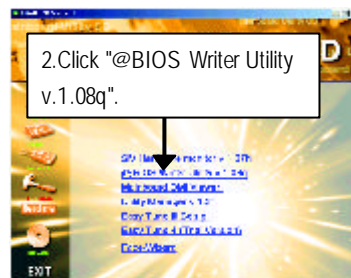
BIOS update procedure:

Method 1:

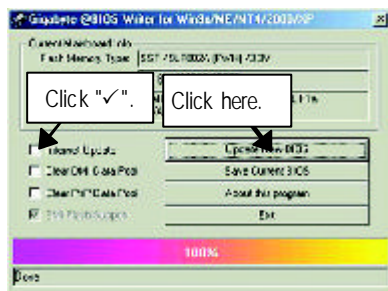
If your OS is Win9X, we recommend that you used Gigabyte @BIOS™ Program to flash BIOS.



(1)



(2)



(3)

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: 8IRE.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

Method 2:

We use GA-7VTX motherboard and Flash841 BIOS flash utility as example.

Please flash the BIOS according to the following procedures if you are now under the DOS mode.

Flash BIOS Procedure:

STEP 1:

(1) Please make sure your system has installed the extraction utility such as winzip or pkunzip.

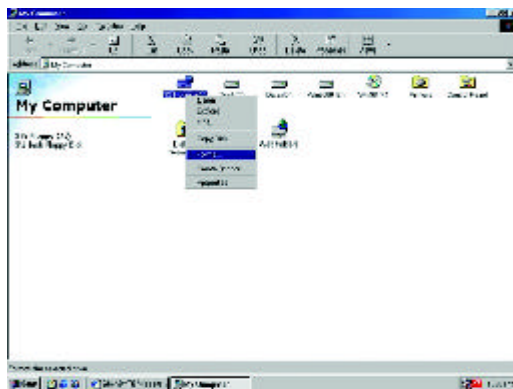
Firstly you have to install the extraction utility such as winzip or pkunzip for unzip the files. Both of these utilities are available on many shareware download pages like

<http://www.shareware.cnet.com>

STEP 2: Make a DOS boot diskette. (See example: Windows 98 O.S.)

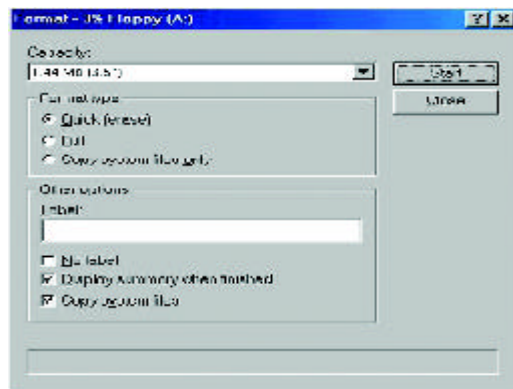
Beware: Windows ME/2000 are not allowed to make a DOS boot diskette.

(1) With an available floppy disk in the floppy drive. Please leave the diskette "UN-write protected" type. Double click the "My Computer" icon from Desktop, then click "3.5 diskette (A)" and right click to select "Format (M)"

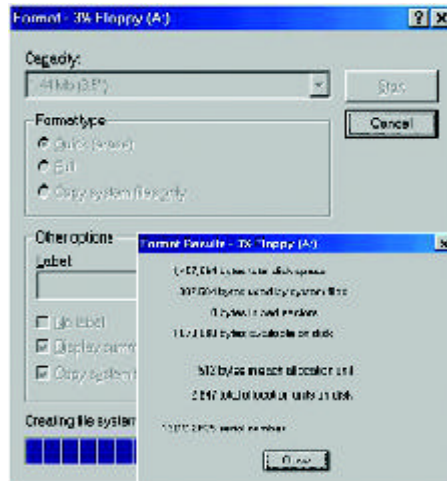


(2) Select the "Quick (erase)" for Format Type, and pick both "Display summary when finished" and "Copy system files", after that press "Start". That will format the floppy and transfer the needed system files to it.

Beware: This procedure will erase all the prior data on that floppy, so please proceed accordingly.



(3) After the floppy has been formatted completely, please press "Close".

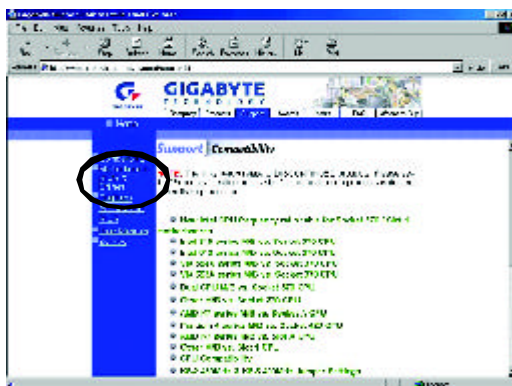


STEP 3: Download BIOS and BIOS utility program.

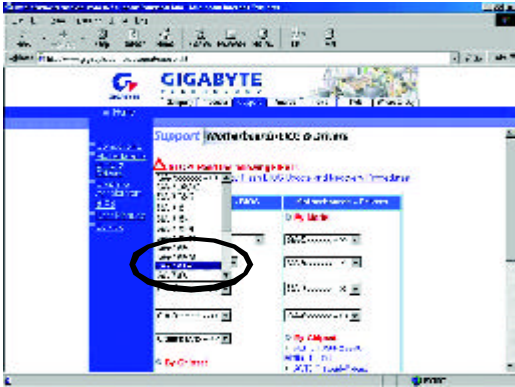
(1) Please go to Gigabyte website <http://www.gigabyte.com.tw/index.html>, and click "Support".



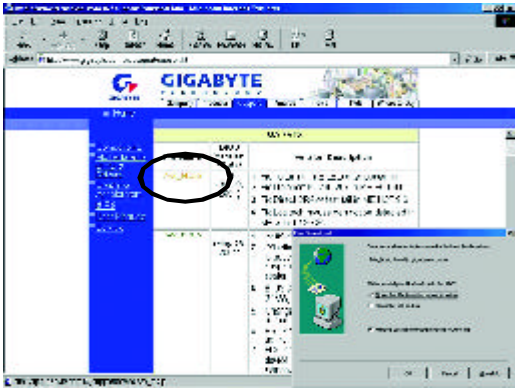
(2) From Support zone, click the "Motherboards BIOS & Drivers".



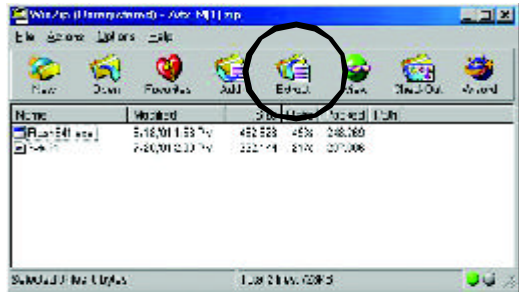
(3) We use GA-7VTX motherboard as example. Please select GA-7VTX by Model or Chipset optional menu to obtain BIOS flash files.



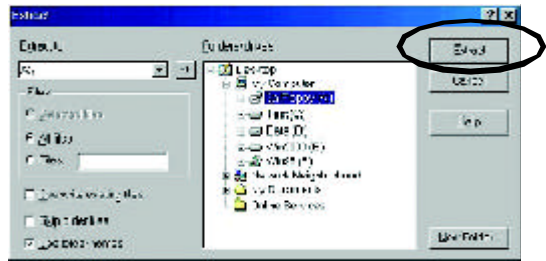
(4) Select an appropriate BIOS version (For example: F4), and click to download the file. It will pop up a file download screen, then select the "Open this file from its current location" and press "OK".



(5) At this time the screen shows the following picture, please click "Extract" button to unzip the files.



(6) Please extract the download files into the clean bootable floppy disk A mentioned in STEP 2, and press "Extract".



STEP 4: Make sure the system will boot from the floppy disk.

(1) Insert the floppy disk (contains bootable program and unzip file) into the floppy drive A. Then, restart the system. The system will boot from the floppy disk. Please press key to enter BIOS setup main menu when system is boot up.



(2) Once you enter the BIOS setup utility, the main menu will appear on the screen. Use the arrows to highlight the item "BIOS FEATURES SETUP".

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

(3) Press "Enter" to enter "BIOS FEATURES SETUP" menu. Use the arrows to highlight the item "1st Boot Device", and then use the "Page Up" or "Page Down" keys to select "Floppy".

AMIBIOS SETUP - BIOS FEATURES SETUP	
(C) 2001 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	ESC: Quit ↑↓←→: Select Item
Floppy Drive Seek : Disabled	F1 : Help PU/PD/+/- : Modify
Password Check : Setup	F5 : Old Values (Shift)F2: Color
	F6 : Load BIOS Defaults
	F7 : Load Setup Defaults

(4) Press "ESC" to go back to previous screen. Use the arrows to highlight the item "SAVE & EXIT SETUP" then press "Enter". System will ask "SAVE to CMOS and EXIT (Y/N)?" Press "Y" and "Enter" keys to confirm. Now the system will reboot automatically, the new BIOS setting will be taken effect next boot-up.

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.24b	
(C) 2001 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	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
ESC: Quit ↑↓←→ : Select Item (Shift)F2 : Change Color F5: Old Values	
F6: Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit	
Save Data to CMOS & Exit SETUP	

STEP 5: BIOS flashing.

(1) After the system boot from floppy disk, type "A:\> dir/w" and press "Enter" to check the entire files in floppy A. Then type the "BIOS flash utility" and "BIOS file" after A:\>. In this case you have to type "A:\> Flash841 7VTX.F4" and then press "Enter".

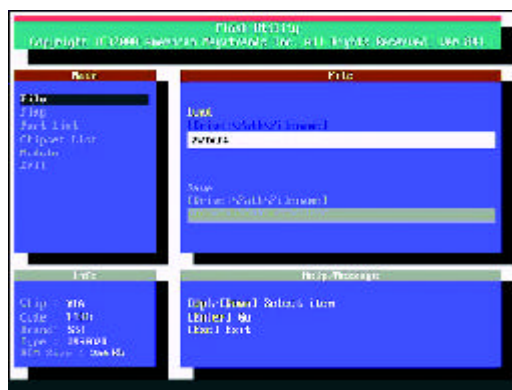
```
Starting Windows 98..

Microsoft(R) Windows98
  © Copyright Microsoft Corp 1981-1999

A:\> dir/w
  Volume in drive A has no label
  Volume Serial Number is 16EB-353D
  Directory of A:\
COMMAND.COM    7VTX.F4  FLASH841.EXE
      3 file(s)    838,954 bytes
      0 dir(s)    324,608 bytes free

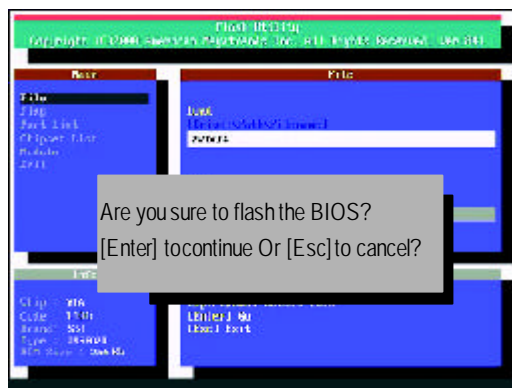
A:\> Flash841 7VTX.F4
```

(2) Now screen appears the following Flash Utility main menu. Press "Enter", the highlighted item will locate on the modelname of the right-upper screen. Right after that, press "Enter" to start BIOS Flash Utility.

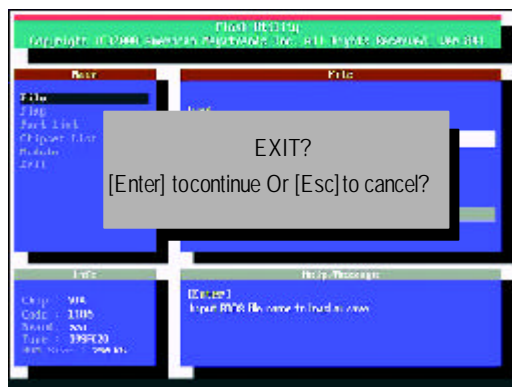


- (3) It will pop up a screen and asks "Are you sure to flash the BIOS?" Press [Enter] to continue the procedure, or press [ESC] to quit.

Beware: Please do not turn off the system while you are upgrading BIOS. It will render your BIOS corrupted and system totally inoperative.



- (4) The BIOS flash completed. Please press [ESC] to exit Flash Utility.



STEP 6: Load BIOS defaults.

Normally the system redetects all devices after BIOS has been upgraded. Therefore, we highly recommend reloading the BIOS defaults after BIOS has been upgraded. This important step resets everything after the flash.

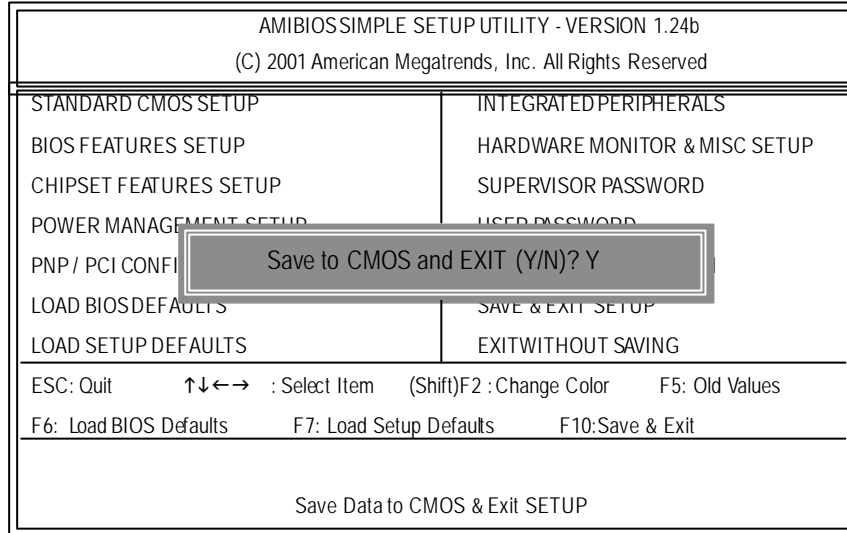
(1) Take out the floppy diskette from floppy drive, and then restart the system. The boot up screen will indicate your motherboard model and current BIOS version.



(2) Don't forget to press key to enter BIOS setup again when system is boot up. Use the arrows to highlight the item "LOAD SETUP DEFAULTS" then press "Enter". System will ask "Load Setup Defaults (Y/N)?" Press "Y" and "Enter" keys to confirm.

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.24b (C) 2001 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	
PNP / PCI CONFIGURATION	Load Setup Defaults? (Y/N)?N
LOAD BIOS DEFAULTS	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
ESC: Quit ↑↓←→ : Select Item (Shift)F2 : Change Color F5: Old Values	
F6: Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit	
Load Setup Defaults	

(3) Use the arrows to highlight the item "SAVE & EXIT SETUP" and press "Enter". System will ask "SAVE to CMOS and EXIT (Y/N)?" Press "Y" and "Enter" keys to confirm. Now the system will reboot automatically, the new BIOS setting will be taken effect next boot-up.



(4) Congratulate you have accomplished the BIOS flash procedure.