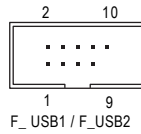
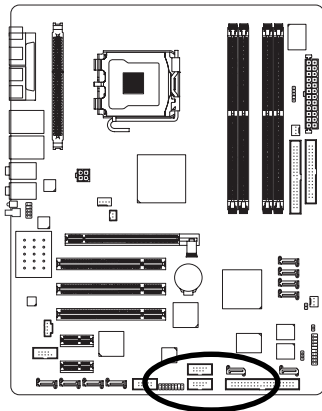


17) F_USB1 / F_USB2 (Front USB Connector)

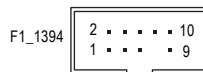
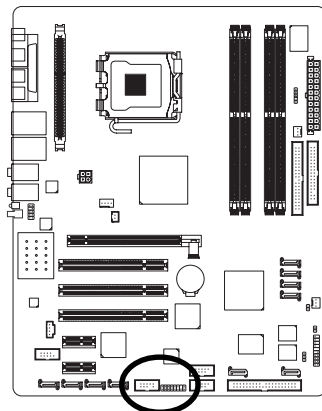
Be careful with the polarity of the front USB connector. Check the pin assignment carefully while you connect the front USB cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional front USB cable, please contact your local dealer. The "USB Device Wake up From S3" is only supported by rear USB ports.



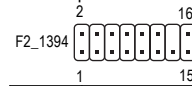
Pin No.	Definition
1	Power
2	Power
3	USB DX-
4	USB Dy-
5	USB DX+
6	USB Dy+
7	GND
8	GND
9	No Pin
10	NC

18) F1_1394 / F2_1394 (IEEE 1394 Connector)

Serial interface standard set by Institute of Electrical and Electronics Engineers, which has features like high speed, high bandwidth and hot plug. Be careful with the polarity of the IEEE1394 connector. Check the pin assignment carefully while you connect the IEEE1394 cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional IEEE1394 cable, please contact your local dealer.



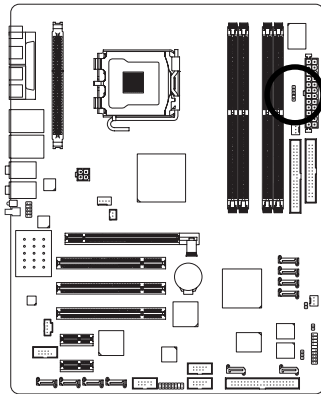
Pin No.	Definition
1	TPA0+
2	TPA0-
3	GND
4	GND
5	TPB0+
6	TPB0-
7	No Pin
8	Power
9	Power
10	GND



Pin No.	Definition
1	Power
2	Power
3	TPA1+
4	TPA1-
5	GND
6	GND
7	TPB1+
8	TPB1-
9	Power
10	Power
11	TPA2+
12	TPA2-
13	GND
14	No Pin
15	TPB2+
16	TPB2-

19) IR

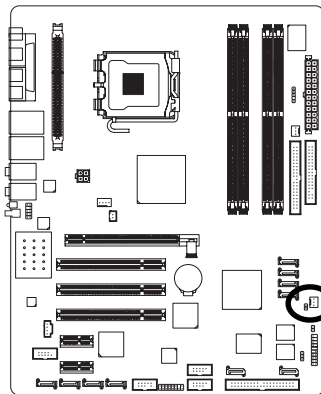
Be careful with the polarity of the IR connector while you connect the IR. Please contact your nearest dealer for optional IR device.



Pin No.	Definition
1	VCC
2	No Pin
3	IRRX
4	GND
5	IR TX

20) CLR_CMOS (Clear CMOS)

You may clear the CMOS data to its default values by this jumper. To clear CMOS, temporarily short 1-2 pin. Default doesn't include the "Shunter" to prevent from improper use this jumper.



Open: Normal

1

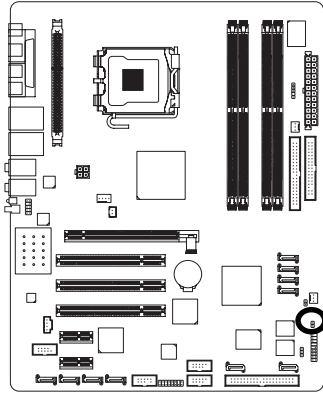


Short: Clear CMOS

1

21) CI (Chassis Intrusion, Case Open)

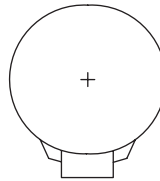
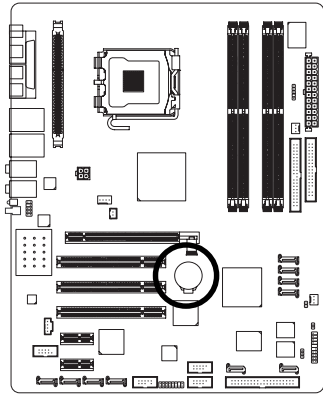
This 2-pin connector allows your system to detect if the chassis cover is removed. You can check the "Case Open" status in BIOS Setup.



1

Pin No.	Definition
1	Signal
2	GND

22) BAT(Battery)



- ❖ 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.

If you want to erase CMOS...

1. Turn OFF the computer and unplug the power cord.
2. Remove the battery, wait for 30 second.
3. Re-install the battery.
4. Plug the power cord and turn ON the computer.

Chapter 2 BIOS Setup

BIOS (Basic Input and Output System) includes a CMOS SETUP utility which allows user to configure required settings or to activate certain system features.

The CMOS SETUP saves the configuration in the CMOS SRAM of the motherboard.

When the power is turned off, the battery on the motherboard supplies the necessary power to the CMOS SRAM.

When the power is turned on, pushing the button during the BIOS POST (Power-On Self Test) will take you to the CMOS SETUP screen. You can enter the BIOS setup screen by pressing "Ctrl + F1".

When setting up BIOS for the first time, it is recommended that you save the current BIOS to a disk in the event that BIOS needs to be reset to its original settings. If you wish to upgrade to a new BIOS, either GIGABYTE's Q-Flash or @BIOS utility can be used.

Q-Flash allows the user to quickly and easily update or backup BIOS without entering the operating system.

@BIOS is a Windows-based utility that does not require users to boot to DOS before upgrading BIOS but directly download and update BIOS from the Internet.

CONTROL KEYS

<↑> <↓> <←> <→>	Move to select item
<Enter>	Select Item
<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
<Page Up>	Increase the numeric value or make changes
<Page Down>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Item Help
<F3>	Select Language
<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>	Dual BIOS/Q-Flash utility
<F9>	System Information
<F10>	Save all the CMOS changes, only for Main Menu

Main Menu

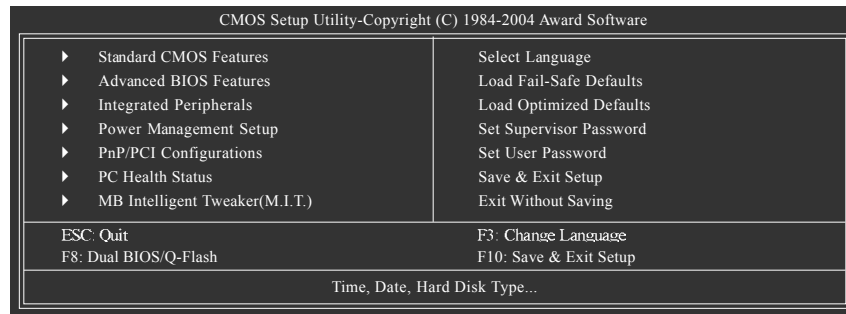
The on-line description of the highlighted setup function is displayed at the bottom of the screen.

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 (as figure below) will appear on the screen. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.



If you can't find the setting you want, please press "Ctrl+F1" to search the advanced option hidden. Please Load Optimized Defaults in the BIOS when somehow the system works not stable as usual. This action makes the system reset to the default for stability.

■ 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 Configuration

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.

■ MB Intelligent Tweaker(M.I.T.)

This setup page is control CPU clock and frequency ratio.

■ 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.

2-1 Standard CMOS Features

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software Standard CMOS Features		
Date (mm:dd:yy)	Wed, Oct 27 2004	Item Help
Time (hh:mm:ss)	22:31:24	Menu Level▶
▶ IDE Channel 0 Master	[None]	Change the day, month, year
▶ IDE Channel 0 Slave	[None]	<Week>
▶ IDE Channel 2 Master	[None]	Sun. to Sat.
▶ IDE Channel 2 Slave	[None]	<Month>
▶ IDE Channel 3 Master	[None]	Jan. to Dec.
▶ IDE Channel 3 Slave	[None]	<Day>
Drive A	[1.44M, 3.5"]	1 to 31 (or maximum allowed in the month)
Drive B	[None]	<Year>
Floppy 3 Mode Support	[Disabled]	1999 to 2098
Halt On	[All, But Keyboard]	
Base Memory	640K	
Extended Memory	511M	
Total Memory	512M	
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F3: Language F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

☞ 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

☞ 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 Channel 0 Master, Slave

- ▶▶ IDE HDD Auto-Detection Press "Enter" to select this option for automatic device detection.
- ▶▶ IDE Device Setup. You can use one of three methods:
 - Auto Allows BIOS to automatically detect IDE devices during POST(default)
 - None Select this if no IDE devices are used and the system will skip the automatic detection step and allow for faster system start up.
 - Manual User can manually input the correct settings.
- ▶▶ Access Mode Use this to set the access mode for the hard drive. The four options are: CHS/LBA/Large/Auto(default:Auto)

☞ IDE Channel 2/3 Master, Slave

- ▶▶ IDE HDD Auto-Detection Press "Enter" to select this option for automatic device detection.
- ▶▶ Extended IDE Drive. You can use one of two methods:
 - Auto Allows BIOS to automatically detect IDE devices during POST(default)
 - None Select this if no IDE devices are used and the system will skip the automatic detection step and allow for faster system start up.
- ▶▶ Access Mode Use this to set the access mode for the hard drive. The two options are: Large/Auto(default:Auto)

» Capacity Capacity of currently installed hard disk.
Hard drive information should be labeled on the outside drive casing. Enter the appropriate option based on this information.

- » Cylinder Number of cylinders
- » Head Number of heads
- » Precomp Write precomp
- » Landing Zone Landing zone
- » Sector 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" 5.25 inch PC-type standard drive; 360K byte capacity.
- » 1.2M, 5.25" 5.25 inch AT-type high-density drive; 1.2M byte capacity.
(3.5 inch when 3 Mode is Enabled).
- » 720K, 3.5" 3.5 inch double-sided drive; 720K byte capacity.
- » 1.44M, 3.5" 3.5 inch double-sided drive; 1.44M byte capacity.
- » 2.88M, 3.5" 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.

☞ Halt on

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

- » No Errors The system boot will not 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 512K for systems with 512K memory installed on the motherboard, or 640K for systems with 640K or more memory installed on the motherboard.

» Extended Memory

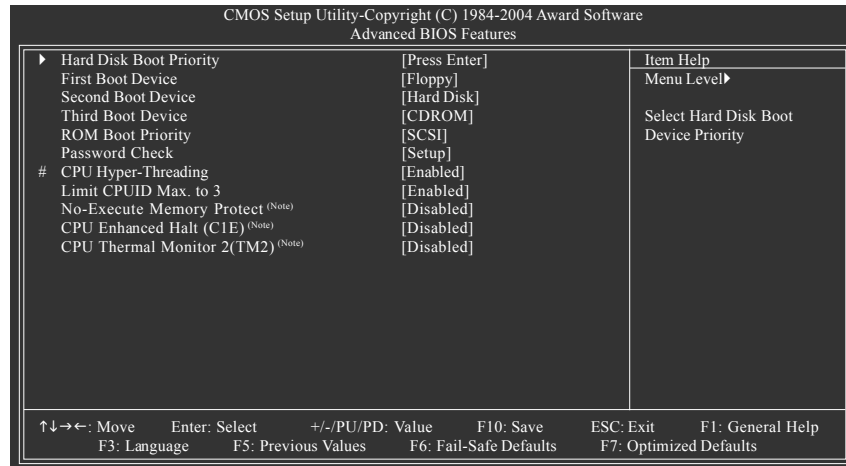
The BIOS determines how much extended memory is present during the POST.

This is the amount of memory located above 1 MB in the CPU's memory address map.

» Total Memory

This item displays the memory size that used.

2-2 Advanced BIOS Features



" # " System will detect automatically and show up when you install the Intel® Pentium® 4 processor with HT Technology.

Hard Disk Boot Priority

Select boot sequence for onboard(or add-on cards) SCSI, RAID, etc.

Use <↑> or <↓> to select a device, then press<+> to move it up, or <-> to move it down the list. Press <ESC> to exit this menu.

First / Second / Third Boot Device

- ▶ Floppy Select your boot device priority by Floppy.
- ▶ LS120 Select your boot device priority by LS120.
- ▶ Hard Disk Select your boot device priority by Hard Disk.
- ▶ 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.

(Note) This item will show up when you install a processor that supports this function.

☞ ROM Boot Priority

Use this function to select onboard RAID or PCI SCSI boot rom order if the boot rom of your device cannot be auto detected.

- ▶▶ SCSI Set boot rom order to SCSI devices..
- ▶▶ ICH6R Set boot rom order to devices on the ICH6R controller.
- ▶▶ PROMISE Set boot rom order to devices on the Promise controller.
- ▶▶ SATA Set boot rom order to devices on the Sil3114 controller.

☞ Password Check

- ▶▶ Setup The system will boot but will not access to Setup page if the correct password is not entered at the prompt. (Default value)
- ▶▶ System The system will not boot and will not access to Setup page if the correct password is not entered at the prompt.

☞ CPU Hyper-Threading

- ▶▶ Enabled Enables CPU Hyper Threading Feature. Please note that this feature is only working for operating system with multi processors mode supported. (Default value)
- ▶▶ Disabled Disables CPU Hyper Threading.

☞ Limit CPUID Max. to 3

- ▶▶ Enabled Limit CPUID Maximum value to 3 when use older OS like NT4. (Default value)
- ▶▶ Disabled Disables CPUID Limit for windows XP.

☞ No-Execute Memory Protect^(Note)

- ▶▶ Enabled Enable No-Execute Memory Protect function.
- ▶▶ Disabled Disable No-Execute Memory Protect function. (Default value)

☞ CPU Enhanced Halt (C1E)^(Note)

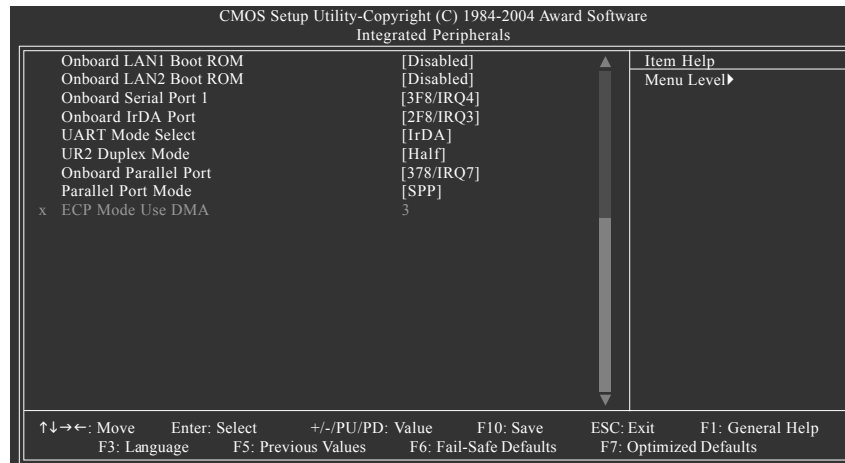
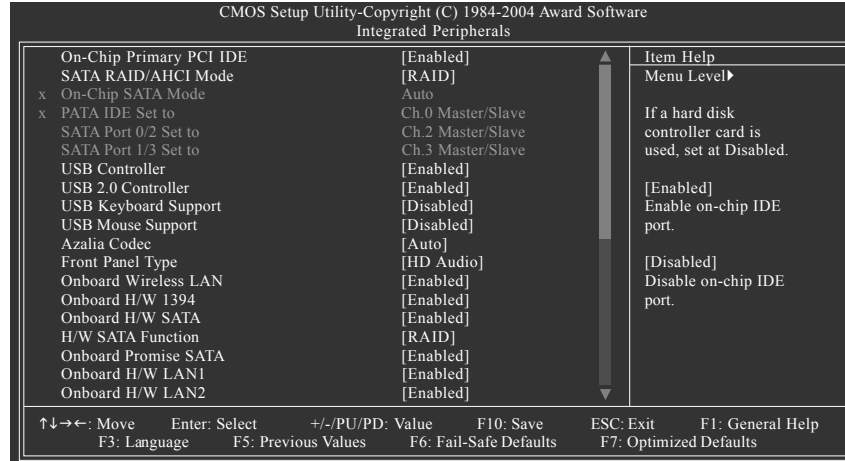
- ▶▶ Enabled Enable CPU Enhanced Halt (C1E) function.
- ▶▶ Disabled Disable CPU Enhanced Halt (C1E) function. (Default value)

☞ CPU Thermal Monitor 2 (TM2)^(Note)

- ▶▶ Enabled Enable CPU Thermal Monitor 2 (TM2) function.
- ▶▶ Disabled Disable CPU Thermal Monitor 2 (TM2) function. (Default value)

(Note) This item will show up when you install a processor that supports this function.

2-3 Integrated Peripherals



☞ On-Chip Primary PCI IDE

- ▶▶ Enabled Enable onboard 1st channel IDE port. (Default value)
- ▶▶ Disabled Disable onboard 1st channel IDE port.

☞ SATA RAID / AHCI Mode

- ▶▶ RAID Select onboard Serial ATA function as RAID. (Default value)
- ▶▶ AHCI Support hotplug function under OS. WinXP, 2000 only.
- ▶▶ Disabled Select onboard Serial ATA function as ATA.

☞ On-Chip SATA Mode

- ▶▶ Disabled Disable this function.
- ▶▶ Auto BIOS will detect automatically. (Default value)
- ▶▶ Combined Set On-Chip SATA mode to Combined, you can use up to 4 HDDs on the motherboard; 2 for SATA and the other for PATA IDE.

- » Enhanced Set On-Chip SATA mode to Enhanced, the motherboard allows up to 6 HDDs to use.
- » Non-Combined Set On-Chip SATA mode to Non-Combined, SATA will be simulated to PATA mode.

☞ **PATA IDE Set to**

- » Ch.1 Master/Slave Set PATA IDE to Ch. 1 Master/Slave. (Default value)
- » Ch.0 Master/Slave Set PATA IDE to Ch. 0 Master/Slave.

☞ **SATA Port 0/2 Set to**

- » This value will auto make by the setting "On-Chip SATA Mode" and "PATA IDE Set to".
- If PATA IDE were set to Ch. 1 Master/Slave, this function will auto set to Ch. 0 Master/Slave.

☞ **SATA Port 1/3 Set to**

- » This value will auto make by the setting "On-Chip SATA Mode" and "PATA IDE Set to".
- If PATA IDE were set to Ch. 0 Master/Slave, this function will auto set to Ch. 1 Master/Slave.

☞ **USB Controller**

- » Enabled Enable USB controller. (Default value)
- » Disabled Disable USB controller.

☞ **USB 2.0 Controller**

Disable this function if you are not using onboard USB 2.0 feature.

- » Enabled Enable USB 2.0 controller. (Default value)
- » Disabled Disable USB 2.0 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)

☞ **Azalia Codec**

- » Auto Auto detect Azalia audio function. (Default value)
- » Disabled Disable Azalia audio function.

☞ **Front Panel Type**

If you connect HD Audio Panel to the AZALIA_FP connector, set this item to **HD Audio**. If you connect AC97 Audio Panel to the AZALIA_FP connector, set this item to **AC97**.

- » AC97 Set front audio panel type to AC97.
- » HD Audio Set front audio panel type to HD Audio. (Default value)

☞ **Onboard Wireless LAN**

- » Enabled Enable onboard wireless LAN function. (Default value)
- » Disabled Disable this function.

☞ **Onboard H/W 1394**

- » Enabled Enable onboard IEEE 1394 function. (Default value)
- » Disabled Disable this function.

☞ **Onboard H/W SATA**

- » Enabled Enable onboard H/W SATA function. (Default value)
- » Disabled Disable this function.

- ☞ **H/W SATA Function**
 - ▶▶ RAID Set onboard H/W SATA function as RAID. (Default value)
 - ▶▶ BASE Set onboard H/W SATA function as base.
- ☞ **Onboard Promise SATA**
 - ▶▶ Enabled Enable onboard Promise SATA function. (Default value)
 - ▶▶ Disabled Disable this function.
- ☞ **Onboard H/W LAN1 (LAN1 port)**
 - ▶▶ Enabled Enable onboard H/W LAN function. (Default value)
 - ▶▶ Disabled Disable this function.
- ☞ **Onboard H/W LAN2 (LAN2 port)**
 - ▶▶ Enabled Enable onboard H/W LAN function. (Default value)
 - ▶▶ Disabled Disable this function.
- ☞ **Onboard LAN1 Boot ROM (LAN1 port)**

This function decide whether to invoke the boot ROM of the onboard LAN chip.

 - ▶▶ Enabled Enable this function.
 - ▶▶ Disabled Disable this function. (Default value)
- ☞ **Onboard LAN2 Boot ROM (LAN2 port)**

This function decide whether to invoke the boot ROM of the onboard LAN chip.

 - ▶▶ Enabled Enable this function.
 - ▶▶ Disabled Disable this 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 IrDA Port**
 - ▶▶ Auto BIOS will automatically setup the IrDA port address.
 - ▶▶ 3F8/IRQ4 Enable onboard IrDA port and address is 3F8/IRQ4.
 - ▶▶ 2F8/IRQ3 Enable onboard IrDA port and address is 2F8/IRQ3. (Default value)
 - ▶▶ 3E8/IRQ4 Enable onboard IrDA port and address is 3E8/IRQ4.
 - ▶▶ 2E8/IRQ3 Enable onboard IrDA port and address is 2E8/IRQ3.
 - ▶▶ Disabled Disable onboard IrDA port .
- ☞ **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. (Default value)
- ☞ **UR2 Duplex Mode**

This feature allows you to select IR mode.

 - ▶▶ Half IR Function Duplex Half. (Default value)
 - ▶▶ Full IR Function Duplex Full.

☞ **Onboard Parallel Port**

- ▶▶ Disabled Disable onboard LPT 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.
- ▶▶ 3BC/IRQ7 Enable onboard LPT port and address is 3BC/IRQ7.

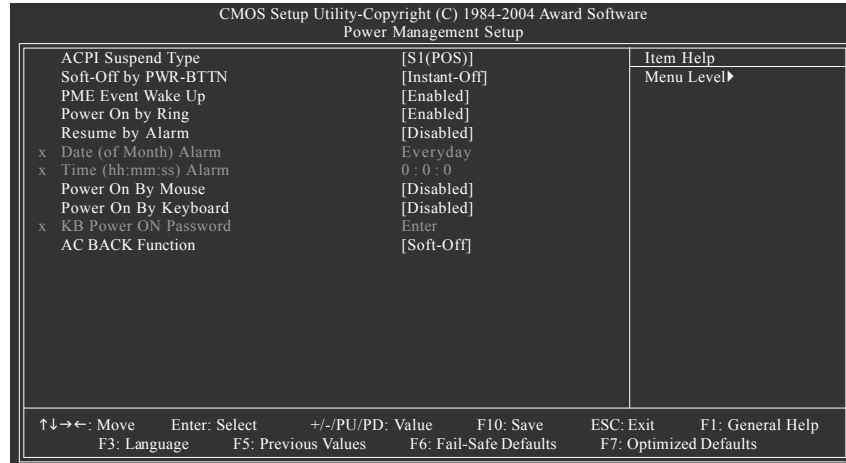
☞ **Parallel Port Mode**

- ▶▶ 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.

2-4 Power Management Setup



☞ ACPI Suspend Type

- ▶▶ S1(POS) Set ACPI suspend type to S1/POS(Power On Suspend). (Default value)
- ▶▶ S3(STR) Set ACPI suspend type to S3/STR(Suspend To RAM).

☞ Soft-Off by PWR-BTTN

- ▶▶ Instant-Off Press power button then Power off instantly. (Default value)
- ▶▶ Delay 4 Sec. Press power button 4 seconds to Power off. Enter suspend if button is pressed less than 4 seconds.

☞ PME Event Wake Up

- ▶▶ Disabled Disable this function.
- ▶▶ Enabled Enable PME Event Wake up. (Default value)

☞ Power On by Ring

- ▶▶ Disabled Disable Power on by Ring function.
- ▶▶ Enabled Enable Power on by Ring function. (Default value)

☞ Resume by Alarm

You can set "Resume by Alarm" item to enabled and key in Date/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)
- ▶▶ Double Click Double click on PS/2 mouse left button to power on the system.

☞ 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 the system.

☞ KB Power ON Password

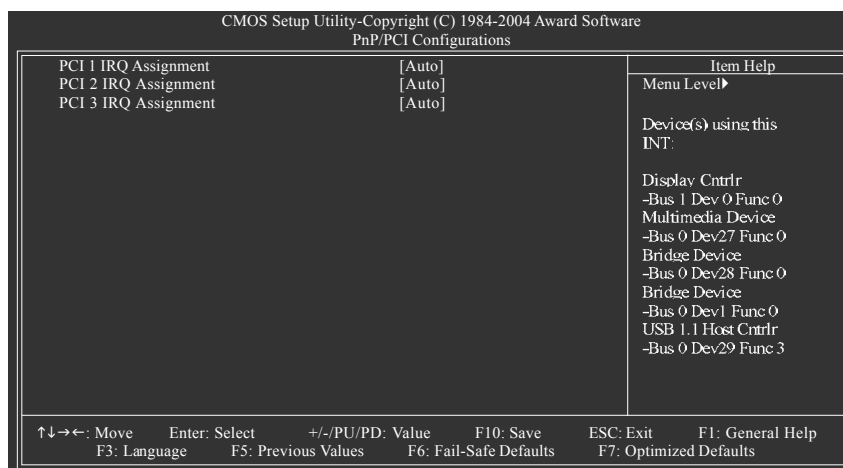
When "Power On by Keyboard" set at Password, you can set the password here.

- ▶▶ Enter Input password (from 1 to 5 characters) and press Enter to set the Keyboard Power On password.

☞ AC BACK Function

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

2-5 PnP/PCI Configurations



☞ PCI 1 IRQ Assignment

- ▶▶ Auto Auto assign IRQ to PCI 1. (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 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.

2-6 PC Health Status

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software		
PC Health Status		
		Item Help
Reset Case Open Status	[Disabled]	Menu Level▶
Case Opened	No	
Vcore	OK	
DDR18V	OK	
+3.3V	OK	
+12V	OK	
Current CPU Temperature	33°C	
Current CPU FAN Speed	4687 RPM	
Current POWER FAN Speed	0 RPM	
Current SYSTEM FAN Speed	0 RPM	
CPU Warning Temperature	[Disabled]	
CPU FAN Fail Warning	[Disabled]	
POWER FAN Fail Warning	[Disabled]	
SYSTEM FAN Fail Warning	[Disabled]	
CPU Smart FAN Control	[Enabled]	
CPU Smart FAN Mode	[Auto]	

↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
 F3: Language F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Reset Case Open Status

- ▶▶ Disabled Don't reset case open status. (Default value)
- ▶▶ Enabled Clear case open status at next boot.

Case Opened

If the case is closed, "Case Opened" will show "No". If the case has been opened, "Case Opened" will show "Yes". If you want to reset "Case Opened" value, set "Reset Case Open Status" to **Enabled** then save BIOS setup and restart your system.

Current Voltage(V) Vcore / DDR18V / +3.3V / +12V

- ▶▶ Detect system's voltage status automatically.

Current CPU Temperature

- ▶▶ Detect CPU temperature automatically.

Current CPU/POWER/SYSTEM FAN Speed (RPM)

- ▶▶ Detect CPU/POWER/SYSTEM fan speed status automatically.

CPU Warning Temperature

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

CPU/POWER/SYSTEM FAN Fail Warning

- ▶▶ Disabled Fan warning function disable. (Default value)
- ▶▶ Enabled Fan warning function enable.

 **CPU Smart FAN Control**

- ▶▶ Disabled Disable this function.
- ▶▶ Enabled Enable the **CPU Smart FAN Control** function. (Default value)
 - a. When the CPU temperature is higher than 65 degrees Celsius, CPU fan will operate at full speed.
 - b. When the CPU temperature is between 20 and 65 degrees Celsius, the CPU fan speed will change depending on the actual CPU temperature.
 - c. When the CPU temperature is lower than 20 degrees Celsius, CPU fan will stop spinning.

 **CPU Smart FAN Mode**

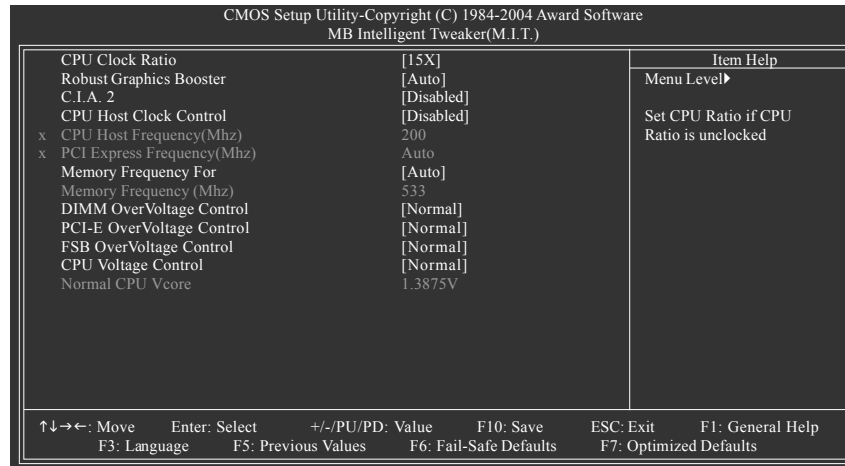
This option is available only when CPU Smart FAN Control is enabled.

- ▶▶ Auto BIOS autodetects the type of CPU fan you installed and sets the optimal CPU Smart FAN control mode for it. (Default value)
- ▶▶ Voltage Set to Voltage when you use a CPU fan with a 3-pin fan power cable.
- ▶▶ PWM Set to PWM when you use a CPU fan with a 4-pin fan power cable.



In fact, the **Voltage** option can be used for CPU fans with 3-pin or 4-pin power cables. However, some 4-pin CPU fan power cables are not designed following Intel 4-wire fans PWM control specifications. With such CPU fans, selecting PWM will not effectively reduce the fan speed.

2-7 MB Intelligent Tweaker(M.I.T.)



Incorrect using these features may cause your system broken. For power end-user use only.

☞ CPU Clock Ratio

This setup option will automatically assign by CPU detection.

The option will display "Locked" and read only if the CPU ratio is not changeable.

☞ Robust Graphics Booster

Select the options can enhance the VGA graphics card bandwidth to get higher performance.

- ▶▶ Auto Set Robust Graphics Booster to Auto. (Default value)
- ▶▶ Fast Set Robust Graphics Booster to Fast.
- ▶▶ Turbo Set Robust Graphics Booster to Turbo.

☞ C.I.A.2

C.I.A.2 (CPU Intelligent Accelerator 2) is designed to detect CPU loading during software program executing, and automatically adjust CPU computing power to maximize system performance.

- ▶▶ Disabled Disable this function. (Default value)
- ▶▶ Cruise Set C.I.A.2 to Cruise. Automatically increase CPU frequency(5%,7%) by CPU loading.
- ▶▶ Sports Set C.I.A.2 to Sports. Automatically increase CPU frequency(7%,9%) by CPU loading.
- ▶▶ Racing Set C.I.A.2 to Racing. Automatically increase CPU frequency(9%,11%) by CPU loading.
- ▶▶ Turbo Set C.I.A.2 to Turbo. Automatically increase CPU frequency(15,17%) by CPU loading.
- ▶▶ Full Thrust Set C.I.A.2 to Full Thrust. Automatically increase CPU frequency(17%,19%) by CPU loading.

Warning: Stability is highly dependent on system components.

- ☞ **CPU Host Clock Control**
 - ▶▶ Disabled Disable CPU Host Clock Control. (Default value)
 - ▶▶ Enabled Enable CPU Host Clock Control.
- ☞ **CPU Host Frequency(Mhz)**
 - ▶▶ 100Mhz ~ 600Mhz Set CPU Host Clock from 100Mhz to 600Mhz.

The actual range depends on the CPU you install. If you use a 533Mhz FSB processor, please set **CPU Host Frequency** to **133Mhz**. If you use an 800Mhz FSB processor, please set **CPU Host Frequency** to **200Mhz**. If you use a 1066Mhz FSB processor, please set **CPU Host Frequency** to **266Mhz**.
- ☞ **PCI Express Frequency(Mhz)**
 - ▶▶ Auto Set PCI Express frequency automatically. (Default value)
 - ▶▶ 100Mhz ~ 130Mhz Set PCI Express frequency from 100Mhz to 130Mhz.
- ☞ **Memory Frequency For**

Wrong frequency may make system can't boot, clear CMOS to overcome wrong frequency issue.

for FSB(Front Side Bus) frequency=533Mhz,

 - ▶▶ 3 Memory Frequency = Host clock x 3.
 - ▶▶ 4 Memory Frequency = Host clock x 4.
 - ▶▶ Auto Set Memory frequency by DRAM SPD data. (Default value)

for FSB(Front Side Bus) frequency=800Mhz,

 - ▶▶ 2.00 Memory Frequency = Host clock x 2.
 - ▶▶ 2.66 Memory Frequency = Host clock x 2.66.
 - ▶▶ 3.00^(Note) Memory Frequency = Host clock x 3.
 - ▶▶ Auto Set Memory frequency by DRAM SPD data. (Default value)

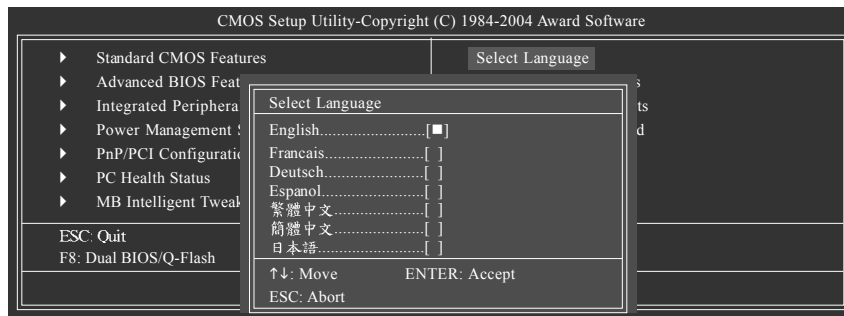
for FSB(Front Side Bus) frequency=1066Mhz,

 - ▶▶ 1.5 Memory Frequency = Host clock x 1.5.
 - ▶▶ 2 Memory Frequency = Host clock x 2.
 - ▶▶ 2.66 Memory Frequency = Host clock x 2.66.
 - ▶▶ 3 Memory Frequency = Host clock x 3.
 - ▶▶ Auto Set Memory frequency by DRAM SPD data. (Default value)
- ☞ **Memory Frequency (Mhz)**
 - ▶▶ The values depend on **CPU Host Frequency(Mhz)** and **Memory Frequency For** setting.
- ☞ **DIMM OverVoltage Control**
 - ▶▶ Normal Set DIMM OverVoltage Control to Normal. (Default value)
 - ▶▶ +0.1V Set DIMM OverVoltage Control to +0.1V.
 - ▶▶ +0.2V Set DIMM OverVoltage Control to +0.2V.
 - ▶▶ +0.3V Set DIMM OverVoltage Control to +0.3V.
- ☞ **PCI-E OverVoltage Control**
 - ▶▶ Normal Set PCI-E OverVoltage Control to Normal. (Default value)
 - ▶▶ +0.1V Set PCI-E OverVoltage Control to +0.1V.
 - ▶▶ +0.2V Set PCI-E OverVoltage Control to +0.2V.
 - ▶▶ +0.3V Set PCI-E OverVoltage Control to +0.3V.
- ☞ **FSB OverVoltage Control**
 - ▶▶ Normal Set FSB OverVoltage Control to Normal. (Default value)
 - ▶▶ +0.1V Set FSB OverVoltage Control to +0.1V.
 - ▶▶ +0.2V Set FSB OverVoltage Control to +0.2V.
 - ▶▶ +0.3V Set FSB OverVoltage Control to +0.3V.

(Note) To use a DDRII 600 memory module on the motherboard, you must install an 800MHz FSB processor and set **Memory Frequency For** to **3.00**.

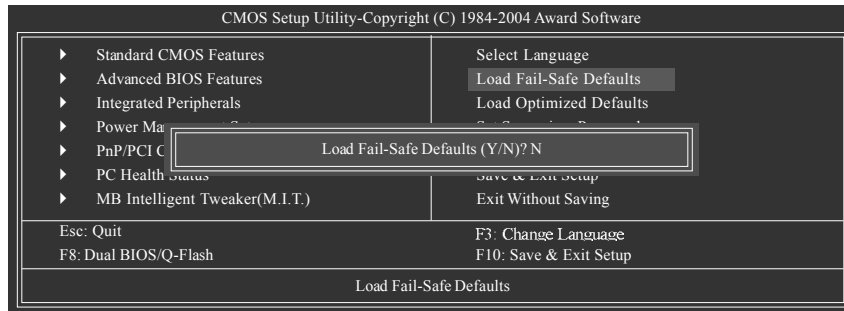
- ☞ **CPU Voltage Control**
 - ▶▶ Supports adjustable CPU Vcore from 0.8375V to 1.6000V. (Default value: Normal)
- ☞ **Normal CPU Vcore**
 - ▶▶ Display your CPU Vcore voltage.

2-8 Select Language



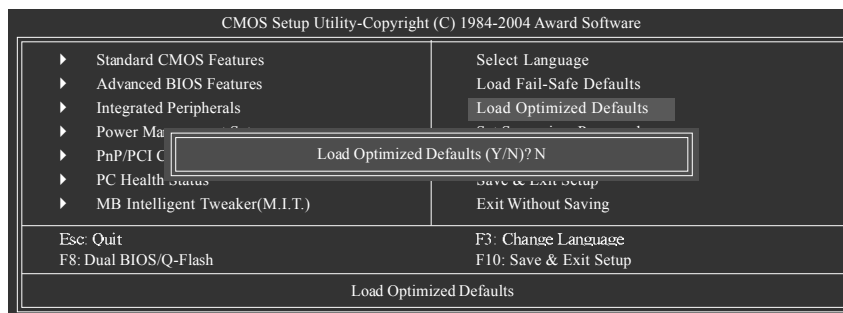
Multi-language supports 7 languages. There are English, French, German, Spanish, Traditional Chinese, Simplified Chinese, and Japanese.

2-9 Load Fail-Safe Defaults



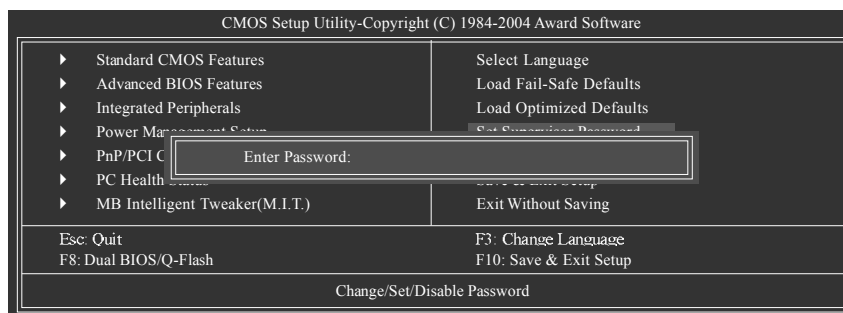
Fail-Safe defaults contain the most appropriate values of the system parameters that allow minimum system performance.

2-10 Load Optimized Defaults



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

2-11 Set Supervisor/User Password



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

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.

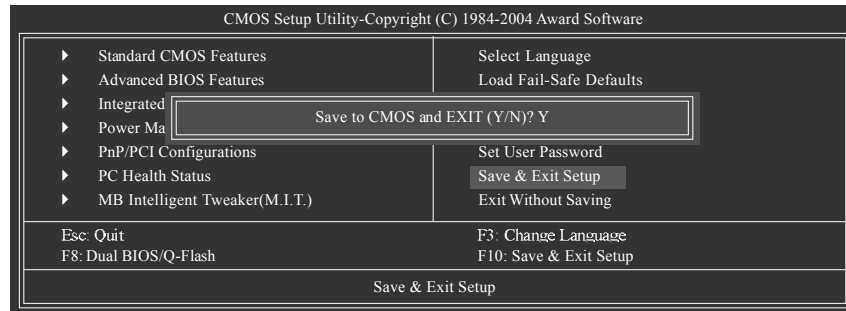
To disable password, just press <Enter> when you are prompted to enter password. A message "PASSWORD DISABLED" will appear to confirm the password being disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

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.

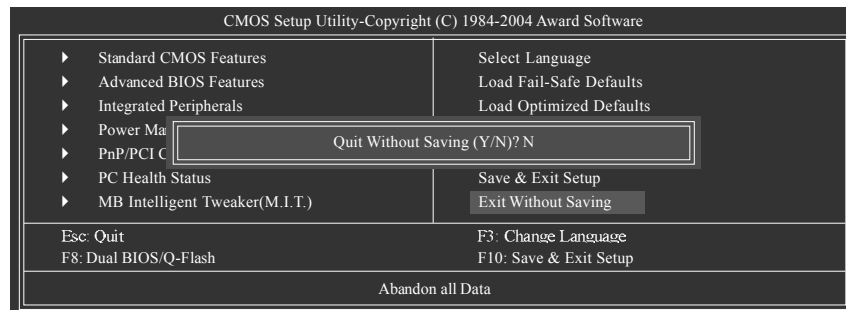
2-12 Save & Exit Setup



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

Type "N" will return to Setup Utility.

2-13 Exit Without Saving



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

Type "N" will return to Setup Utility.

Chapter 3 Drivers Installation



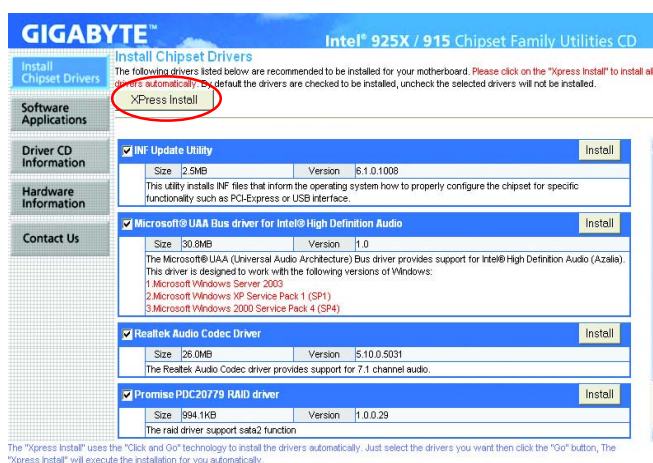
Pictures below are shown in Windows XP.

Insert the driver CD-title that came with your motherboard into your CD-ROM drive, 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 Run.exe.

3-1 Install Chipset Drivers

"Xpress Install " is now analyzing your computer...99%

After insert the driver CD, "Xpress Install" will scan automatically the system and then list all the drivers that recommended to install. Please pick the item that you want and press "install" followed the item; or you can press "Xpress Install" to install all items defaulted.



The "Xpress Install" uses the "Click and Go" technology to install the drivers automatically. Just select the drivers you want then click the "Go" button, The "Xpress Install" will execute the installation for you automatically.



Some device drivers will restart your system automatically. After restarting your system the "Xpress Install" will continue to install other drivers. System will reboot automatically after install the drivers, afterward you can install others application.



For USB2.0 driver support under Windows XP operating system, please use Windows Service Pack. After install Windows Service Pack, it will show a question mark "?" in "Universal Serial Bus controller" under "Device Manager". Please remove the question mark and restart the system (System will auto-detect the right USB2.0 driver).

3-2 Software Applications

This page displays all the tools that Gigabyte developed and some free software, you can choose anyone you want and press "install" to install them.

GIGABYTE™ Intel® 925X / 915 Chipset Family Utilities CD

Software Applications
Please click on the following applications listed below to install

Software Applications	Size	Description	Install
GIGABYTE C.O.M. (Corporate Online Manager)	8.4MB	A web-based system management tool that allows client system hardware information such as CPU and memory and graphics card and much more to be monitored or controlled via a host.	Install
EasyTune 5	4.7MB	An easy-to-use Windows-based system enhancement utility allowing quick access to a variety of performance features.	Install
DMI Viewer	1012.9KB	DMI Viewer provides a management tool for viewing motherboard hardware information.	Install
Face Wizard	1.9MB	Face Wizard provides utility for customizing BIOS boot up screen.	Install
@BIOS			Install

The page reveals the value-added software developed by Gigabyte and its worldwide partners.

3-3 Driver CD Information

This page lists the contents of software and drivers in this CD-title.

GIGABYTE™ Intel® 925X / 915 Chipset Family Utilities CD

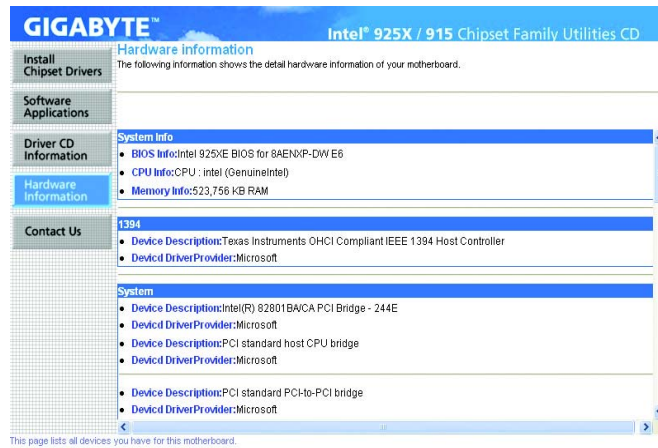
Driver CD Information
The following information shows the detail contents stored in this Driver CD.

Directory Name	Description
Chipset/MSI	MSI® chipset software installation utility for Windows XP
• INFUpdate	Intel® chipset software installation utility for Windows 2000
	Intel® chipset software installation utility for Windows ME
	Intel® chipset software installation utility for Windows 98
• IAA	Intel® application accelerator for Windows XP
	Intel® application accelerator for Windows 2000
• VGA	Win2k_XP-Intel® Graphics Media Accelerator Driver for Windows XP
	Win2k_XP-Intel® Graphics Media Accelerator Driver for Windows 2000
• EnableUSB31q	Enable USB device back form G3 mode
Audio	
Directory Name	Description
• cmmedia	cmmedia AC'97 Audio Driver
• Realtek	Realtek AC'97 Audio Driver
Network	
Directory Name	Description
• Realtek	LAN Driver for Realtek 8150/8100/8110s
• Marvell	Marvell 10/100/1000 Base LAN driver
• BroadCom	BroadCom PCI-E LAN driver
Other	
Directory Name	Description

The page lists the contents of software and drivers in this CD title.

3-4 Hardware Information

This page lists all device you have for this motherboard.



3-5 Contact Us

Please see the last page for details.



Chapter 4 Appendix

4-1 Unique Software Utilities

(Not all model support these Unique Software Utilities, please check your MB features.)



U-PLUS D.P.S. (Universal Plus Dual Power System)

The U-Plus Dual Power System (U-Plus DPS) is a revolutionary eight-phase power circuit built for ultimate system protection. Designed to withstand varying current levels and changes, the U-Plus D.P.S. provides an immensely durable and stable power circuit to the CPU for solid system stability. These characteristics make it the ideal companion with the latest LGA775 Intel® Pentium® 4 Processor as well as future Intel® processors. As well, 4 blue LED's are mounted on the U-Plus D.P.S. for intelligent indication of system loading.



M.I.T. (Motherboard Intelligent Tweaker)

Motherboard Intelligent Tweaker (M.I.T.) allows user to access and change BIOS feature settings with relative speed and ease. Through GIGABYTE M.I.T. feature the user is no longer required to switch into different modes within BIOS setup in order to change system settings such as the CPU system bus, memory timings or to enabled Gigabyte's unique C.I.A. 2 and M.I.B. 2 features. M.I.T.'s integration of all platform performance settings into a single mode now gives any user the ability to control and enhance their computer system to the desired level.



C.I.A.2 (CPU Intelligent Accelerator 2)

GIGABYTE CPU Intelligent Accelerator 2(C.I.A. 2) is designed to automatically adjust CPU computing power to maximize system performance. When enabled, the program detects the current CPU loading and automatically accelerates the CPU computing performance to allow for a faster and smoother execution of programs. When the function is disabled, the CPU is returned to its initial status.



M.I.B.2 (Memory Intelligent Booster 2)

Built on the original M.I.B., the new Memory Intelligent Booster 2 (M.I.B. 2) is designed especially to maximize memory performance and boost memory bandwidth up to 10%. With added branded memory module information, users are able to optimize memory performance by selecting from a recommended memory module list.



S.O.S. (System Overclock Saver)

System Overclock Saver (S.O.S.) is a unique feature that eliminates system boot-up errors resulting from system over-enhancement by the user. With GIGABYTE's proprietary S.O.S. feature, users no longer need to open up the PC chassis and short-circuit the "Clear CMOS" pins or the battery on the motherboard to reset the system back to factory default settings. Instead, S.O.S. automatically resets the overclocked system settings back to their factory defaults to provide a more user-friendly and reliable platform for users.



Download Center

Download Center allows users to quickly download and update their BIOS as well as the latest drivers for their system. Download Center automatically runs a system check of the user PC and provides the user with the current system information as well as displaying a detailed list of all new drivers with the option for download.



C.O.M. (Corporate Online Management)

A web-based system management tool that allows system hardware information such as CPU, memory, graphics card, etc. to be monitored and controlled via the Internet, C.O.M. allows corporate MIS engineers to easily maintain corporate computers such as providing the most up-to-date drivers and BIOS.

4-1-1 EasyTune 5 Introduction

EasyTune 5 presents the most convenient Windows based system performance enhancement and manageability utility. Featuring several powerful yet easy to use tools such as 1) Overclocking for enhancing system performance, 2) C.I.A. and M.I.B. for special enhancement for CPU and Memory, 3) Smart-Fan control for managing fan speed control of both CPU cooling fan and North-Bridge Chipset cooling fan, 4) PC health for monitoring system status.^(Note)

User Interface Overview



	Button / Display	Description
1.	Overclocking	Enters the Overclocking setting page
2.	C.I.A./C.I.A.2 and M.I.B./M.I.B.2	Enters the C.I.A./2 and M.I.B./2 setting page
3.	Smart-Fan	Enters the Smart-Fan setting page
4.	PC Health	Enters the PC Health setting page
5.	GO	Confirmation and Execution button
6.	"Easy Mode" & "Advance Mode"	Toggles between Easy and Advance Mode
7.	Display screen	Display panel of CPU frequency
8.	Function display LEDs	Shows the current functions status
9.	GIGABYTE Logo	Log on to GIGABYTE website
10.	Help button	Display EasyTune™ 5 Help file
11.	Exit or Minimize button	Quit or Minimize EasyTune™ 5 software

(Note) EasyTune 5 functions may vary depending on different motherboards.

4-1-2 Xpress Recovery Introduction



What is Xpress Recovery ?

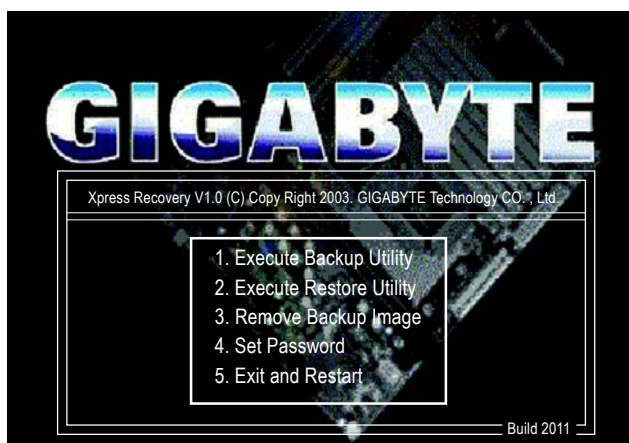
Xpress Recovery is a utility used to back up and restore an OS partition. If the hard drive is not working properly, the user can restore the drive to its original state.



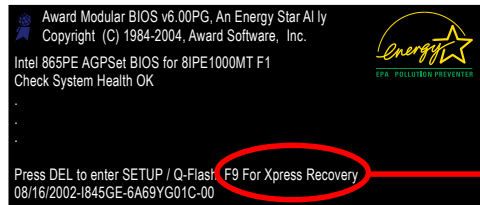
1. Supports FAT16, FAT32, and NTFS formats
2. Must be connected to the IDE1 Master
3. Allows installation of only one OS
4. Must be used with an IDE hard disk supporting HPA
5. The first partition must be set as the boot partition. When the boot partition is backed up, please do not alter its size.
6. Xpress Recovery is recommended when using Ghost to return boot manager to NTFS format.

How to use the Xpress Recovery

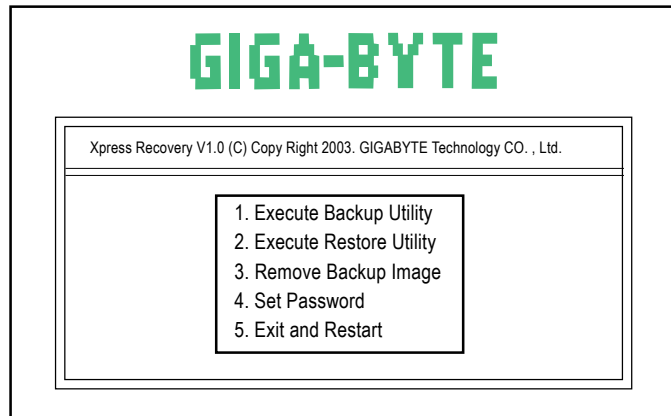
1. Boot from CD-ROM (BMP Mode)
Enter the BIOS menu, select "Advanced BIOS Feature" and set to boot from CD-ROM. Insert the provided driver CD into your CD drive, then save and exit the BIOS menu. Once the computer has restarted, the phrase "Boot from CD:" will appear at the bottom left-hand corner of the screen. When "Boot from CD:" appears, press any key to enter Xpress Recovery.
Once you have completed this step, subsequent access to Xpress Recovery can also function by pressing the F9 key during computer power on.



2. Press F9 during powering on the computer. (Text Mode)
Press F9 during powering on the computer .




F9 For Xpress Recovery



1. If you have already entered Xpress Recovery by booting from the CD-ROM, you can enter Xpress Recovery in the future by pressing the F9 key.
2. System storage capacity as well as drive reading/writing speed will affect backup speed.
3. It is recommended that Xpress Recovery be immediately installed after OS and all required driver and software installations are complete.

1. Execute Backup Utility:


 **Press B to Backup your System or Esc to Exit**

The backup utility will automatically scan your system and back up data as a backup image in your hard drive.



Not all systems support access to Xpress Recovery by pressing the F9 key during computer power on. If this is the case, please use the boot from CD-ROM method to enter Xpress Recovery.

2. Execute Restore Utility:

 **This program will recover your system to factory default.**

Press R to restore your system back to factory default or press Esc to exit


Restores backup image to original state.

3. Remove Backup Image:

 **Remove backup image. Are you sure? (Y/N)**

Remove the backup image.

4. Set Password:

 **Please input a 4-16 character long password (a-z or 0-9) or press Esc to exit**

You can set a password to enter Xpress Recovery to protect your hard disk data. Once this is done, password input will be required to enter Xpress Recovery during the next as well as subsequent system restarts. If you wish to remove the need for password entry, please select "Set Password" and under "New Password/Confirm Password", make sure there is no entry and then press "Enter" to remove password requirement.

5. Exit and Restart:

Exit and restart your computer.

4-1-3 Flash BIOS Method Introduction



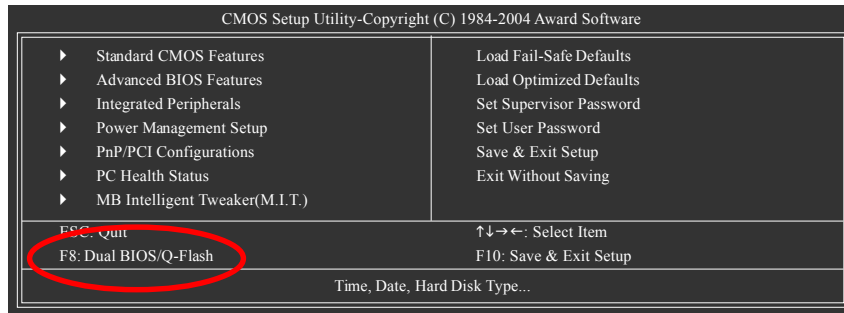
A. What is Dual BIOS Technology?

Dual BIOS means that there are two system BIOS (ROM) on the motherboard, one is the Main BIOS and the other is Backup BIOS.

Under the normal circumstances, the system works on the Main BIOS. If the Main BIOS is corrupted or damaged, the Backup BIOS can take over while the system is powered on. This means that your PC will still be able to run stably as if nothing has happened in your BIOS.

B. How to use Dual BIOS and Q-Flash Utility?

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 Flash utility.



b. Dual BIOS / Q-Flash Programming Utility

Dual BIOS Utility V1.33		
Boot From.....	Main Bios	
Main ROM Type/Size.....	SST 49LF004A	512K
Backup ROM Type/Size.....	SST 49LF004A	512K
Wide Range Protection	Disable	
Boot From	Main Bios	
Auto Recovery	Enable	
Halt On Error	Disable	
Keep DMI Data	Enable	
Copy Main ROM Data to Backup		
Load Default Settings		
Save Settings to CMOS		
Q-Flash Utility		
Update Main BIOS from Floppy		
Update Backup BIOS from Floppy		
Save Main BIOS to Floppy		
Save Backup BIOS to Floppy		
PgDn/PgUp: Modify	↑↓: Move	ESC: Reset F10: Power Off

c. Dual BIOS Item explanation:

Wide Range Protection: Disable(Default), Enable

Status 1:

If any failure (ex. Update ESCD failure, checksum error or reset? occurs in the Main BIOS, just before the Operating System is loaded and after the power is on, and that the Wide Range Protection is set to "Enable", the PC will boot from Backup BIOS automatically.

Status 2:

If the ROM BIOS on peripherals cards(ex. SCSI Cards, LAN Cards,..) emits signals to request restart of the system after the user make any alteration on it, the boot up BIOS will not be changed to the Backup BIOS.

Boot From : Main BIOS(Default), Backup BIOS

Status 1:

The user can set to boot from main BIOS or Backup BIOS.

Status 2:

If one of the main BIOS or the Backup BIOS fails, this item "Boot From : Main BIOS(Default)" will become gray and will not be changed by user.

Auto Recovery : Enable(Default), Disable

When one of the Main BIOS or Backup BIOS occurs checksum failure, the working BIOS will automatically recover the BIOS of checksum failure.

(In the Power Management Setup of the BIOS Setting, if ACPI Suspend Type is set to Suspend to RAM, the Auto Recovery will be set to Enable automatically.)

(If you want to enter the BIOS setting, please press "Del" key when the boot screen appears.)

Halt On Error : Disable(Default), Enable

If the BIOS occurs a checksum error or the Main BIOS occurs a WIDE RANGE PROTECTION error and Halt On Error set to Enable, the PC will show messages on the boot screen, and the system will pause and wait for the user's instruction.

If Auto Recovery :Disable, it will show <or the other key to continue.>

If Auto Recovery :Enable, it will show <or the other key to Auto Recover.>

Keep DMI Data : Enable(Default), Disable

Enable: The DMI data won't be replaced by flashing new BIOS.(recommend)

Disable: The DMI data will be replaced by flashing new BIOS.

Copy Main ROM Data to Backup

(If you boot from Backup ROM, this item will change to Copy Backup ROM Data to Main)

Auto recovery message:

BIOS Recovery: Main to Backup

The means that the Main BIOS works normally and could automatically recover the Backup BIOS.

BIOS Recovery: Backup to Main

The means that the Backup BIOS works normally and could automatically recover the Main BIOS.

(This auto recovery utility is set by system automatically and can't be changed by user.)

Load Default Settings

Load dual BIOS default value.

Save Settings to CMOS

Save revised setting.



Method 1 : Q-Flash™ Utility

Q-Flash™ is a BIOS flash utility embedded in Flash ROM. With this utility, users only have to stay in the BIOS menu when they want to update BIOS. Q-Flash™ allows users to flash BIOS without any utility in DOS or Windows. Using Q-Flash™ indicating no more fooling around with any complicated instructions and operating system since it is in the BIOS menu.



Please note that because updating BIOS has potential risk, please do it with caution!! We are sorry that Gigabyte Technology Co., Ltd is not responsible for damages of system because of incorrect manipulation of updating BIOS to avoid any claims from end-users.

Before You Begin:

Before you start updating BIOS with the Q-Flash™ utility, please follow the steps below first.

1. Download the latest BIOS for your motherboard from Gigabyte's website.
2. Extract the BIOS file downloaded and save the BIOS file (the one with model name.Fxx. For example, 8KNXPU.Fba) to a floppy disk.
3. Reboot your PC and press **Del** to enter BIOS menu.

The BIOS upgrading guides below are separated into two parts.

If your motherboard has dual-BIOS, please refer to **Part One**.

If your motherboard has single-BIOS, please refer to **Part Two**.

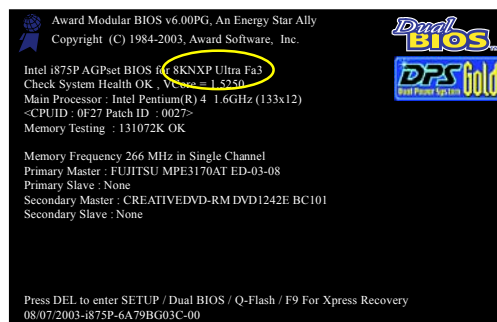
Part One:

Updating BIOS with Q-Flash™ Utility on Dual BIOS Motherboards.

Some of Gigabyte motherboards are equipped with dual BIOS. In the BIOS menu of the motherboards supporting Q-Flash and Dual BIOS, the Q-Flash utility and Dual BIOS utility are combined in the same screen. This section only deals with how to use Q-Flash utility.

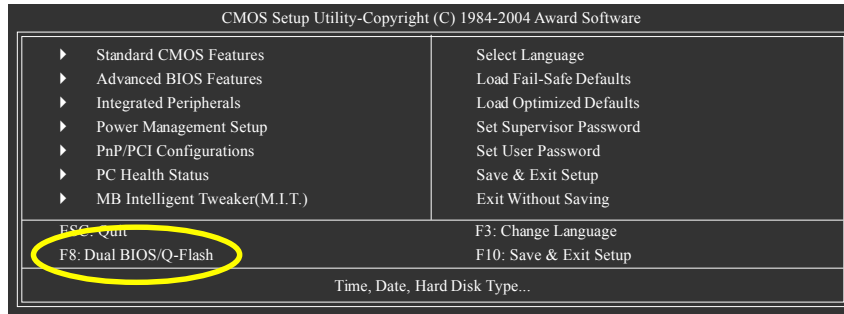
In the following sections, we take GA-8KNXP Ultra as the example to guide you how to flash BIOS from an older version to the latest version. For example, from Fa3 to Fba.

The BIOS file is Fa3
before updating



Entering the Q-Flash™ utility:

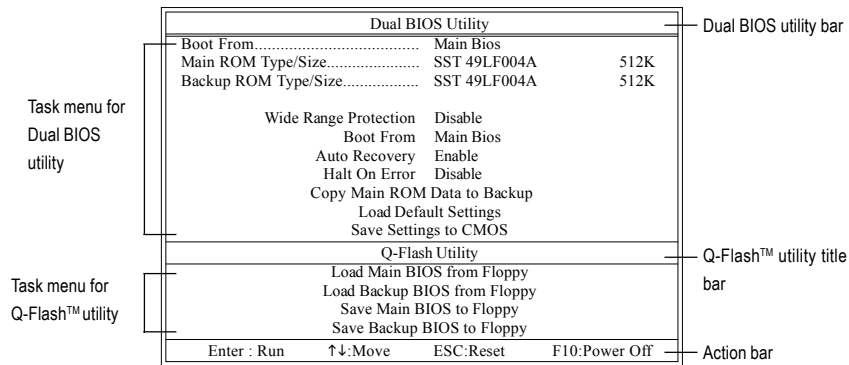
Step1: To use Q-Flash utility, you must press **Del** in the boot screen to enter BIOS menu.



Step 2: Press **F8** button on your keyboard and then **Y** button to enter the Dual BIOS/Q-Flash utility.

Exploring the Q-Flash™ / Dual BIOS utility screen

The Q-Flash / Dual BIOS utility screen consists of the following key components.



Task menu for Dual BIOS utility:

Contains the names of eight tasks and two item showing information about the BIOS ROM type. Blocking a task and pressing Enter key on your keyboard to enable execution of the task.

Task menu for Q-Flash utility:

Contains the names of four tasks. Blocking a task and pressing Enter key on your keyboard to enable execution of the task.

Action bar:

Contains the names of four actions needed to operate the Q-Flash/Dual BIOS utility. Pressing the buttons mentioned on your keyboards to perform these actions.

Using the Q-Flash™ utility:

This section tells you how to update BIOS using the Q-Flash utility. As described in the "Before you begin" section above, you must prepare a floppy disk having the BIOS file for your motherboard and insert it to your computer. If you have already put the floppy disk into your system and have entered the Q-Flash utility, please follow the steps below to flash BIOS.

Steps:

1. Press arrow buttons on your keyboard to move the light bar to "Load Main BIOS from Floppy" item in the Q-Flash menu and press Enter button.
Later, you will see a box pop up showing the BIOS files you previously downloaded to the floppy disk.



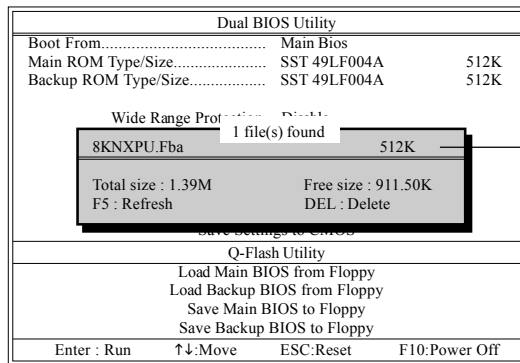
If you want to save the current BIOS for backup purpose, you can begin Step 1 with "Save Main BIOS to Floppy" item.

2. Move to the BIOS file you want to flash and press Enter.

In this example, we only download one BIOS file to the floppy disk so only one BIOS file, 8KNXPU.Fba, is listed.

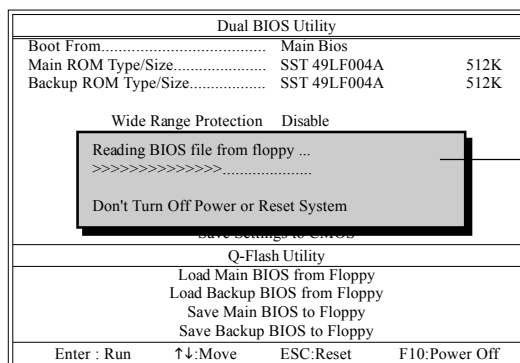


Please confirm again you have the correct BIOS file for your motherboard.



BIOS file in the floppy disk.

After pressing Enter, you'll then see the progress of reading the BIOS file from the floppy disk.



Do not turn off power or reset your system at this stage!!

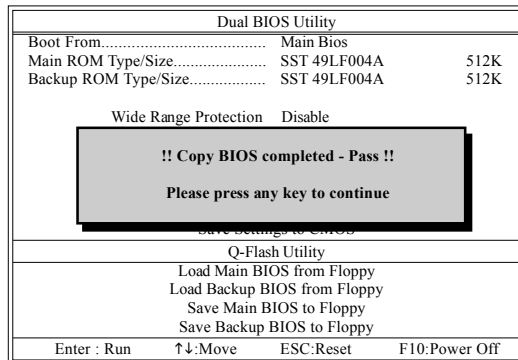
After BIOS file is read, you'll see a confirmation dialog box asking you "Are you sure to update BIOS?"

- Press Y button on your keyboard after you are sure to update BIOS.
Then it will begin to update BIOS. The progress of updating BIOS will be displayed.



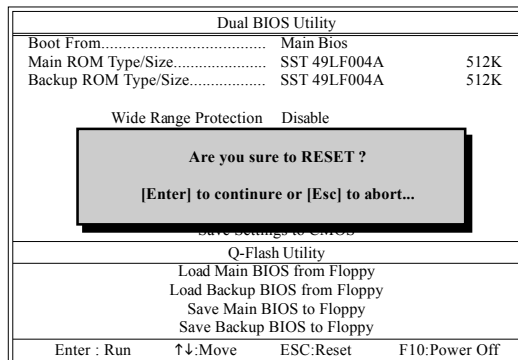
Please do not take out the floppy disk when it begins flashing BIOS.

- Press any keys to return to the Q-Flash menu when the BIOS updating procedure is completed.



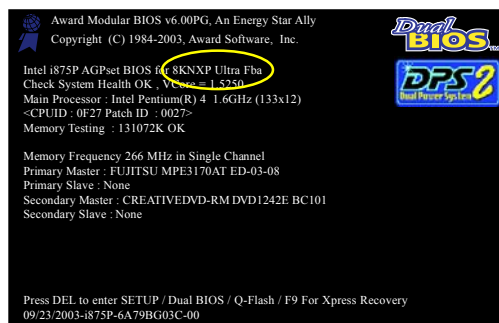
You can repeat Step 1 to 4 to flash the backup BIOS, too.

- Press Esc and then Y button to exit the Q-Flash utility. The computer will restart automatically after you exit Q-Flash.

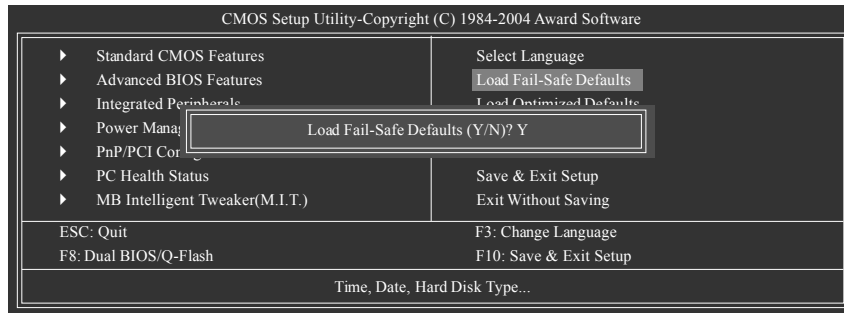


After system reboots, you may find the BIOS version on your boot screen becomes the one you flashed.

The BIOS file becomes Fba after updating.

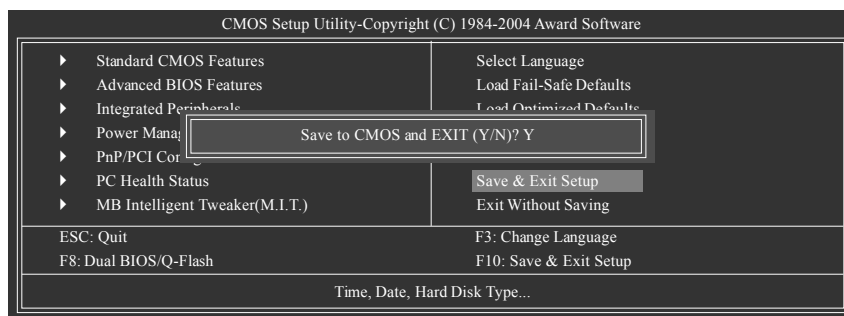


- 6. Press **Del** to enter BIOS menu after system reboots. When you are in BIOS menu, move to **Load Fail-Safe Defaults** item and press **Enter** to load BIOS Fail-Safe Defaults. Normally the system redetects all devices after BIOS has been upgraded. Therefore, we highly recommend reloading the BIOS defaults after BIOS has been upgraded.



Press **Y** on your keyboard to load defaults.

- 7. Select **Save & Exit Setup** item to save the settings to CMOS and exit the BIOS menu. System will reboot after you exit the BIOS menu. The procedure is completed.

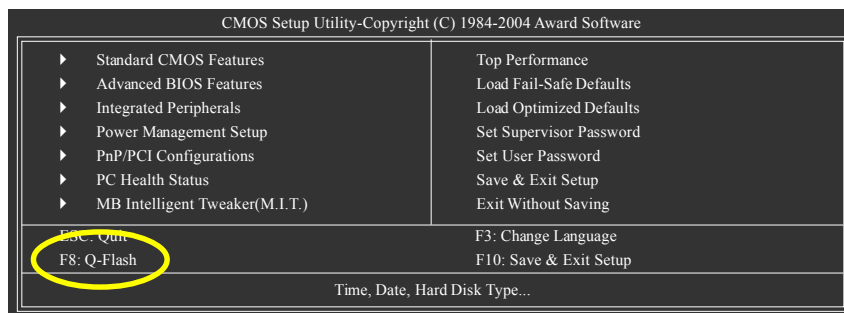


Press **Y** on your keyboard to save and exit.

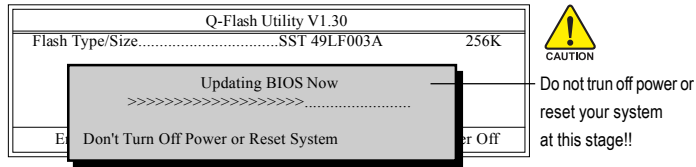
Part Two:

Updating BIOS with Q-Flash™ Utility on Single-BIOS Motherboards.

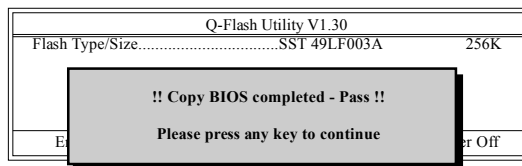
This part guides users of single-BIOS motherboards how to update BIOS using the Q-Flash™ utility.



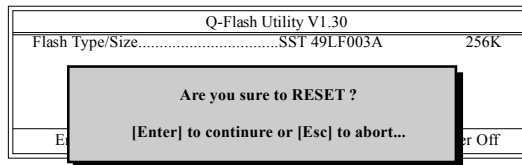
- 3. Press Y button on your keyboard after you are sure to update BIOS. Then it will begin to update BIOS. The progress of updating BIOS will be shown at the same time.



- 4. Press any keys to return to the Q-Flash menu when the BIOS updating procedure is completed.

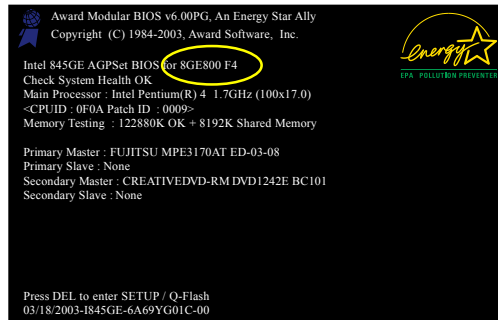


- 5. Press Esc and then Y button to exit the Q-Flash utility. The computer will restart automatically after you exit Q-Flash.



After system reboots, you may find the BIOS version on your boot screen becomes the one you flashed.

The BIOS file becomes F4 after updating



- 6. Press Del to enter BIOS menu after system reboots and "Load BIOS Fail-Safe Defaults". See how to Load BIOS Fail-Safe Defaults, please kindly refer to Step 6 to 7 in Part One.

Congratulation!! You have updated BIOS successfully!!



Method 2 : @BIOS™ Utility

If you do not have a DOS startup disk, we recommend that you use the new @BIOS utility. @BIOS allows users to update their BIOS under Windows. Just select the desired @BIOS server to download the latest version of BIOS.

Fig 1. Installing the @BIOS utility

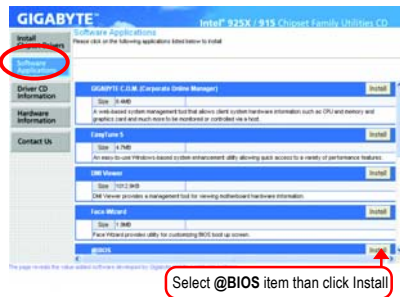


Fig 2. Installation complete and run @BIOS

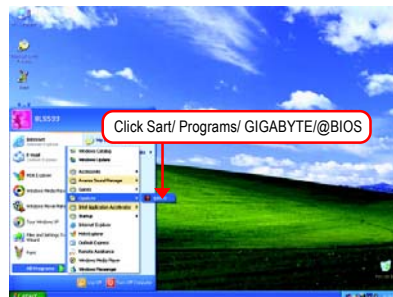


Fig 3. The @BIOS utility

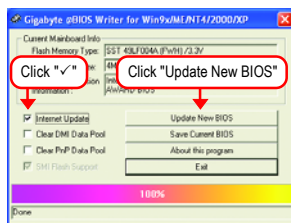


Fig 4. Select the desired @BIOS server



1. Methods and steps:

I. Update BIOS through Internet

- a. Click "Internet Update" icon
- b. Click "Update New BIOS" icon
- c. Select @BIOS™ sever
- 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: 8AENXPD.E5).
- 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.

2. Note:

- I. 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.
- II. 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.
- III. 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.
- IV. Please note that any interruption during updating will cause system unbooted

4-1-4 Serial ATA BIOS Setting Utility Introduction

RAID Levels

RAID (Redundant Array of Independent Disks) is a method of combining two hard disk drives into one logical unit. The advantage of an Array is to provide better performance or data fault tolerance. Fault tolerance is achieved through data redundant operation, where if one drives fails, a mirrored copy of the data can be found on another drive. This can prevent data loss if the operating system fails or hangs. The individual disk drives in an array are called members. The configuration information of each member is recorded in the reserved sector that identifies the drive as a member. All disk members in a formed disk array are recognized as a single physical drive to the operating system.

Hard disk drives can be combined together through a few different methods. The different methods are referred to as different RAID levels. Different RAID levels represent different performance levels, security levels and implementation costs. The RAID levels which the Intel® ICH6R chipset supports are RAID 0 and RAID 1. The RAID levels with the Promise PDC20779 chip supports are RAID 0 and RAID 1.

RAID 0 (Striping)

RAID 0 reads and writes sectors of data interleaved between multiple drives. If any disk member fails, it affects the entire array. The disk array data capacity is equal to the number of drive members times the capacity of the smallest member. The Intel RAID striping block size can be set from 4KB to 64KB. RAID 0 does not support fault tolerance.

RAID 1 (Mirroring)

RAID 1 writes duplicate data onto a pair of drives and reads both sets of data in parallel. If one of the mirrored drives suffers a mechanical failure or does not respond, the remaining drive will continue to function. Due to redundancy, the drive capacity of the array is the capacity of the smallest drive. Under a RAID 1 setup, an extra drive called the spare drive can be attached. Such a drive will be activated to replace a failed drive that is part of a mirrored array. Due to the fault tolerance, if any RAID 1 drive fails, data access will not be affected as long as there are other working drives in the array.

Please follow the steps below to construct a complete RAID array:

- 1) Have ready your hard drives for RAID construction.
Note: To achieve best performance, it is recommended that the hard drives used are of similar make and storage capacity.
- 2) Please attach the hard drive connectors to their appropriate location on the motherboard ie. IDE, SCSI, or SATA.
- 3) Enter the motherboard BIOS and locate RAID setup (Please refer to the section on Integrated Peripherals).
- 4) Enter RAID setup in the BIOS and select the RAID type (For instance, enter Ctrl + I to select Intel RAID; Ctrl + S to select Silicon Image).
- 5) Complete driver installation.
- 6) Complete RAID utility installation.

More information on steps 4 and 5 is provided. (For more detailed setup information, please visit "Support\ Motherboard\ Technology Guide section" on our website at <http://www.gigabyte.com.tw> to read or download the information you need.) Sections below introduce the steps to configure Intel and Promise RAID BIOS

A. Configuring the Intel RAID BIOS

The Intel RAID BIOS setup lets you choose the RAID array type and which hard drives you want to make part of the array.

Entering the RAID BIOS Setup

1. After rebooting your computer, wait until you see the RAID software prompting you to press Ctrl + I. The RAID prompt appears as part of the system POST and boot process prior to loading the OS. You have a few seconds to press Ctrl + I before the window disappears.

```
Intel(R) Application Accelerator RAID Option ROM v4.0.6180
Copyright(C) 2003-04 Intel Corporation. All Rights Reserved.

RAID Volumes :
None Defined.

Physical Disks :
Port  Driver Model      Serial #          Size   Type/Status(Vol ID)
0     ST3120026AS          3JT354CP         111.7GB Non-RAIDDisk
1     ST3120026AS          3JT329JX         111.7GB Non-RAIDDisk

Press <CTRL - I> to enter Configuration Utility
```

Press Ctrl + I. The Intel RAID Utility - Create RAID Volume window appears (as Figure below).

```
Intel(R) Application Accelerator RAID Option ROM v4.0.6180
Copyright(C) 2003-04 Intel Corporation. All Rights Reserved.

[ MAIN MENU ]
1. Create RAID Volume
2. Delete RAID Volume
3. Reset Disks to Non-RAID
4. Exit

[ DISK/VOLUME INFORMATION ]

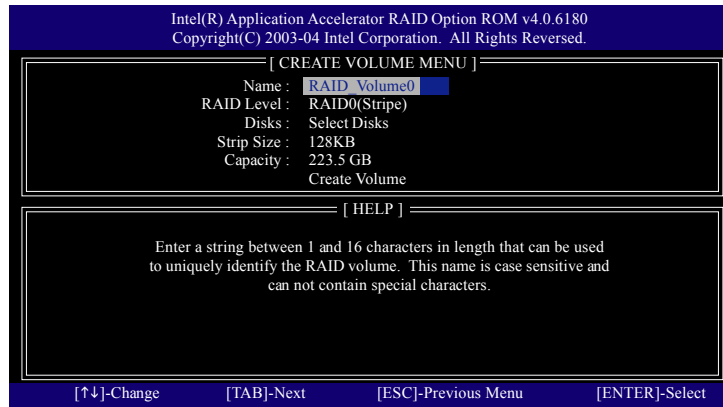
RAID Volumes :
None Defined.

Physical Disks :
Port  Driver Model      Serial #          Size   Type/Status(Vol ID)
0     ST3120026AS          3JT354CP         111.7GB Non-RAIDDisk
1     ST3120026AS          3JT329JX         111.7GB Non-RAIDDisk

[↑↓]-Select      [ESC]-Exit      [ENTER]-Select Menu
```

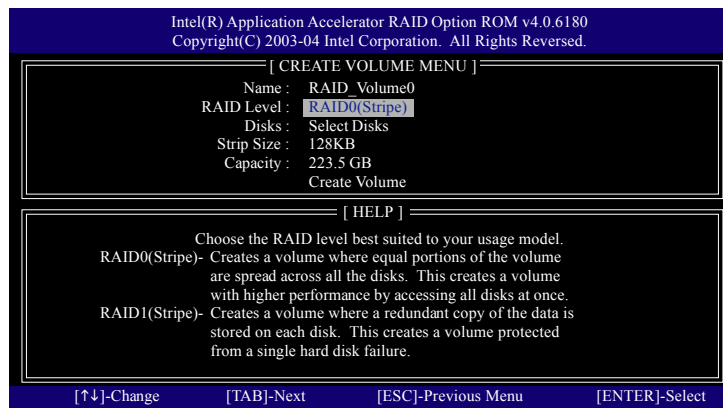
Create RAID Volume

Press **Enter** under **Create RAID Volume** to set up RAID.



After entering the Create Volume Menu, you can set disk name with 1~16 letters (letters cannot be special characters) under **Name** item.

After setting disk name, press **Enter** to select **RAID Level**.



There are two RAID levels: RAID0(Stripe) and RAID1(Mirror). After selecting the RAID level, press **Enter** to select **Strip Size**.

The KB is a unit of Strip Size. You can set disk block size with this item.

The disk block size can be set from 4KB to 128KB. After you set disk block size, press **Enter** to set disk Capacity.

```

Intel(R) Application Accelerator RAID Option ROM v4.0.6180
Copyright(C) 2003-04 Intel Corporation. All Rights Reserved.

[ CREATE VOLUME MENU ]
Name : RAID_Volume0
RAID Level : RAID0(Stripe)
Disks : Select Disks
Strip Size : 128KB
Capacity : 223.5 GB
Create Volume

[ HELP ]

Choose the RAID level best suited to your usage model.
The following are typical values:
16KB - Best for sequential transfers
64KB - Good general purpose strip size
128KB - Best performance for most desktops and workstations

[↑↓]-Change [TAB]-Next [ESC]-Previous Menu [ENTER]-Select

```

```

Intel(R) Application Accelerator RAID Option ROM v4.0.6180
Copyright(C) 2003-04 Intel Corporation. All Rights Reserved.

[ CREATE VOLUME MENU ]
Name : RAID_Volume0
RAID Level : RAID0(Stripe)
Disks : Select Disks
Strip Size : 128KB
Capacity : 223.5 GB
Create Volume

[ HELP ]

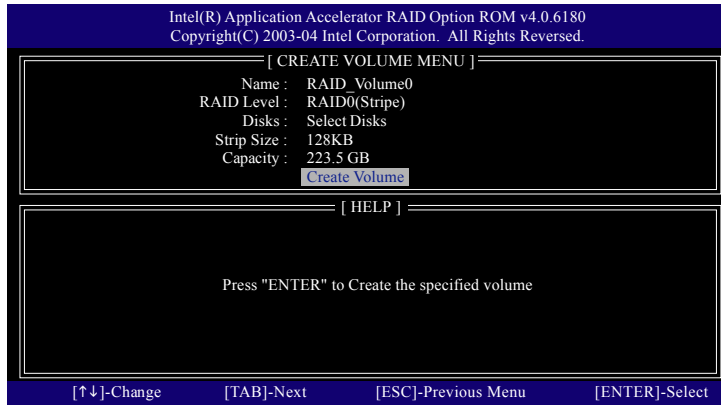
Enter the volume capacity. The default value indicates the
maximum volume capacity using the selected disks. If less
than the maximum capacity is chosen, creation of a second
volume is needed to utilize the remaining space.

[↑↓]-Change [TAB]-Next [ESC]-Previous Menu [ENTER]-Select

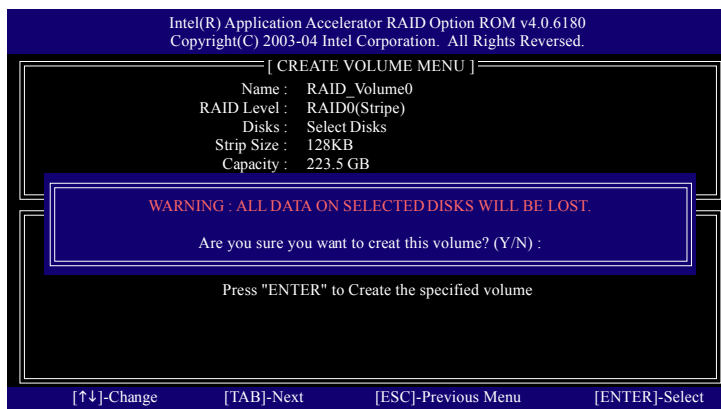
```

Press **Enter** to enter **Create Volume** after setting disk capacity.

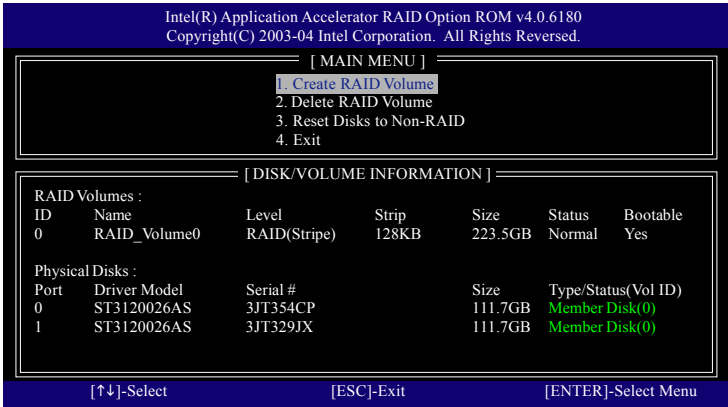
Press **Enter** under the **Create Volume** item.



An alert bar will be displayed warning you that all data on selected disks will be lost. Please press **Y** to complete the set-up of RAID.

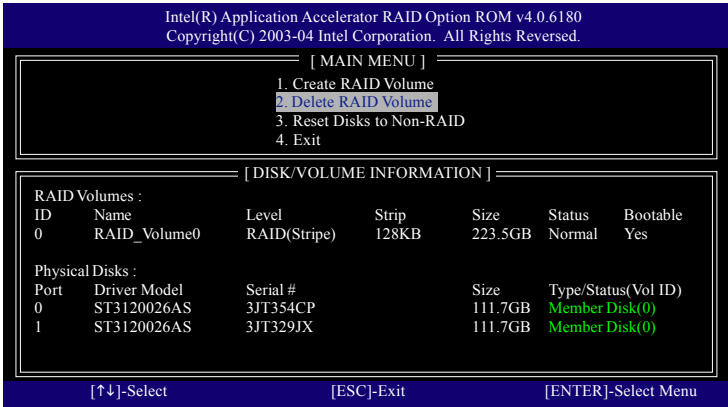


After the completion, you will see the detailed information about the RAID, such as RAID level, disk block size, disk name and disk capacity, etc.



Delete RAID Volume

If you want to delete a RAID volume, please select the **Delete RAID Volume** option. Press **Enter** key and follow the instructions on the screen.



B. Configuring the Promise PDC20779 RAID BIOS

The Promise PDC20779 RAID BIOS setup lets you choose the RAID array type and which hard drives you want to make part of the array.

Entering the RAID BIOS Setup

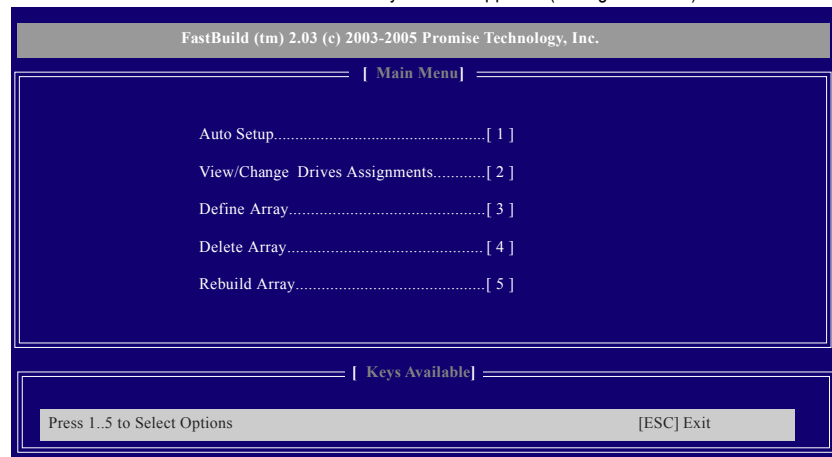
1. After rebooting your computer, wait until you see the RAID software prompting you to press Ctrl + F. The RAID prompt appears as part of the system POST and boot process prior to loading the OS. You have a few seconds to press Ctrl + F before the window disappears.

```
FastTrak 779 (tm) BIOS Version 2.00.0.24
Copyright (c) 2003 Promise Technology, Inc.
Updated in 2004

No Array is defined.....

Press <Ctrl-F> to enter FastBuild (tm) Utility or
Press [ESC] to continue booting
```

Press <Ctrl> + <F>. The Promise RAID Utility window appears (as Figure below).



Main Menu

This is the first option screen when you enter the FastBuild Setup.

To create a new array automatically, press <1>. Promise recommends this option for most users.

To manually create an array, press <3> to enter the *Define Array* window. If you wish to specify block size, you must create the array manually.

To view the disk drivers assigned to arrays, press <2> to enter the *View Drive Assignments* window.

To delete an array, press <4> to enter the *Delete Array* window.

To recover from an error in a mirrored (RAID 1) disk array, press <5> to enter the *Rebuild Array* window.

Create Arrays Automatically

To create a new array automatically, press 1 to enter the *Auto Setup* window. The Auto Setup selection from the Main Menu can intuitively help create your disk array. It will assign all available drives appropriate for the disk array you are creating.

```

FastBuild (tm) 2.03 (c) 2003-2005 Promise Technology, Inc.
----- [ Auto Setup Options Menu ] -----
Optimize Array for: Performance
----- [ Array Setup Configuration ] -----
Mode..... Stripe
Spare Drive..... 0
Drives Used in Array..... 2
Array Disk Capacity (size in MB)..... 240068
----- [ Keys Available ] -----
[←, , Space] Change Option [ESC] Exit [CTRL-Y] Save

```

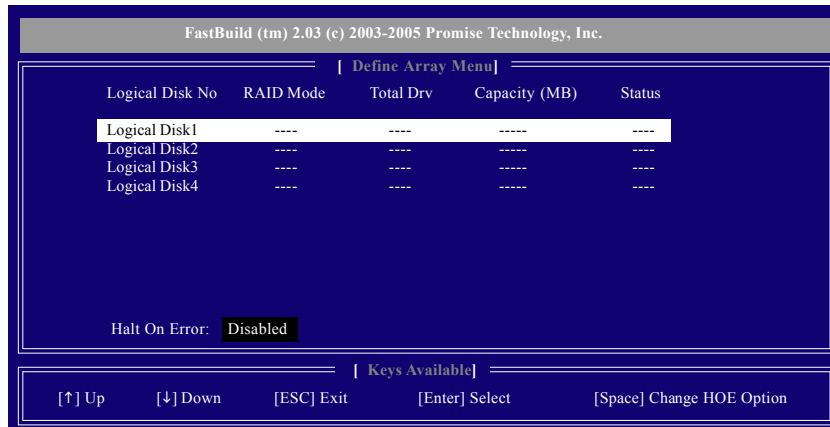
Under the *Optimized Array for* setting, use the LEFT ARROW <←> or SPACEBAR key to select Performance (RAID 0) or Security (RAID 1). Press CTRL and Y to save the configuration.

Performance: Under the Performance setting (RAID 0), FastTrak assigns two drives to a single Striped array. If you want a one-drive array or you want to specify block size, please go to the *Define Array* windows.

Security: Under the Security setting (RAID 1), FastTrak assigns two drives to a single Mirrored array.

Create Arrays Manually

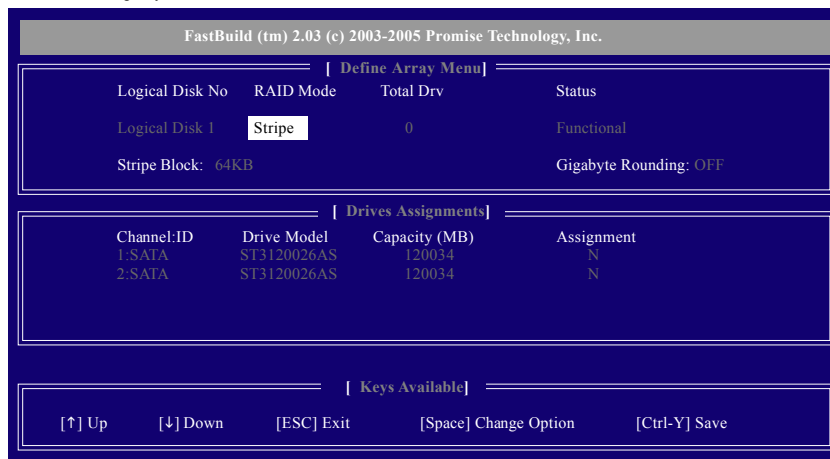
To create a new array manually, press 3 to enter the *Define Array* window. The Define Array selection from the Main Menu allows users to begin the process of manually defining the drive elements and RAID levels for one or multiple disk arrays attached to the Promise PDC20779 controller.



Use arrow keys [↑↓] to move to a logical disk set and press ENTER to enter the *Define Array Menu*.
Halt on Error

When enabled, if the RAID controller detects an error, the boot process will stop when the FastTrak BIOS appears and wait for your input. At that point, you can press <Ctrl>+<F> to enter the FastBuild utility or press <ESC> to continue booting.

When disabled, the FastTrak BIOS will appear and show the Critical array, but the computer will continue booting if you take no action.



RAID Mode: Use Space key to change your selection between Stripe (RAID 0) or Mirror (RAID 1)

Stripe Block: For striped (RAID 0) arrays, you can manually select the stripe block size. Press the Space bar to scroll through choices from 32 to 128KB. The default is 64KB.

Gigabyte Rounding: The Gigabyte Rounding feature is designed for Mirrored (RAID 1) arrays in which a drive has failed and the user cannot replace the drive with the same capacity or larger.

In the following procedure, we'll create RAID 0 as an example.

1. Under the RAID Mode section, press the Spacebar to select *Stripe*.
2. Set the Stripe Block size. 64K is the default.
3. Under the Drive Assignments section, press the [↑↓] key to highlight a drive.
4. Press the Spacebar to change the Assignment option to **Y**. This action adds the drive to the disk array. Assign from one or two drives. If you assign only one drive, there will be no performance benefit. The *Total Drv* section will show the number of disks assigned.
5. Press <Ctrl>+<Y> keys to save the information. The window below will appear.

```
Do you want to do quick initialize
or create only? (Yes/No)
Y-Create and Quick Initialize
N-Create Only
```

6. Press <Y> to create and quick initialize the array or press <N> to create it only.
7. Press <Esc> if you want to exit the RAID BIOS utility.

View Drive Assignments

The *View Drive Assignments* option in the Main Menu displays whether drives are assigned to a disk array or are unassigned.

Channel:ID	Drive Model	Capacity (MB)	Assignment	Mode
1:SATA	ST3120026AS	120034	Logical Disk 1	U6
2:SATA	ST3120026AS	120034	Logical Disk 1	U6

Mode (D=DMA, U=UDMA)

Keys Available

[↑,↓,Space] Change Option [CTRL-Y] Save [ESC] Exit

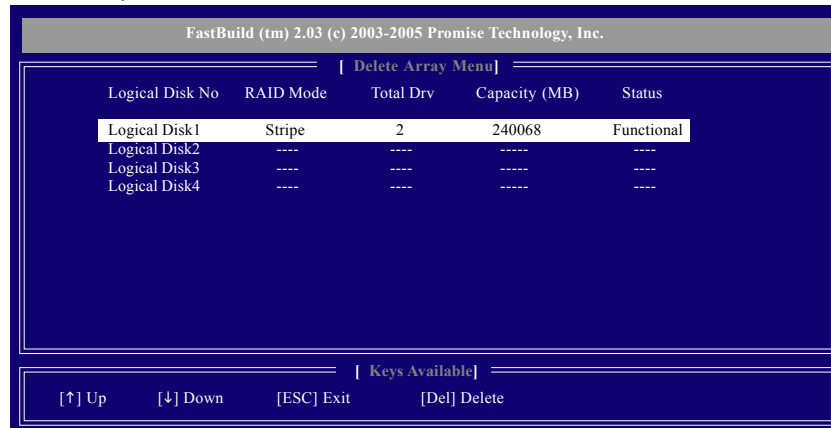
Under the Assignment column, drives are labeled with their assigned disk array or shown as *Spare* if unassigned.

Delete an Array

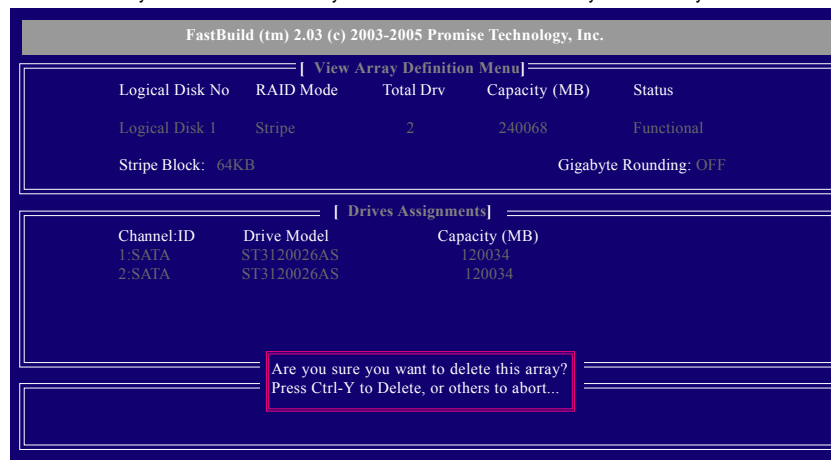
The Delete Array menu option allows for deletion of disk array assignments.



Deleting an existing disk array could result in loss of data. Record all array information including the array type, the disk members, and stripe block size in case you wish to undo a deletion.



1. To delete an array, highlight the array you wish to delete and press the key.
2. The View Array Definition Menu will appear (as shown below) showing which drives are assigned to this array. Press <Ctrl>+<Y> if you are sure to delete the array or other keys to abort.



3. Press <Y> to confirm yes to the following warning message and continue array deletion.

Do you want to clear boot sector that will delete any existing data on your hard disks?
Y - Clear boot sector / N - Delete only

4. At th next prompt, press <Ctrl>+<Y> to remove the boot sector or any keys to abort. When the array is deleted, the screen will return to *Delete Array Menu*. Press <Esc> if you want to exit the RAID BIOS utility.

Installing the RAID drivers

To install Windows 2000/XP onto a Serial ATA hard disk successfully, you need to install required driver for the SATA controller on your motherboard during OS installation. Without the driver, the hard disk may not be recognized during the Windows setup process.

First of all, you have to copy the driver for the SATA controller on your motherboard from the motherboard driver CD to a floppy disk. See the instructions below about how to copy the driver.

Step 1: Find an available Operation System and insert the motherboard driver CD into the CD-ROM drive. The installation utility will appear automatically soon after you insert the driver CD. Quit the installation utility first. Insert a blank formatted floppy disk into the floppy disk drive.

Step 2: Go to My Computer and right-click the CD-ROM icon (This procedure assumes Drive D) and select Open. Then you will see folders and files contained in the driver CD. Double-click the BootDrv folder icon and select **MENU.exe** (refer to Fig.1).



Fig.1

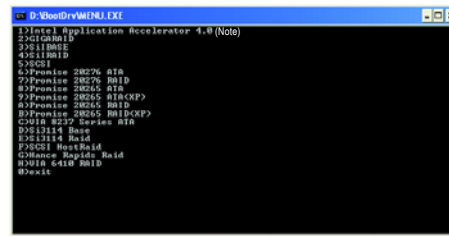


Fig.2

Step 3:

A MS-DOS prompt screen will appear. Information on all chipsets should be listed on the screen (Refer to Fig.2), please select the proper chipset model.

Your system will then automatically zip and transfer this driver file to the floppy disk.

After you complete the steps, boot from the Windows CD to install the RAID drivers.

When install Windows 2000 or Windows XP from HDDs in serial ATA controller, press **F6** as Win2000 or XP boots up, then supply serial ATA controller driver by this floppy disk. Follow on-screen instructions to complete installation.

(Each time you add a new hard drive to a RAID array, the RAID driver will have to be installed under Windows once for that hard drive. After that, the driver will not have to be installed.)

Note: In the menu list, Intel Application Accelerator 4.0 is Intel ICH6R chipset.

4-1-5 Configuring the Onboard Wireless LAN

This section has been designed to make installing and setting up the Onboard Wireless LAN feature easier. Before we begin, if your PC is using other third party wireless drivers, we suggest you disable them now. Now lets get started!

Configuring the Onboard Wireless LAN

- A. Insert your Setup CD into your Desktop PC's CD-ROM Drive. The Welcome Screen will automatically open. If it does not, browse to the /Utility folder on your CD-ROM driver and execute "setup.exe."
- B. Click Install Wireless Driver and Utility. Install Shield will open.



- C. Click Next to proceed with Wireless LAN driver installation.



- D. Setup proceeds with Wireless Adapter installation. Confirm the message below by clicking **OK**, and if you see a screen which says "This Hardware has not Passed Windows Logo Testing", this is normal. Click **Continue Anyway**.



- E. After fully installing the Adapter Driver and Utility, the Wireless LAN bubble and the Wireless Utility quick start icon (represented by 4 green bars) appear in your system tray. For more information on how to use the advanced features found in the Wireless Utility, please refer to your Users Manual in PDF format at GIGABYTE's website.



Congratulations. The installation of your Wireless LAN feature is complete!

For more information about your WPEAG Super G PCI Adapter and the Wireless Utility, please refer to your User Guide included on the resource CD-ROM, or visit us as at www.giga-byte.com.



4-1-6 2- / 4- / 6- / 8- Channel Audio Function Introduction

This motherboard provide 6 audio connector. You are able to use 2-/4-/6-/8-channels audio feature by audio software selection.

Introduction of audio connectors:

You may connect CD-ROM/DVD-ROM, walkman or others audio input to Line In.

The front channels or earphone can be connected to Line Out (Front Speaker Out).

Connect microphone to Mic In.

Connect the rear channels to Rear Speaker Out.

Connect the Center/Subwoofer channels to Center/Subwoofer Speaker Out.

Connect the side channels to Side Speaker Out.

The installation of audio software for Windows 2000/ XP is very simple. Please follow the steps to install the function.(Following pictures are in Windows XP)



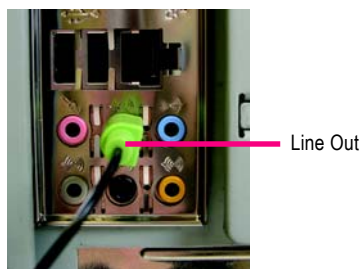
If you set the **Front Panel Type** option to **HD Audio** in BIOS, make sure to connect your audio device to the front panel connector before system start-up or you'll not be able to see the front panel options from the sound effect application.

Stereo Speakers Connection and Settings:

We recommend that you use the speaker with amplifier to acquire the best sound effect if the stereo output is applied.


STEP 1:

Connect the stereo speakers or earphone to "Line Out".



STEP 2 :

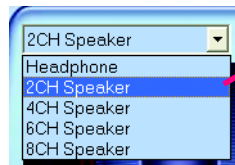
Following installation of the audio driver, you find a

Sound Effect  icon on the lower right hand taskbar.

Click the icon to select the function.

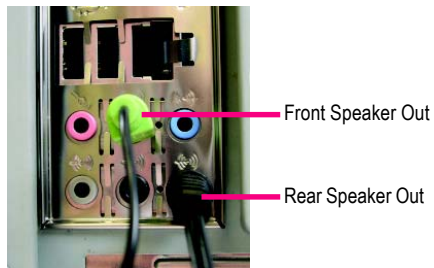


STEP 3:
Click "Speaker Configuration" then click on the left selection bar and select "2CH Speaker" to complete 2 channel audio configuration.



4 Channel Audio Setup

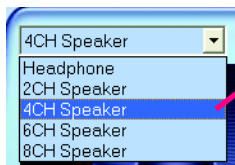
STEP 1 :
Connect the front channels to "Front Speaker Out", the rear channels to "Rear Speaker Out".



STEP 2 :
Following installation of the audio driver, you find a Sound Effect icon on the lower right hand taskbar. Click the icon to select the function.



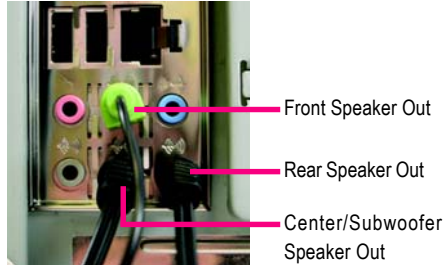
STEP 3:
Click "Speaker Configuration" then click on the left selection bar and select "4CH Speaker" to complete 4 channel audio configuration.



6 Channel Audio Setup

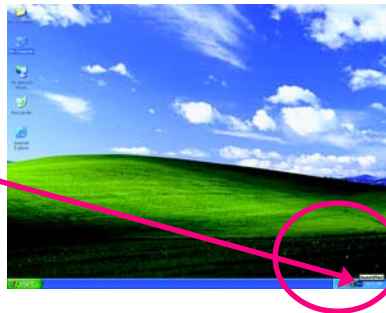
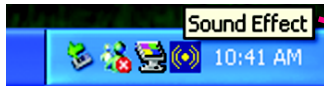
STEP 1 :

Connect the front channels to "Front Speaker Out", the rear channels to "Rear Speaker Out", and the Center/Subwoofer channels to "Center/Subwoofer Speaker Out".



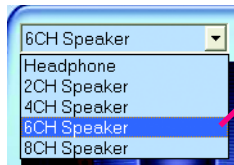
STEP 2 :

Following installation of the audio driver, you find a Sound Effect icon on the lower right hand taskbar. Click the icon to select the function.



STEP 3:

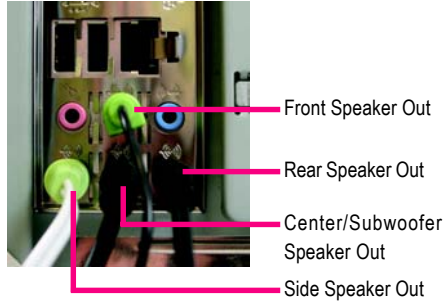
Click "Speaker Configuration" then click on the left selection bar and select "6CH Speaker" to complete 6 channel audio configuration.



8 Channel Audio Setup

STEP 1 :

Connect the front channels to "Front Speaker Out", the rear channels to "Rear Speaker Out", the Center/Subwoofer channels to "Center/Subwoofer Speaker Out", and the side channels to "Side Speaker Out".



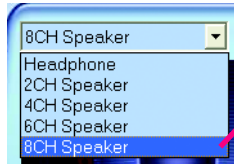
STEP 2 :

Following installation of the audio driver, you find a Sound Effect icon on the lower right hand taskbar. Click the icon to select the function.



STEP 3:

Click "Speaker Configuration" then click on the left selection bar and select "8CH Speaker" to complete 8 channel audio configuration.



Sound Effect Configuration:

At the sound effect menu, users can adjust sound option settings as desired.



Jack-Sensing Introduction

Jack-Sensing provides audio connectors error-detection function.



Install Microsoft DirectX8.1 or later version before to enable Jack-Sensing support for Windows 2000.

After you install an audio device, a screen of a list would pop up from the audio software for you to choose the type of device you installed.



If you have connected your device to the wrong jack, the Jack-Sensing function would indicate the correct jack for your device and you can reconnect the device to the correct jack following the arrow instruction.



The correct icon for audio device will be displayed after the reinstallation.



4-2 Troubleshooting

Below is a collection of general asked questions. To check general asked questions based on a specific motherboard model, please log on to <http://tw.giga-byte.com/faq/faq.htm>

Question 1: I cannot see some options that were included in previous BIOS after updating BIOS. Why?

Answer: Some advanced options are hidden in new BIOS version. Please press Ctrl and F1 keys after entering BIOS menu and you will be able to see these options.

Questions 2: Why is the light of my keyboard/optical mouse still on after computer shuts down?

Answer: In some boards, a small amount of electricity is kept on standby after computer shuts down and that's why the light is still on.

Question 3: How do I clear CMOS?

Answer: If your board has a Clear CMOS jumper, please refer to the Clear CMOS steps in the manual. If your board doesn't have such jumper, you can take off the on-board battery to leak voltage to clear CMOS. Please refer to the steps below:

Steps:

1. Turn off power.
2. Disconnect the power cord from MB.
3. Take out the battery gently and put it aside for about 10 minutes (Or you can use a metal object to connect the positive and negative pins in the battery holder to makethem short for one minute).
4. Re-insert the battery to the battery holder.
5. Connect power cord to MB again and turn on power.
6. Press Del to enter BIOS and load Fail-Safe Defaults.
7. Save changes and reboot the system.

Question 4: Why does system seem unstable after updating BIOS?

Answer: Please remember to load Fail-Safe Defaults (Or Load BIOS Defaults) after flashing BIOS. However, if the system instability still remains, please clear CMOS to solve the problem.

Question 5: Why do I still get a weak sound after turning up the speaker to the maximum volume?

Answer: Please make sure the speaker you are using is equipped with an internal amplifier. If not, please change another speaker with power/amplifier and try again later.

Question 6: How do I disable onboard VGA card in order to add an external VGA card?

Answer: Gigabyte motherboards will auto-detect the external VGA card after it is plugged in, so you don't need to change any setting manually to disable the onboard VGA.

Question 7: Why cannot I use the IDE 2?

Answer: Please refer to the user manual and check whether you have connected any cable that is not provided with the motherboard package to the USB Over Current pin in the Front USB Panel. If the cable is your own cable, please remove it from this pin and do not connect any of your own cables to it.

Question 8: Sometimes I hear different continuous beeps from computer after system boots up. What do these beeps usually stand for?

Answer: The beep codes below may help you identify the possible computer problems. However, they are only for reference purposes. The situations might differ from case to case.

→ AMI BIOS Beep Codes

*Computer gives 1 short beep when system boots successfully.

*Except for beep code 8, these codes are always fatal.

- 1 beep Refresh failure
- 2 beeps Parity error
- 3 beeps Base 64K memory failure
- 4 beeps Timer not operational
- 5 beeps Processor error
- 6 beeps 8042 - gate A20 failure
- 7 beeps Processor exception interrupt error
- 8 beeps Display memory read/write failure
- 9 beeps ROM checksum error
- 10 beeps CMOS shutdown register read/write error
- 11 beeps Cache memory bad

→ AWARD BIOS Beep Codes

- 1 short: System boots successfully
- 2 short: CMOS setting error
- 1 long 1 short: DRAM or M/B error
- 1 long 2 short: Monitor or display card error
- 1 long 3 short: Keyboard error
- 1 long 9 short: BIOS ROM error
- Continuous long beeps: DRAM error
- Continuous short beeps: Power error



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