GA-8ILFT Series

P4 Titan-DDR Motherboard

# USER'S MANUAL

Pentium® 4 Processor Motherboard

Rev. 1001

12ME-8ILFT-1001

English

# Table of Content

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English

## Item Checklist

- ☑ The GA-8ILFT motherboard
- ☑ IDE cable x 1/ Floppy cable x 1
- ☑ CD for motherboard driver & utility (IUCD)
- ☑ GA-8ILFT user's manual
- ☑ I/O Shield

**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.

# Chapter 1 Introduction

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## Features Summary

| | |
|---|---|
| Form Factor | • 20.3cm x 2.9cm Flex ATX size form factor, 4 layers PCB. |
| Motherboard | • GA-8ILFT Series Motherboard:<br>GA-8ILFT and GA-8ILFT-C |
| CPU | • Socket 478 for Intel® Micro FC-PGA2 Pentium® 4 processor<br>• Support Intel® Pentium® 4 (Northwood, 0.13μm) processor<br>• Intel Pentium®4 400MHz FSB<br>• 2nd cache depends on CPU |
| Chipset | • Chipset 82845GL HOST/AGP/Controller<br>• ICH4 I/O Controller Hub |
| Memory | • 2 184-pin DDR DIMM sockets<br>• Supports PC1600 DDR or PC2100 DDR SDRAM<br>• Supports up to 2GB DRAM (Max)<br>• Supports only 2.5V DDR SDRAM |
| I/O Control | • ITE8712 |
| Slots | • 3 PCI slot supports 33MHz & PCI 2.2 compliant |
| On-Board IDE | • An IDE controller on the Intel ICH4 PCI chipset provides IDE HDD/CD-ROM with PIO, Bus Master (Ultra DMA33/ATA66/ATA100) operation modes.<br>• Can connect up to four IDE devices |
| On-Board Peripherals | • 1 Floppy port supports 2 FDD with 360K, 720K,1.2M, 1.44M and 2.88M bytes.<br>• 1 Parallel port supports Normal/EPP/ECP mode<br>• 1 Serial ports (COMA), 1 VGA port<br>• 4 x USB 2.0/1.1 (2x Rear, 2Front by cable)<br>• 1 Front Audio connector<br>• 1 Serial IRQ connector |
| On-Board VGA | • Built in Intel 845GL Chipset |
| On-Board Sound | • AC97 CODEC (RealTek ALC201A)<br>• 1 Buzzer<br>• Line In/Line Out/Mic In/CD In/AUX In/Game Port/SPDIF |

to be continued.....

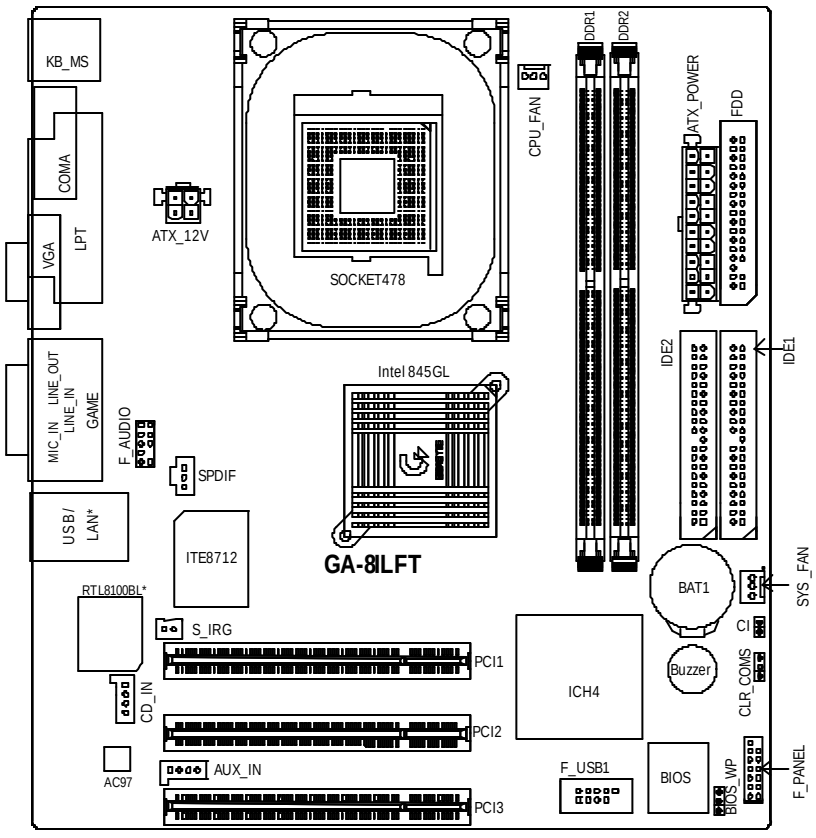
English

| | |
|---|---|
| On-Board LAN* | • Builit in RTL8100BL Chipset<br>• 1 RJ45 port |
| Hardware Monitor | • CPU/System Fan Revolution detect<br>• CPU/System Fan Control<br>• CPU Overheat Warning<br>• System Voltage Detect |
| PS/2 Connector | • PS/2 Keyboard interface and PS/2 Mouse interace |
| BIOS | • Licensed AWARD BIOS, 2M bit FWH |
| Additional Features | • External Modem wake up<br>• PS/2 Keyboard password power on<br>• PS/2 Mouse power on<br>• AC Recovery<br>• USB KB/Mouse wake up from S3<br>• Poly fuse for keyboard,USB,game port over-current protection<br>• Supports @BIOS<br>• Supports EasyTune4 |

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.

*** For GA-8ILFT Only.**

## GA-8ILFT Series Motherboard Layout

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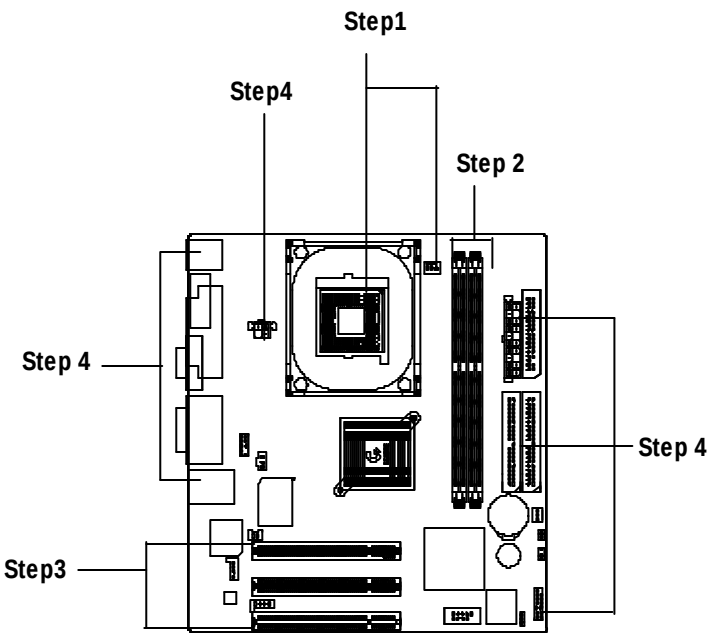
# Chapter 2 Hardware Installation Process

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

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



## Step 1: Install the Central Processing Unit (CPU)

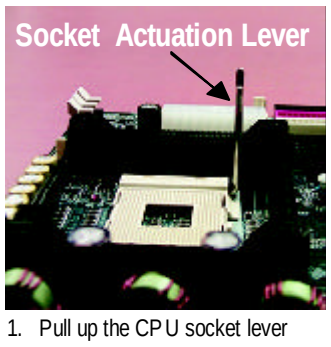
### Step 1-1 : CPU Installation



CPU Top View

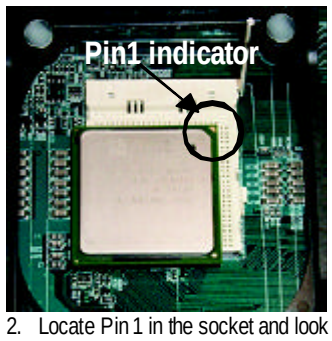


CPU Bottom View




1. Pull up the CPU socket lever and up to 90-degree angle.

3. Press down the CPU socket lever and finish CPU installation.

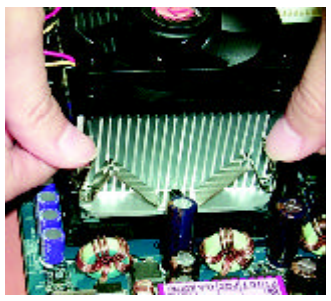



2. Locate Pin 1 in the socket and look for a (golden) cut edge on the CPU upper corner. Then insert the CPU into the socket.

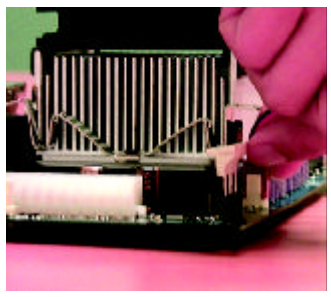
- **Please make sure the CPU type is supported by the motherboard.**
- **If you do not match the CPU socket Pin 1 and CPU cut edge well, it will cause improper installation. Please change the insert orientation.**

English

## 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 alone 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.**

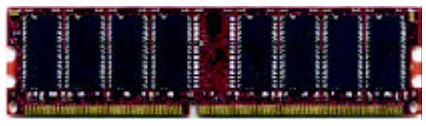
## Step 2: Install memory modules

The motherboard has 2 dual inline memory module (DIMM) sockets. 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.

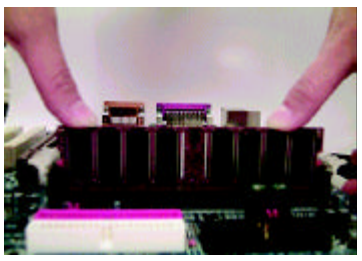
Total Memory Sizes With Unbuffered DDR DIMM

| Devices used on DIMM | 1 DIMM x 64 / x 72 | 2 DIMMs x 64 / x 72 |
|---|---|---|
| 64 Mbit (2Mx8x4 banks) | 128 MBytes | 256 MBytes |
| 64 Mbit (1Mx16x4 banks) | 32 MBytes | 64 MBytes |
| 128 Mbit(4Mx8x4 banks) | 256 MBytes | 512 MBytes |
| 128 Mbit(2Mx16x4 banks) | 64 MBytes | 128 MBytes |
| 256 Mbit(8Mx8x4 banks) | 512 MBytes | 1 GBytes |
| 256 Mbit(4Mx16x4 banks) | 128 MBytes | 256 MBytes |
| 512 Mbit(16Mx8x4 banks) | 1 GBytes | 2 GBytes |
| 512 Mbit(8Mx16x4 banks) | 256 MBytes | 512 MBytes |

Notes: Double-sidedx16 DDR memory devices are not support by Intel 845 chipset.



DDR



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

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

English

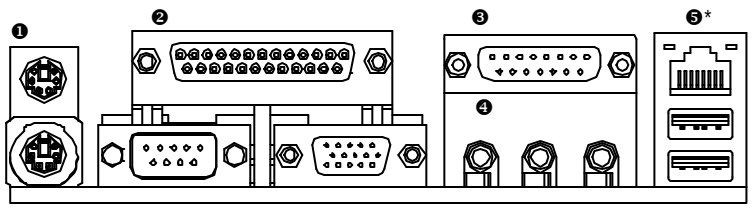
## DDR Introduction

Established on the existing SDRAM industry infrastructure, DDR (Double Data Rate) memory is a high performance and cost-effective solution that allows easy adoption for memory vendors, OEMs and system integrators.

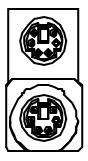
DDR memory is a sensible evolutionary solution for the PC industry that builds on the existing SDRAM infrastructure, yet makes awesome advances in solving the system performance bottleneck by doubling the memory bandwidth. DDR SDRAM will offer a superior solution and migration path from existing SDRAM designs due to its availability, pricing and overall market support. PC2100 DDR memory (DDR266) doubles the data rate through reading and writing at both the rising and falling edge of the clock, achieving data bandwidth 2X greater than PC133 when running with the same DRAM clock frequency. With peak bandwidth of 2.1GB per second, DDR memory enables system OEMs to build high performance and low latency DRAM subsystems that are suitable for servers, workstations, high-end PC's and value desktop SMA systems. With a core voltage of only 2.5 Volts compared to conventional SDRAM's 3.3 volts, DDR memory is a compelling solution for small form factor desktops and notebook applications.

## Step 3: Connect ribbon cables, cabinet wires, and power supply

### Step3-1 : I/O Back Panel Introduction




#### ❶ PS/2 Keyboard and PS/2 Mouse Connector



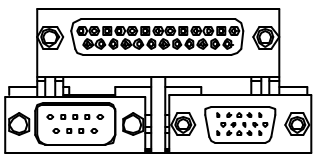
PS/2 Mouse Connector
(6 pin Female)

PS/2 Keyboard Connector
(6 pin Female)

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

#### ❷ Parallel Port and Serial Ports (COM1/COM2)

Parallel Port
(25 pin Female)



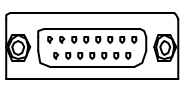
COMA
Serial Port
(9 pin Male)

VGA
VGA Port
(15 pin Female)

➢ 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.

English

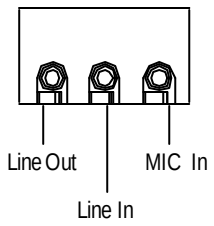
### ❸ Game /MIDI Ports



Joystick/ MIDI (15 pin Female)

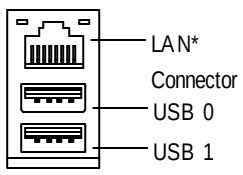
➢ This connector supports joystick, MIDI keyboard and other relate audio devices.

### ❹ 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.

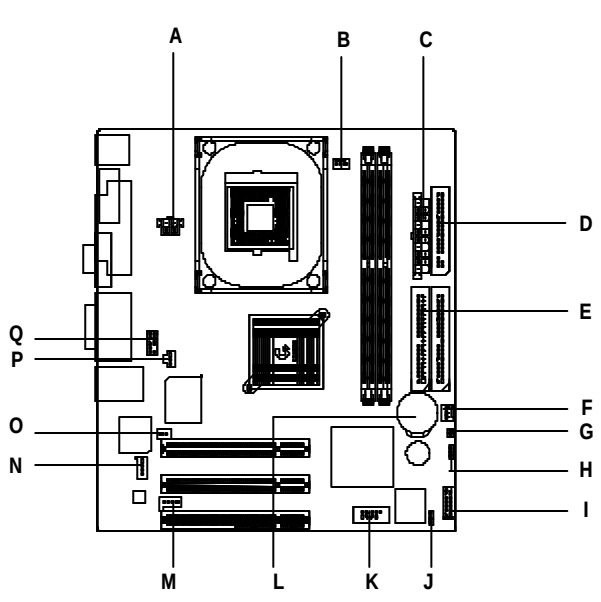
### ❺ USB/LAN* Connector




➢ 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, Win NT 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.

*** For GA-8ILFT Only.**

## Step 3-2 : Connectors Introduction




| | |
|---|---|
| A) ATX_12V | J) BIOS_WP |
| B) CPU_FAN | K) F_USB1 |
| C) ATX | L) BATTERY |
| D) FDD | M) AUX_IN |
| E) IDE1/IDE2 | N) CD_IN |
| F) SYS_FAN | O) S_IRQ |
| G) CI | P) SPDIF |
| H) CLR_CMOS | Q) F_AUDIO |
| I) F_PANEL | |

*** For GA-8ILFT Only.**

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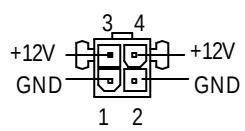
**A) ATX_12V ( +12V Power Connector)**




- This connector (ATX +12V) suppliesthe CPU operation voltage (Vcore).
  If this " ATX+ 12V connector" is not connected, system cannot boot.

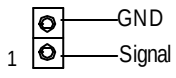
**B) CPU_FAN (CPU FAN Connector)**


- 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 600 mA.

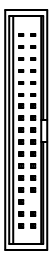
**F) SYS_FAN (System FAN Connector)**


**G) CI (CASE OPEN)**

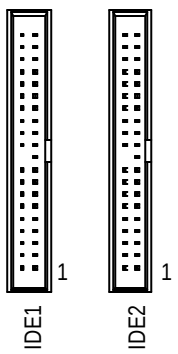
- This 2 pin connector allows your system to enable or disable the system alarm if the sys tem case begin remove.



**D) FDD (Floppy Connector)**

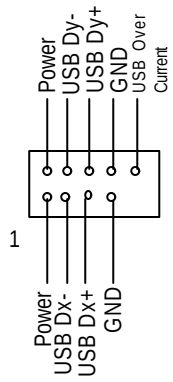



**E) IDE1/ IDE2 (IDE1/IDE2 Connector)**




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

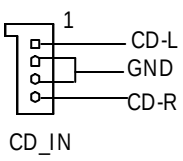
**K) F_USB1 (Front USB Connector)**



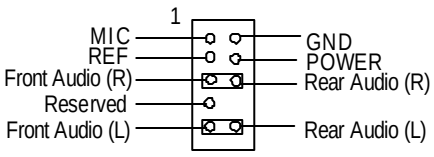

- Be careful with the polarity of the front panel USB connector. Check the pin assignment while you connect the front panel USB cable. Please contact your nearest dealer for optional front panel USB cable.

English

**N) CD_IN (CD IN)**



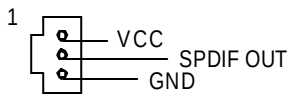

**Q)F_AUDIO (F_AUDIO Connector)**




➢ If you want to use Front Audio connector, you must remove 5-6, 9-10 Jumper.

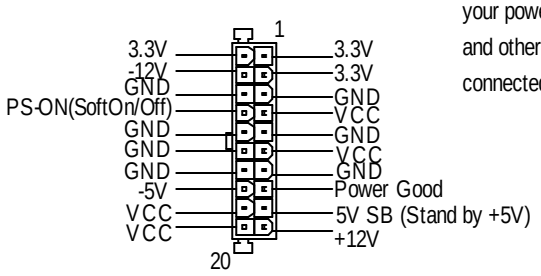
In order to utilize the front audio header, your chassis must have front audio connector. Also please make sure the pin assigment on the cable is the same as the pin assigment on the MB header. To find out if the chassis you are buying support front audio connector, please contact your dealer.

**P) SPDIF (SPDIF)**



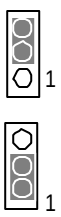

➢ The SPDIF output is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby Digital Decoder. Use this feature only when your stereo system has digital output function.

**C) ATX_POWER (ATX Power)**



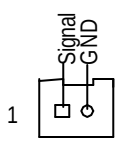

➢AC power cord should only be connected to your power supply unit after ATX power cable and other related devices are firmly connected to the mainboard.

**J) BIOS_WP (BIOS Write Protection)**



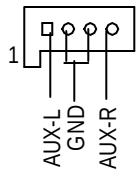

➢ Please note, To flash/upgrade BIOS on this MB BIOS_WP must be set to 2-3 close. We recommend BIOS_WP to be set to "1-2 close", whenever user does not need to flash/upgrade the BIOS.

**O) S_IRQ (For special design, for example: PCMCIA add on card)**



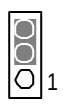
English

**M) AUX_IN ( AUX In Connector)**

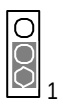



**H) CLR_CMOS (Clear CMOS)**

➢ You may clear the CMOS data to its default values by this jumper.

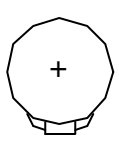



2-3 close: Normal




1-2 close: Clear CMOS

**L) BATTERY(Battery)**

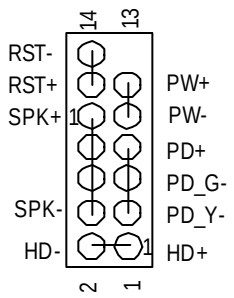



**CAUTION**

- ❖ 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.

E

**I) F_PANEL (2x7 pins connector)**




| | |
|---|---|
| HD (IDE Hard Disk Active LED) | Pin 1: LED anode(+)<br>Pin 2: LED cathode(-) |
| SPK (Speaker Connector) | Pin 1: VCC(+)<br>Pin 2- Pin 3: NC<br>Pin 4: Data(-) |
| RST (Reset Switch) | Open: Normal Operation<br>Close: Reset Hardware System |
| PD+/PD_G-/PD_Y-(Power LED) | Pin 1: LED anode(+)<br>Pin 2: LED cathode(-)<br>Pin 3: LED cathode(-) |
| PW (Soft Power Connector) | Open: Normal Operation<br>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.

English

# 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**

Powering ON the computer and pressing <Del> immediately will allow you to enter 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.

**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 value from CMOS, only for Option Page Setup Menu |
| <F6> | Load the file-safe default CMOS value from BIOS default table |
| <F7> | Load the Optimized Defaults |
| <F8> | Q-Flash function |
| <F9> | Reserved |
| <F10> | Save all the CMOS changes, only for Main Menu |

E

**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 Award BIOS CMOS Setup Utility, the Main Menu (Figure 1) 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.

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| | |
|---|---|
| ▸Standard CMOS Features | Top Performance |
| ▸Advanced BIOS Features | Load Fail-Safe Defaults |
| ▸Integrated Peripherals | Load Optimized Defaults |
| ▸Power Management Setup | Set Supervisor Password |
| ▸PnP/PCI Configurations | Set User Password |
| ▸PC Health Status | Save & Exit Setup |
| ▸Frequency/Voltage Control | 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.

English

- **IntegratedPeripherals**

  This setup page includes all onboard peripherals.
- **PowerManagementSetup**

  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.
- **PC Health Status**

  This setup page is the System auto detect Temperature, voltage, fan, speed.
- **Frequency/Voltage Control**

  This setup page is control CPU's clock and frequency ratio.
- **TopPerformance**

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

  This setup page is select multi language.
- **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.

# Standard CMOS Features

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Standard CMOS Features

| | | |
|---|---|---|
| Date (mm:dd:yy) | Mon, Feb 21 2000 | ItemHelp |
| Time (hh:mm:ss) | 22:31:24 | Menu Level ▶ |
| | | Change the day, month, |
| ▶IDE Primary Master | None | year |
| ▶IDE Primary Slave | None | |
| ▶IDE Secondary Master | None | <Week> |
| ▶IDE Secondary Slave | None | Sun. to Sat. |
| | | |
| Drive A | 1.44M, 3.5 in. | <Month> |
| Drive B | None | Jan. to Dec. |
| Floppy 3 Mode Support | Disabled | |
| | | <Day> |
| Halt On | All, But Keyboard | 1 to 31 (or maximum |
| | | allowed in the month) |
| Base Memory | 640K | |
| Extended Memory | 130048K | <Year> |
| Total Memory | 131072K | 1999 to 2098 |

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

Figure 2: Standard CMOS Features

### ☞ 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 1999 through 2098

English

☞ **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.

☞ **IDE Primary Master, Slave / IDE Secondary Master, Slave**

The category identifies the types of hard disk from drive C to F that has been installed in the computer. There are two types: auto type, and manual type. Manual type is user-definable; Auto type which 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>.

☞ **Drive A / Drive B**

The category identifies the types 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.

☞ **Floppy 3 Mode Support (for Japan Area)**

| | |
|---|---|
| ⏩ Disabled | Normal Floppy Drive. (Default value) |
| ⏩ Drive A | Drive A is 3 mode Floppy Drive. |
| ⏩ Drive B | Drive B is 3 mode Floppy Drive. |
| ⏩ Both | Drive A & B are 3 mode Floppy Drives. |

☞ **Halton**

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

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

☞ **Memory**

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

**Base Memory**

The POST 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.

**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.

English

## Advanced BIOS Features

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Advanced BIOS Features

| | | |
|---|---|---|
| First Boot Device | Floppy | ItemHelp |
| Second Boot Device | HDD-0 | Menu Level ▶ |
| Third Boot Device | CDROM | |
| Boot Up Floppy Seek | Disabled | |
| Init Display First | Onboard/AGP | |
| Graphics Aperture Size | 128MB | |
| Graphics Share Memory | 8MB | |

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

Figure 3: Advanced BIOS Features

### ☞ First / Second / Third Boot Device

- ⏩ Floppy — Select your boot device priority by Floppy.
- ⏩ LS120 — Select your boot device priority by LS120.
- ⏩ HDD-0~3 — Select your boot device priority by HDD-0~3.
- ⏩ SCSI — Select your boot device priority by SCSI.
- ⏩ CDROM — Select your boot device priority by CDROM.
- ⏩ ZIP — Select your boot device priority by ZIP.
- ⏩ USB-FDD — Select your boot device priority by USB-FDD.
- ⏩ USB-ZIP — Select your boot device priority by USB-ZIP.
- ⏩ USB-CDROM — Select your boot device priority by USB-CDROM.
- ⏩ USB-HDD — Select your boot device priority by USB-HDD.
- ⏩ LAN — Select your boot device priority by LAN.
- ⏩ Disabled — Select your boot device priority by Disabled.

### ☞ Boot Up Floppy Seek

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

- ⏩ Enabled — BIOS searches for floppy disk drive to determine it is 40 or 80 tracks. Note that BIOS can not tell from 720 K, 1.2 M or 1.44 M drive type as they are all 80tracks.
- ⏩ 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 K. (Default value)

### ☞ Init Display First

- ⏩ Onboard/AGP — Set Init Display First to onboard/AGP. (Default value)
- ⏩ PCI — Set Init Display First to PCI.

### ☞ Graphics Aperture Size

- ⏩ 128MB — Set Graphics Aperture Size to 128MB. (Default value)
- ⏩ Disabled — Disable this function.

### ☞ Graphics Share Memory

- ⏩ 8MB — Set Graphics Share Memory to 8MB. (Default value)
- ⏩ 1MB — Set Graphics Share Memory to 1MB.

English

## Integrated Peripherals

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Integrated Peripherals

| | | |
|---|---|---|
| On-Chip Primary PCI IDE | Enabled | ItemHelp |
| On-Chip Secondary PCI IDE | Enabled | Menu Level ▶ |
| IDE1 Conductor Cable | Auto | If a hard disk |
| IDE2 Conductor Cable | Auto | controller card is |
| USB Controller | Enabled | used, set at Disable |
| USB Keyboard Support | Disabled | |
| USB Mouse Support | Disabled | [Enabled] |
| AC97 Audio | Auto | Enable onboard IDE |
| Onboard LAN | Enabled | |
| Onboard LAN Boot ROM | Disabled | |
| Onboard Serial Port 1 | 3F8/IRQ4 | PORT |
| Onboard Serial Port 2 | 2F8/IRQ3 | |
| UART Mode Select | Normal | [Disabled] |
| x UR2 Duplex Mode | Half | Disable onboard IDE |
| Onboard Parallel Port | 378/IRQ7 | PORT |
| Parallel Port Mode | SPP | |
| x ECP Mode Use DMA | 3 | |
| Game Port Address | 201 | |
| Midi Port Address | 330 | |
| Midi Port IRQ | 10 | |

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

Figure 4: Integrated Peripherals

### ☞ On-Chip Primary PCI IDE

⏩ Enabled Enable onboard 1st channel IDE port. (Default value)

⏩ Disabled Disable onboard 1st channel IDE port.

### ☞ On-Chip Secondary PCI IDE

⏩ Enabled Enable onboard 2nd channel IDE port. (Default value)

⏩ Disabled Disable onboard 2nd channel IDE port.

### ☞ 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).

### ☞ USB Controller

⏩ Enabled Enable USB Controller. (Default value)

⏩ Disabled Disable USB Controller.

### ☞ USB Keyboard Support

⏩ Enabled Enable USB Keyboard Support.

⏩ Disabled Disable USB Keyboard Support. (Default value)

### ☞ USB Mouse Support

⏩ Enabled Enable USB Mouse Support.

⏩ Disabled Disable USB Mouse Support. (Default value)

English

### ☞ AC97 Audio

- ⏩ Auto — Enable onboard AC'97 audio function. (Default Value)
- ⏩ Disabled — Disable this function.

### ☞ OnboardLAN

- ⏩ Enabled — Enabled Onboard LAN function. (Default value)
- ⏩ Disabled — Disabled onboard LAN function.

### ☞ Onboard LANBootROM

- ⏩ Enabled — Enabled Onboard LAN Boot ROM function.
- ⏩ Disabled — Disabled onboard LAN Boot ROM function.(Default value)

### ☞ Onboard Serial Port 1

- ⏩ Auto — BIOS will automatically setup the port 1 address.
- ⏩ 3F8/IRQ4 — Enable onboard Serial port 1 and address is 3F8. (Default value)
- ⏩ 2F8/IRQ3 — Enable onboard Serial port 1 and address is 2F8.
- ⏩ 3E8/IRQ4 — Enable onboard Serial port 1 and address is 3E8.
- ⏩ 2E8/IRQ3 — 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.
- ⏩ 3F8/IRQ4 — Enable onboard Serial port 2 and address is 3F8.
- ⏩ 2F8/IRQ3 — Enable onboard Serial port 2 and address is 2F8. (Default value)
- ⏩ 3E8/IRQ4 — Enable onboard Serial port 2 and address is 3E8.
- ⏩ 2E8/IRQ3 — Enable onboard Serial port 2 and address is 2E8.
- ⏩ Disabled — Disable onboard Serial port 2.

### ☞ UART Mode Select

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

- ASKIR — Set onboard I/O chip UART to ASKIR Mode.
- IrDA — Set onboard I/O chip UART to IrDA Mode.
- Normal — Set onboard I/O chip UART to Normal Mode. (Default Value)

### UR2 Duplex Mode

- Half — IR Function Duplex Half. (Default Value)
- Full — IR Function Duplex Full.

### Onboard Parallel port

- 378/IRQ7 — Enable onboard LPT port and address is 378/IRQ7. (Default Value)
- 278/IRQ5 — Enable onboard LPT port and address is 278/IRQ5.
- Disabled — Disable onboard LPT port.
- 3BC/IRQ7 — Enable onboard LPT port and address is 3BC/IRQ7.

### Parallel Port Mode

- SPP — Using Parallel port as Standard Parallel Port. (Default Value)
- EPP — Using Parallel port as Enhanced Parallel Port.
- ECP — Using Parallel port as Extended Capabilities Port.
- ECP+EPP — Using Parallel port as ECP & EPP mode.

### ECP Mode Use DMA

- 3 — Set ECP Mode Use DMA to 3. (Default Value)
- 1 — Set ECP Mode Use DMA to 1.

### Game Port Address

- 201 — Set Game Port Address to 201. (Default Value)
- 209 — Set Game Port Address to 209.
- Disabled — Disable this function.

### Midi Port Address

- 300 — Set Midi Port Address to 300.

English

- ▸▸330 Set Midi Port Address to 330.(Default Value)
- ▸▸Disabled Disable this function.

☞ **Midi Port IRQ**

- ▸▸5 Set Midi Port IRQ to 5.
- ▸▸10 Set Midi Port IRQ to 10.(Default Value)

# Power Management Setup

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Power Management Setup

| | | |
|---|---|---|
| ACPI Suspend Type | S1(POS) | ItemHelp |
| Soft-Off by PWR_BTTN | Instant-Off | Menu Level ▶ |
| PME Event Wake Up | Enabled | [S1] |
| ModemRingOn/WakeOnLan | Enabled | |
| Resume by Alarm | Disabled | Set suspend type to |
| x Date (of Month) Alarm | Everyday | Power On Suspend under |
| x Time (hh:nn:ss) | 0 0 0 | ACPI OS |
| Power On By Mouse | Disabled | |
| Power On By Keyboard | Disabled | [S3] |
| x KB Power ON Password | Enter | Set suspend type to |
| AC Back Function | Soft-Off | Suspend to RAM under |
| | | ACPI OS |

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

Figure 5: Power Management Setup

### ☞ ACPI Suspend Type

⏩ S1(POS) Set ACPI suspend type to S1. (Default Value)

⏩ S3(STR) Set ACPI suspend type to S3.

### ☞ Soft-off by PWR_BTTN

⏩ Instant-off Press power button then Power off instantly. (Default value)

⏩ Delay 4 Sec. Press power button 4 sec to Power off. Enter suspend if button is pressed less than 4 sec.

English

☞ **PME EventWake Up**

⏩Disabled Disable this function.

⏩Enabled Enable PME Event Wake up. (Default Value)

☞ **ModemRingOn/WakeOnLAN**

⏩Disabled Disable Modem Ring on/wake on Lan function.

⏩Enabled Enable Modem Ring on/wake on Lan. (Default Value)

☞ **Resume by Alarm**

You can set "Resume by Alarm" 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 RTC Alarm Lead To Power On is Enabled.

Date (of Month) Alarm : Everyday, 1~31

Time ( hh: mm: ss) Alarm : (0~23) : (0~59) : (0~59)

☞ **Power On By Mouse**

⏩Disabled Disabled this function. (Default value)

⏩Mouse Click Double click on PS/2 mouse left button.

☞ **Power On By Keyboard**

⏩Password Enter from 1 to 5 characters to set the Keyboard Power On Password.

⏩Disabled Disabled this function. (Default value)

⏩Keyboard 98 If your keyboard have "POWER Key" button, you can press the key to power on your system.

☞ **KB Power ON Password**

⏩Enter Input password (from 1 to 5 characters) and press Enter to set the Key board Power On Password.

☞ **AC Back Function**

⏩Memory System power on depends on the status before AC lost.

⏩Soft-Off Always in Off state when AC back. (Default value)

⏩Full-On Always power on the system when AC back.

## PnP/PCI Configurations

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PnP/PCI Configurations

| | | |
|---|---|---|
| PCI 1 IRQ Assignment | Auto | Item Help |
| PCI 2 IRQ Assignment | Auto | Menu Level ▶ |
| PCI 3 IRQ Assignment | Auto | |

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

Figure 6: PnP/PCI Configurations

### ☞ PCI 1 IRQ Assignment

| | |
|---|---|
| ⏭ Auto | Auto assign IRQ to PCI. (Default value) |
| ⏭ 3,4,5,7,9,10,11,12,14,15 | Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 1/PCI 5. |

### ☞ PCI 2 IRQ Assignment

| | |
|---|---|
| ⏭ Auto | Auto assign IRQ to PCI 2. (Default value) |
| ⏭ 3,4,5,7,9,10,11,12,14,15 | Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 2. |

### ☞ PCI 3 IRQ Assignment

| | |
|---|---|
| ⏭ Auto | Auto assign IRQ to PCI 3. (Default value) |
| ⏭ 3,4,5,7,9,10,11,12,14,15 | Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 3. |

English

# PC Health Status

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PC Health Status

| | | |
|---|---|---|
| Reset Case Open Status | Disabled | ItemHelp |
| Case Opened | No | Menu Level ▶ |
| VCORE | 1.730V | |
| +1.5V | 1.502V | |
| +3.3V | 3.360V | |
| +5V | 5.053V | |
| +12V | 11.840V | |
| Current CPU Temperature | 35°C/95°F | |
| Current CPU FAN Speed | 6490 RPM | |
| Current SYSTEM FAN Speed | 0 RPM | |
| CPU Warning Temperature | Disabled | |
| CPU FAN Fail Warning | Disabled | |
| SYSTEM FAN Fail Warning | Disabled | |

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

Figure 7: PC Health Status

☞ **Reset Case Open Status**

☞ **Case Opened**

If the case is closed, "Case Opened" will show "No".

If the case have been opened, "Case Opened" will show "Yes".

If you want to reset "Case Opened" value, set "Reset Case Open Status" to "Enabled" and save CMOS, your computer will restart.

Disabled : Don't reset case open status.;Enabled : Clear case open status at next boot.

☞ **Current Voltage (V) VCORE / 1.5V /+3.3V / +5V / +12V**

⏩ Detect system's voltage status automatically.

☞ **Current CPU Temperature**

⏩ Detect CPU Temp. automatically.

☞ **Current CPU/SYSTEM FAN Speed (RPM)**

⏩ Detect CPU/SYSTEM Fan speed status automatically.

☞ **CPU Warning Temperature**

| | |
|---|---|
| ⏩ 60°C / 140°F | Monitor CPU Temp. at 60°C / 140°F. |
| ⏩ 70°C / 158°F | Monitor CPU Temp. at 70°C / 158°F. |
| ⏩ 80°C / 176°F | Monitor CPU Temp. at 80°C / 176°F. |
| ⏩ 90°C / 194°F | Monitor CPU Temp. at 90°C / 194°F. |
| ⏩ Disabled | Disable this function.(Default value) |

☞ **CPU FAN Fail Warning**

| | |
|---|---|
| ⏩ Disabled | Fan Warning Function Disable. (Default value) |
| ⏩ Enabled | Fan Warning Function Enable. |

☞ **SYSTEM FAN Fail Warning**

| | |
|---|---|
| ⏩ Disabled | Fan Warning Function Disable. (Default value) |
| ⏩ Enabled | Fan Warning Function Enable. |

English

# Frequency/Voltage Control

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Frequency/Voltage Control

| | | |
|---|---|---|
| CPU Clock Ratio | 15X | ItemHelp |
| CPU Host Clock Control | Disabled | Menu Level ▶ |
| x CPU Host Frequency (Mhz) | 100 | |
| x PCI/AGP Divider | Disabled | |
| Host/DRAM Clock ratio | Auto | |
| Memory Frequency (Mhz) | 266 | |
| PCI/AGP Frequency (Mhz) | 33/66 | |

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

Figure 7: Frequency/Voltage Control

### ☞ CPU Clock Ratio

Set CPU Ratio if CPU Ratio is unlocked.

⏩10X~24X It's depends on CPU Clock Ratio.

### ☞ CPU Host Clock Control

Note: If system hangs up before enter CMOS setup utility, wait for 20 sec for times out reboot. When time out occur, system will reset and run at CPU default Host clock at next boot.

⏩Disable Disable CPU Host Clock Control.(Default value)

⏩Enable Enable CPU Host Clock Control.

### ☞ CPU Host Frequency

⏩100MHz ~ 355MHz Set CPU Host Clock from 100MHz to 355MHz.

### ☞ PCI/AGP Divider

⏩ You can choose Disabled,PLL/40,PLL/32,PLL/24,PLL/20/PLL/16 mode to adjust PCI/AGP frequency.

### ☞ Host/DRAM Clock Ratio

(Warning: wrong frequency may make system can't boot, clear CMOS to overcome wrong frequency issue)

⏩ 2.0 Memory Frequency = Host clock X 2.0.

⏩ 2.66 Memory Frequency = Host clock X 2.66.

⏩ Auto Set Memory frequency by DRAM SPD data. (Default value)

### ☞ Memory Frequency(Mhz)

⏩ The values depend on CPU Host Frequency(Mhz) .

### ☞ PCI/AGP Frequency(Mhz)

⏩ Setup PCI/AGP frequency by adjusting CPU Host Frequency or PCI/AGP Divider item.

English

## Load Fail-Safe Defaults

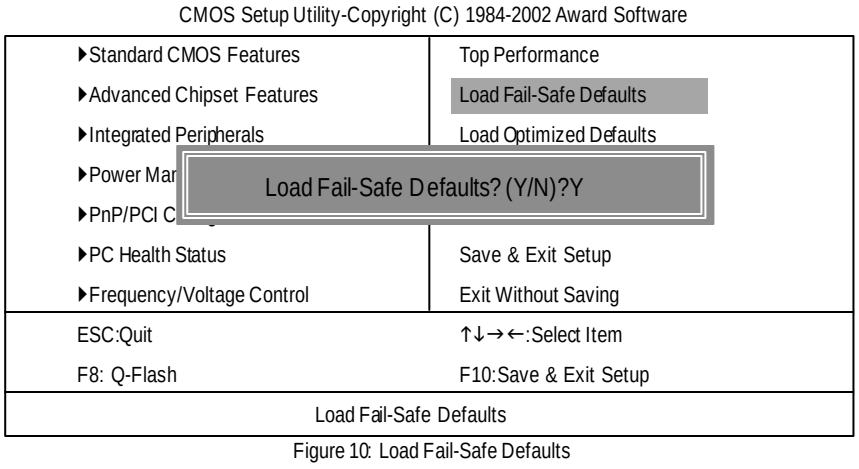


Figure 10: Load Fail-Safe Defaults

### TopPerformance

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

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

## Load Optimized Defaults

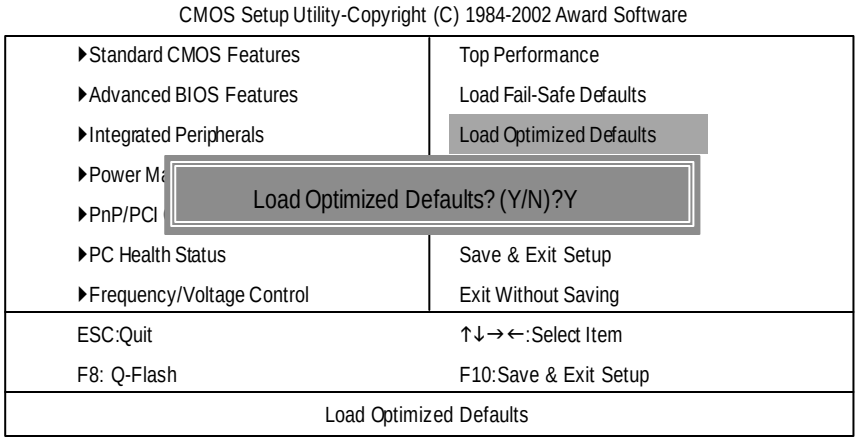



Figure 11: Load Optimized Defaults

### LoadOptimized Defaults

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

English

## Set Supervisor/User Password

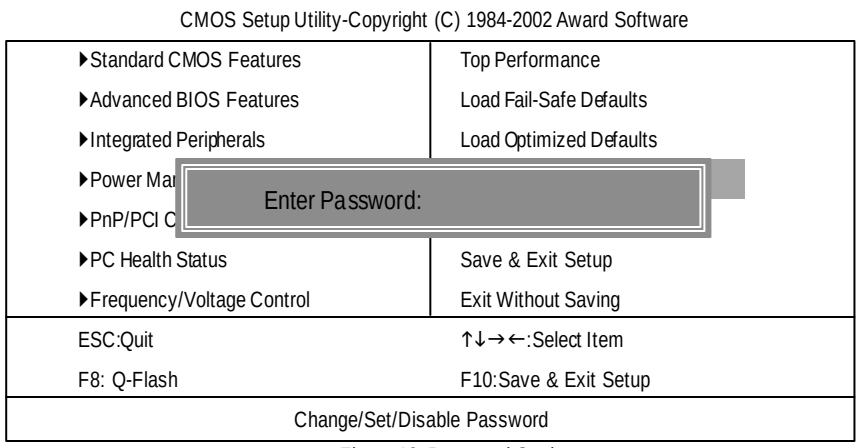


Figure 12: Password Setting

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

Type the password, up to eight 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:

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

## Save & Exit Setup

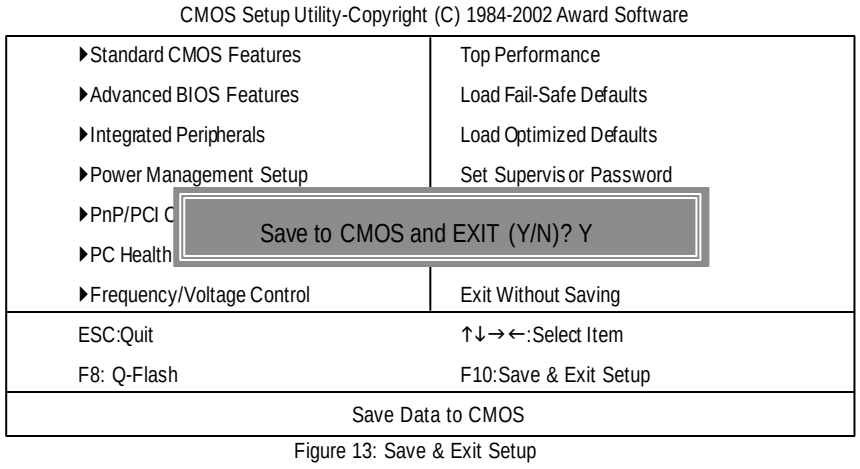



Figure 13: Save & Exit Setup

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

Type “N” will return to Setup Utility.

English

## Exit Without Saving

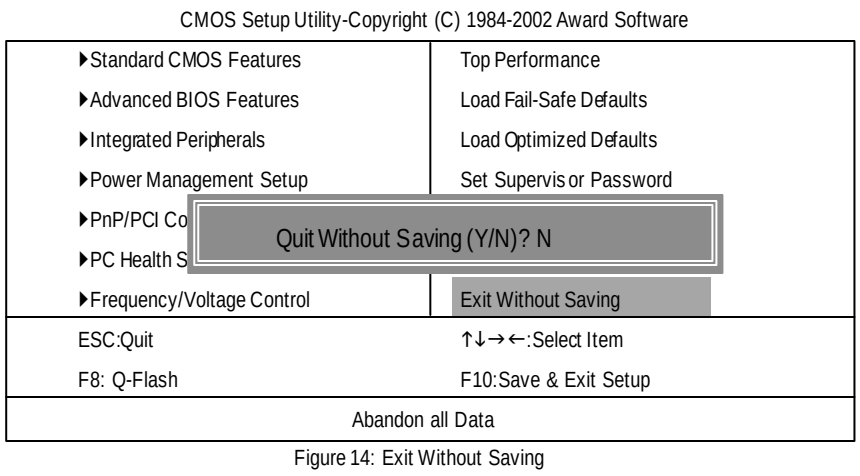


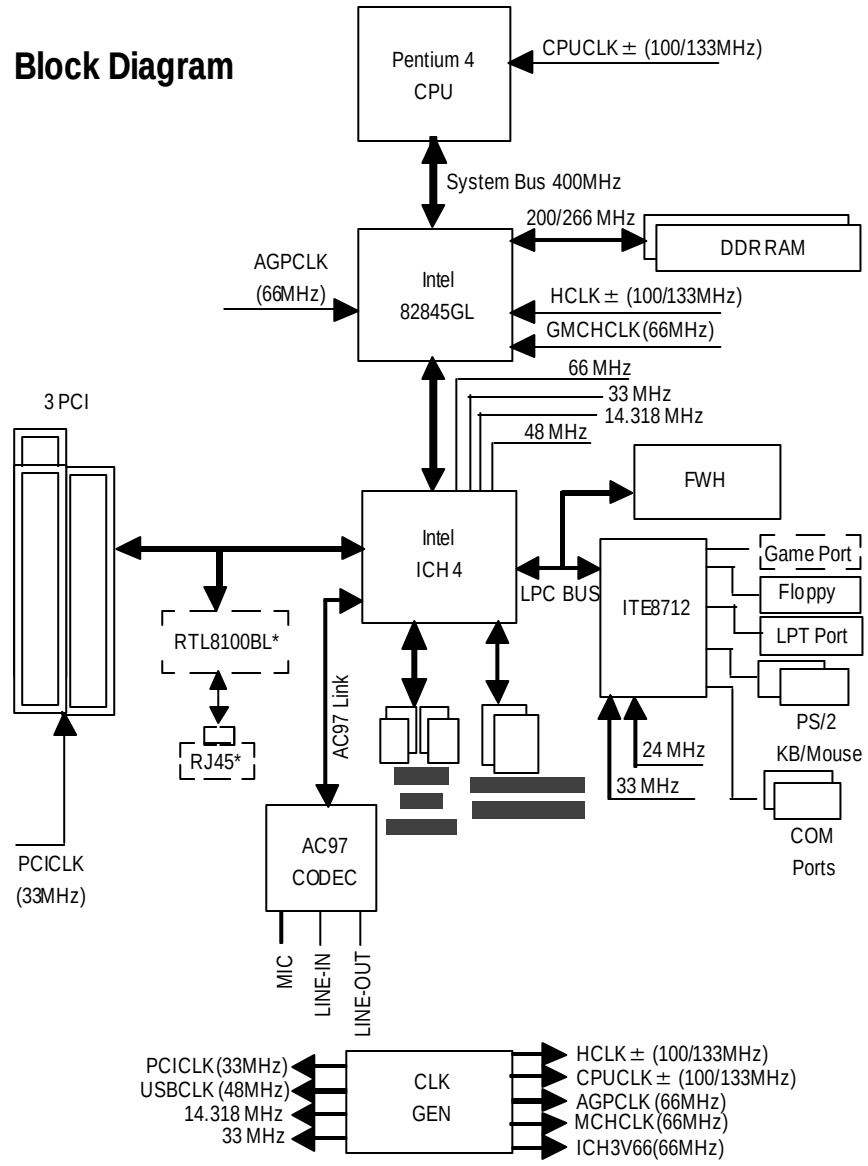

Figure 14: Exit Without Saving

Type "Y" will quit the Setup Utility without saving to RTC CMOS.

Type "N" will return to Setup Utility.

# Chapter 4 Technical Reference

## Block Diagram




*** For GA-8ILFT Only.**

English

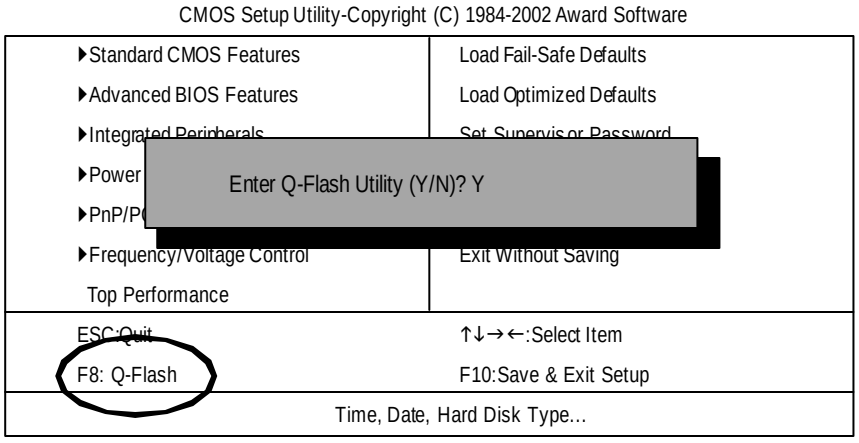
## Q-Flash Introduction

**A. What is Q-Flash Utility?**

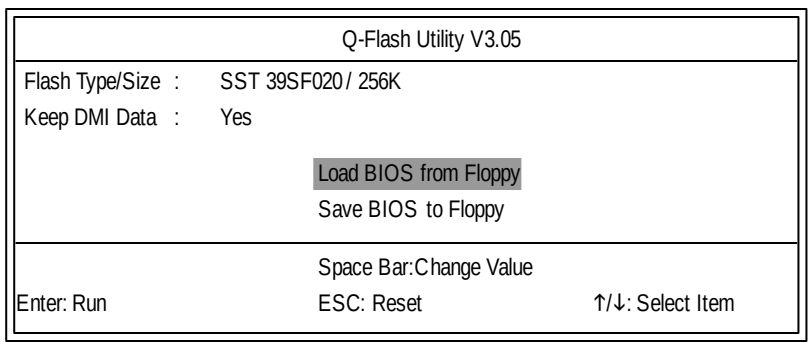
Q-Flash utility is a pre-O.S. BIOS flash utility enables users to update its BIOS within BIOS mode, no more fooling around any OS.

**B. How to use Q-Flash?**

a. After power on the computer, pressing <Del> 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



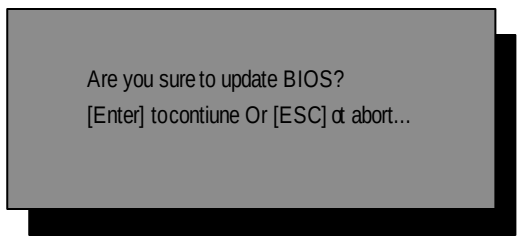
**Load BIOS From Floppy**

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

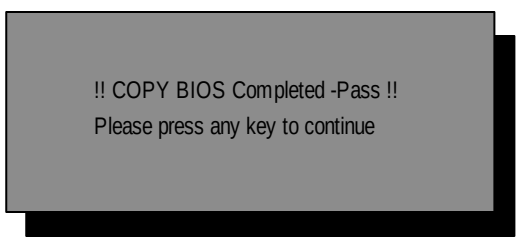



Where XXXX.XX is name of the BIOS file.

Press Enter to Run.




Press Enter to Run.




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

English

## @ 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.

# Easy Tune™ 4 Introduction

## Gigabyte announces *EasyTune™ 4*

## Windows based Overclocking utility

EasyTune 4 carries on the heritage so as to pave the way for future generations.

Overclock" might be one of the most common issues in computer field. But have many users ever tried it? The answer is probably "no". Because "Overclock" is thought to be very difficult and includes a lot of technical know-how, sometimes "Overclock" is even considered as special skills found only in some enthusiasts. But as to the experts in "Overclock", what's the truth? They may spend quite a lot of time and money to study, try and use many different hardware or BIOS tools to do "Overclock". And even with these technologies, they still learn that it's quite a risk because the safety and stability of an "Overclock" system is unknown. Now everything is different because of a Windows based overclocking utility "EasyTune 4" --announced by Gigabyte. This windows based utility has totally changed the gaming rule of "Overclock". This is the first windows based overclocking utility is suitable for both normal and power users. Users can choose either "Easy Mode" or "Advanced Mode" for overclocking at their convenience. For users who choose "Easy Mode", they just need to click "Auto Optimize" to have autoed and immediate CPU overclocking. This software will then overdrive CPU speed automatically with the result being shown in the control panel. If users prefer "Overclock" by them, there is also another choice. Click "Advanced Mode" to enjoy "sport drive" class Overclocking user interface. "Advanced Mode", allows users to change the system bus / AGP / Memory working frequency in small increments to get ultimate system performance. It operates in coordination with Gigabyte motherboards. Besides, it is different from other traditional over-clocking methods, EasyTune 4 doesn't require users to change neither BIOS nor hardware switch/ jumper setting; on the other hand, they can do "Overclock" at easy step . Therefore, this is a safer way for "Overclock" as nothing is changed on software or hardware. If user runs EasyTune 4 over system's limitation, the biggest lost is only to restart the computer again and the side effect is then well controlled. Moreover, if one well-performed system speed has been tested in EasyTune 4, user can "Save" this setting and "Load" it in next time. Obviously, Gigabyte EasyTune 4 has already turned the "Overclock" technology toward to a newer generation. This wonderful software is now free bundled in Gigabyte motherboard attached in driver CD. Users may make a test drive of "EasyTune 4" to find out more amazing features by themselves.

*Some Gigabyte products are not fully supported by EasyTune 4. Please find the products supported list in the web site.

*Any "Overclocking action" is at user's risk, Gigabyte Technology will not be responsible for any damage or instability to your processor, motherboard, or any other components.

English

# Chapter 5 Appendix

**Picture below are shown in Windows XP (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 845GL Chipset Driver

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

B. Installing Sound Driver

Click this item to install sound driver.

C. Installing LAN Driver

Click this item to install LAN driver.


## Appendix A: Intel 845GL Chipset Driver Installation

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

Inorder to install the driver successfully, please refer to the following installation procedures.

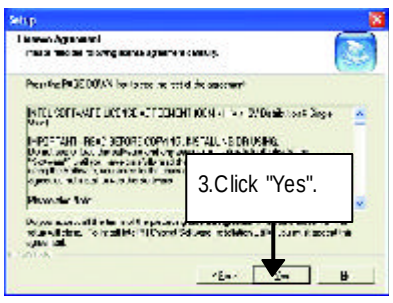

*** For GA-8ILFT Only.**

## A-1. Intel Chipset Software Installation Utility

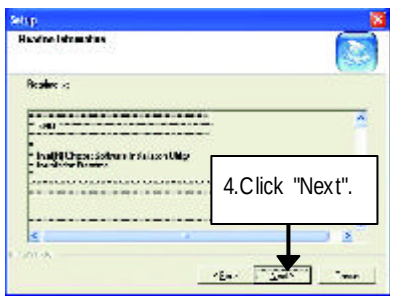
Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.


(1)


(2)

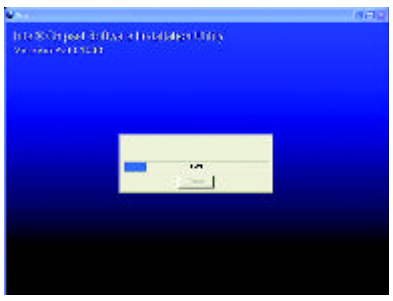



(3)




(4)

English



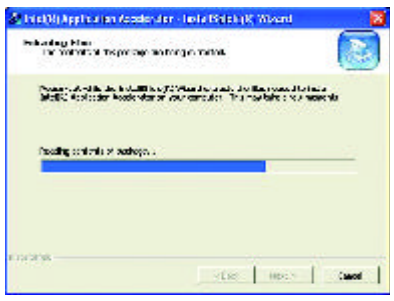
(5)


(6)

## A-2. Intel Application Accelerator

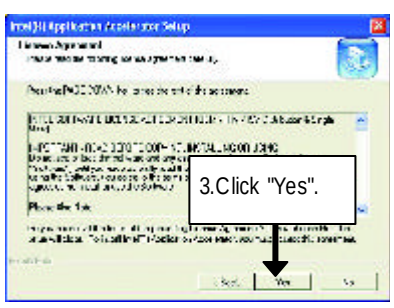
Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.


(1)



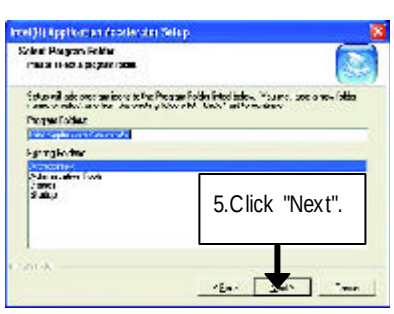
(2)


(3)



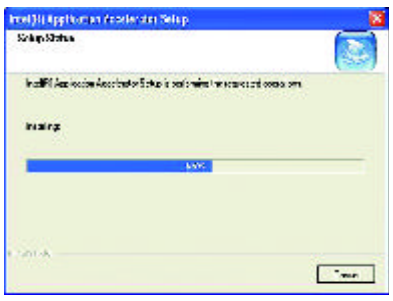

(4)


(5)




(6)

English



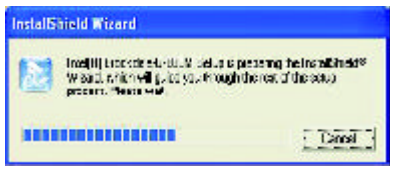
(7)


(8)

## A-3. Intel 845G Chipset VGA Graphics Driver

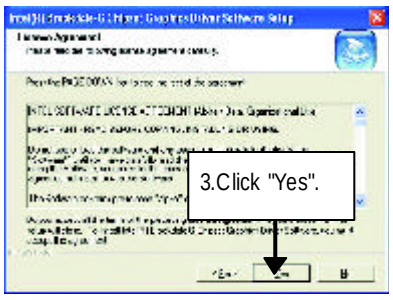
Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.


(1)

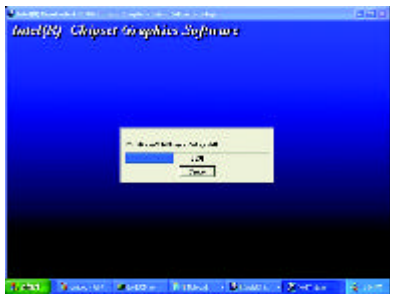




(2)




(3)



(4)

English


(5)

### A-4. USB Patch 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)

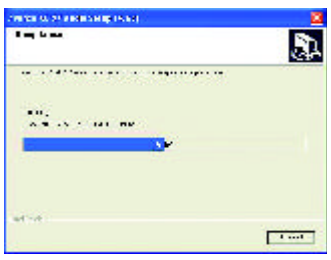

(2)

## Appendix B: RealTek 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)

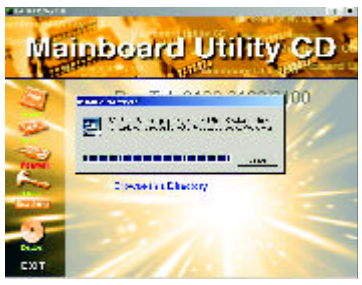

(4)

English

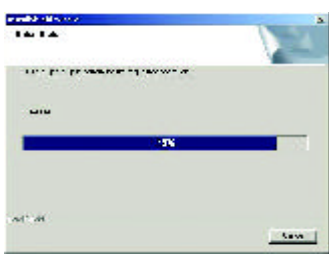
## Appendix C: RealTek 8139/8130/8100 Network Driver *

➢ For your reference, you can use the following steps to complete the RealTek 8139/8130/8100 Network Driver Installation.

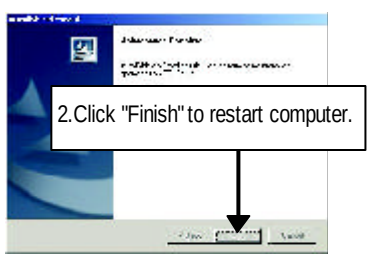

(1)




(2)



(3)

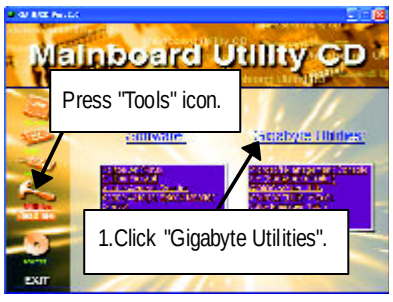



(4)

*** For GA-8ILFT Only.**

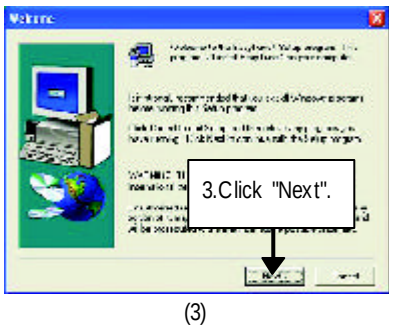
## Appendix D: EasyTune 4 Utilities Installation

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.



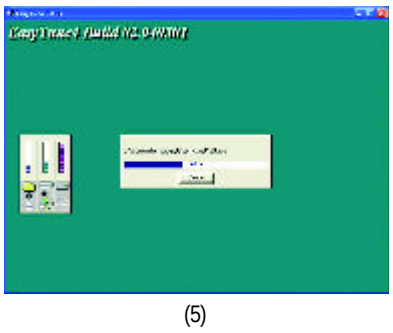

(1)


(2)




(3)


(4)



(5)


(6)

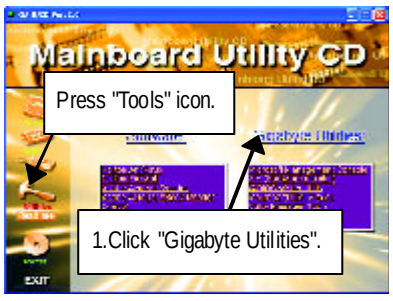
English

## Appendix E: BIOS Flash Procedure

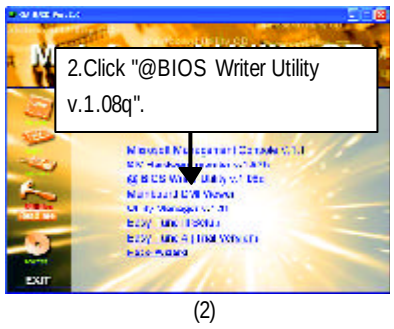
BIOS update procedure:

Method 1:

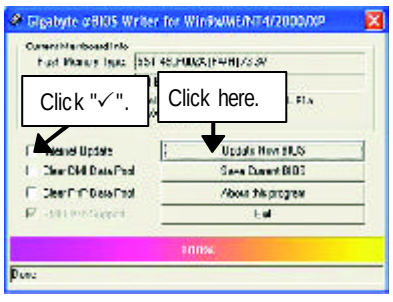
If your OS is Win9X, we recommend that you used Gigabyte @BIOS™ Program to flash BIOS.




(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 @BIOSTM sever 1 in Taiwan" and "Gigabyte @BIOS™ sever 2 in Taiwan" are available for now, the others will be completedsoon)
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: 8ILFT.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.

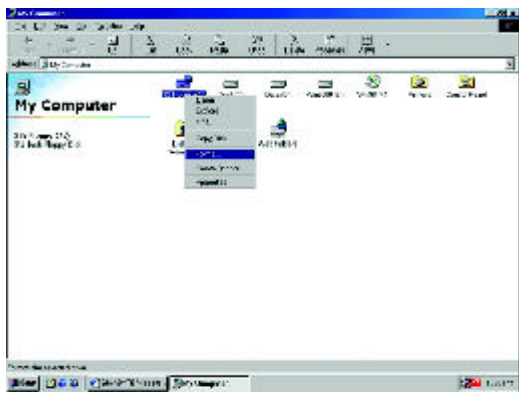
Note:

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

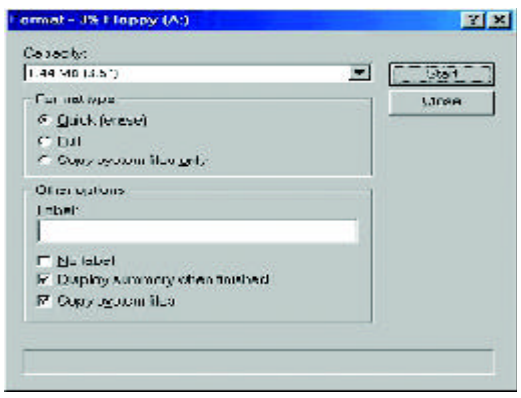
English

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

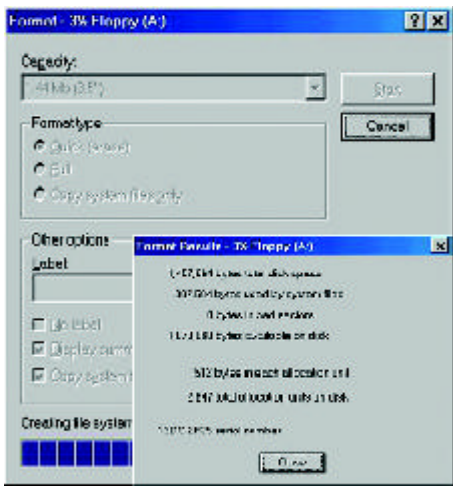
STEP 2: Make a DOS boot diskette. (See example: Windows 98 O.S.)
Beware: Windows ME/2000 are not allowed to make a DOS boot diskette.
(1) With an available floppy disk in the floppy drive. Please leave the diskette "UN-write protected" type. Double click the "My Computer" icon from Desktop, then click "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.



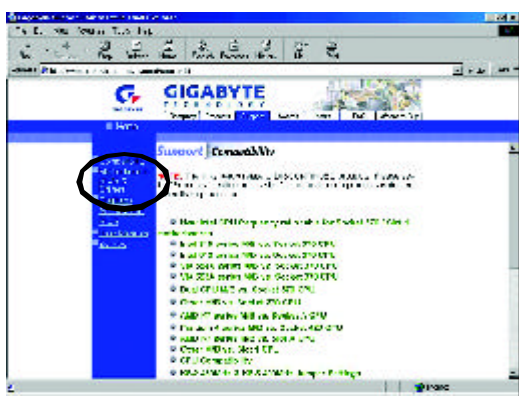
(3) After the floppy has been formatted completely, please press "Close".



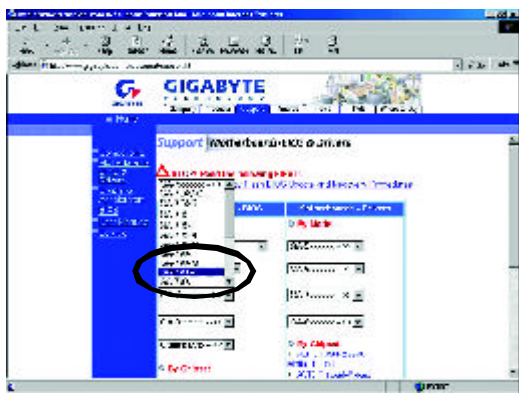
STEP 3: Download BIOS and BIOS utility program.

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

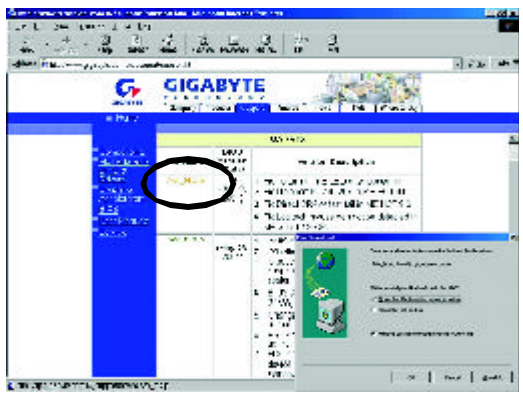

(2) From Support zone, click the "Motherboards BIOS & Drivers".



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

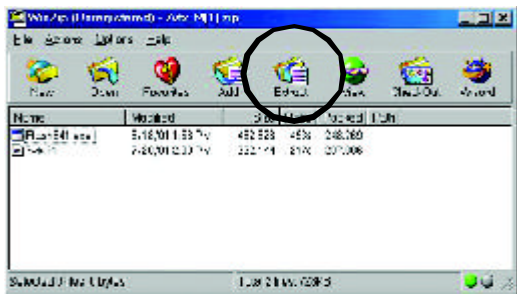



(4) Select an appropriate BIOS version (For example: F4), and click to download the file. It will pop up a file download screen, then select the "Open this file from its current location" and press "OK".

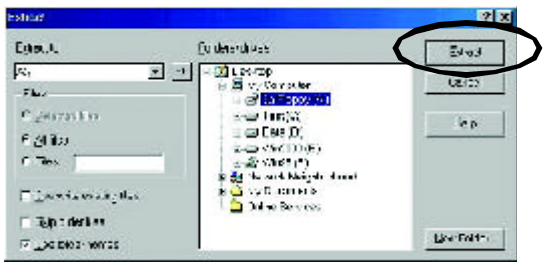


English

(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.

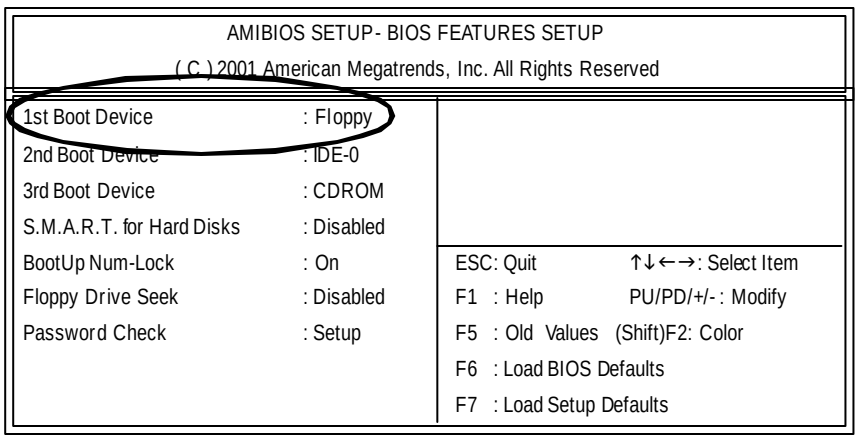
(1) Insert the floppy disk (contains bootable program and unzip file) into the floppy drive A. Then, restart the system. The system will boot from the floppy disk. Please press <DEL> key to enter BIOS setup main menu when system is boot up.


(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".

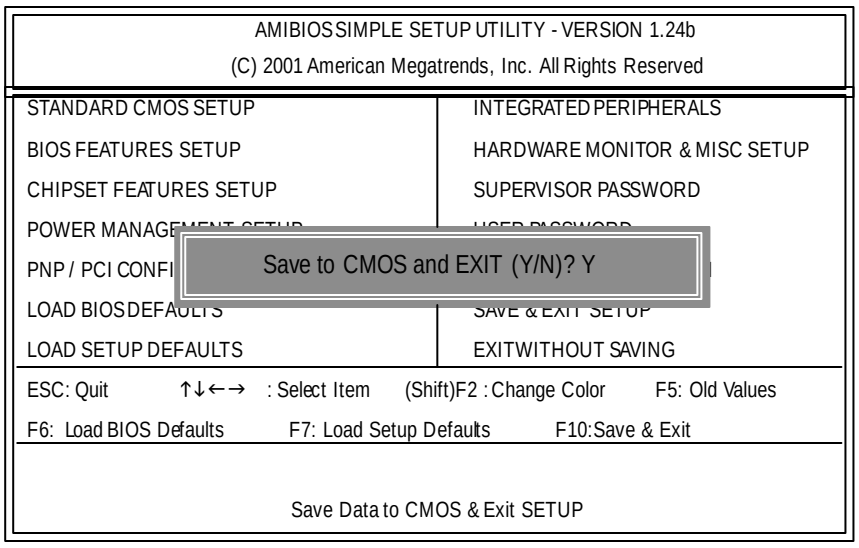
| AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.24b<br>(C) 1999 American Megatrends, Inc. All Rights Reserved | |
|---|---|
| STANDARD CMOS SETUP | INTEGRATED PERIPHERALS |
| BIOS FEATURES SETUP | HARDWARE MONITOR & MISC SETUP |
| CHIPSET FEATURES SETUP | SUPERVISOR PASSWORD |
| POWER MANAGEMENT SETUP | USER PASSWORD |
| PNP / PCI CONFIGURATION | IDE HDD AUTO DETECTION |
| LOAD 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 | |
| Time, Date , Hard Disk Type... | |

English

(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".




(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.

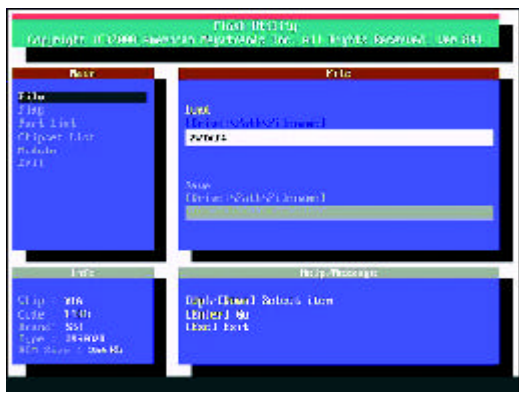


STEP 5: BIOS flashing.

(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".

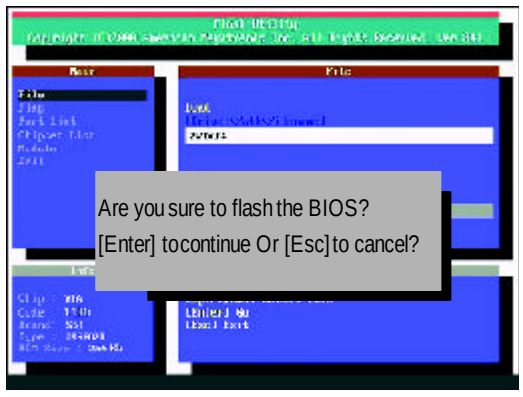
```
Starting Windows 98...

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 model name of the right-upper screen. Right after that, press "Enter" to start BIOS Flash Utility.

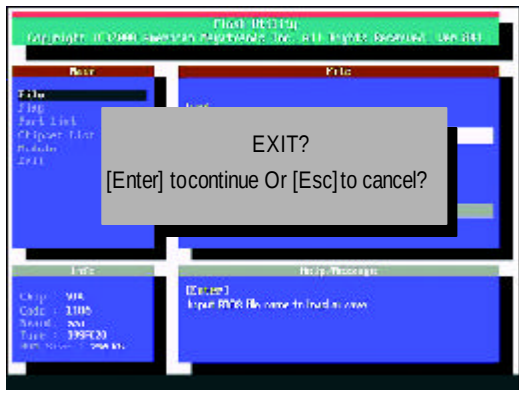


English

(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.

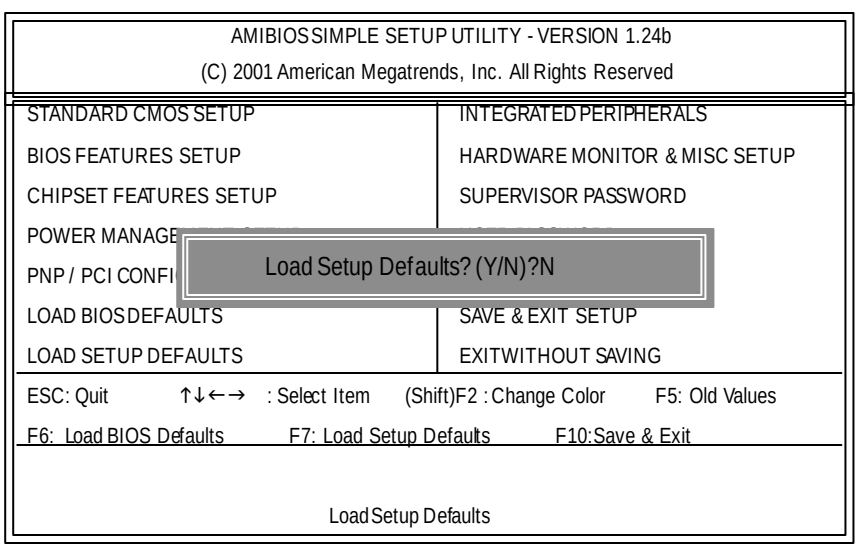


STEP 6: Load BIOS defaults.

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.

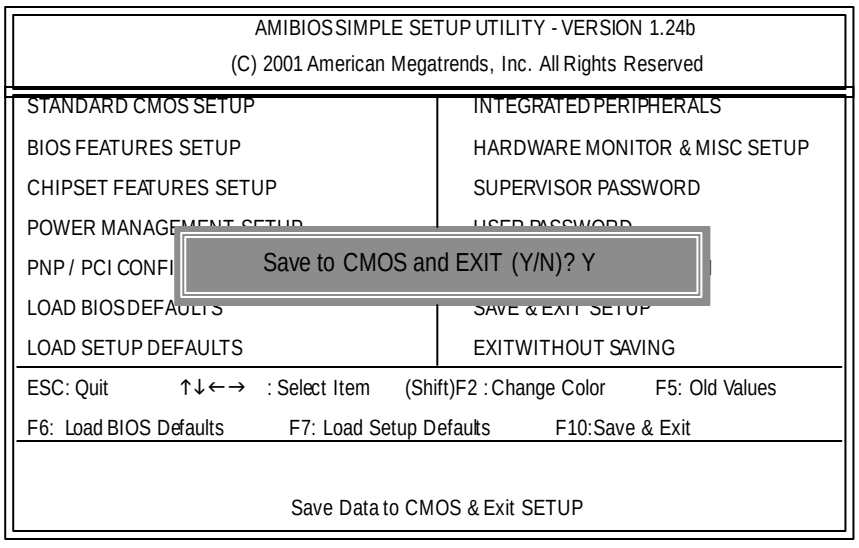
(1) Take out the floppy diskette from floppy drive, and then restart the system. The boot up screen will indicate your motherboard model and current BIOS version.


(2) Don't forget to press <DEL> 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.



English

(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.

## Appendix E: 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 |

to be continued.....

English

| Acronyms | Meaning |
|---|---|
| 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: