Table of Content

BIOS Setup

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

ENTERING SETUP

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

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

CONTROL KEYS

<☞>	Move to previous item
<☞>	Move to next item
<☞>	Move to the item in the left hand
<☞>	Move to the item in the right hand
<Esc>	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
<+/PgUp>	Increase the numeric value or make changes
<-/PgDn>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Reserved
<F3>	Reserved
<F4>	Reserved
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
<F7>	Load the Setup Defaults
<F8>	Reserved
<F9>	Reserved
<F10>	Save all the CMOS changes, only for Main Menu

GETTING HELP

Main Menu

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

Status Page Setup Menu / Option Page Setup Menu

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

The Main Menu (For example: BIOS Ver. : F7)

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

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Standard CMOS Features	Select Language
Advanced BIOS Features	Load Fail-Safe Defaults
Integrated Peripherals	Load Optimized Defaults
Power Management Setup	Load Top Performance Defaults
PnP/PCI Configurations	Set Supervisor Password
PC Health Status	Set User Password
Frequency/Voltage Control	Save & Exit Setup
Top Performance	Exit Without Saving
ESC:Quit	F3:Change Language
F8:Dual BIOS /Q-Flash	F10:Save & Exit Setup
Time, Date, Hard Disk Type…	

Figure 1: Main Menu

? **Standard CMOS Features**

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

? **Advanced BIOS Features**

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

? **Integrated Peripherals**

This setup page includes all onboard peripherals.

? **Power Management Setup**

This setup page includes all the items of Green function features.

? **PnP/PCI Configurations**

This setup page includes all the configurations of PCI & PnP ISA resources.

? **PC Health Status**

This setup page is the System auto detect Temperature, voltage, fan, speed.

? **Frequency/Voltage Control**

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

? **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 better performance configuration.

? **Load Top Performance Defaults**

Top Performance Defaults indicates the value of the system parameters which the system would be in best performance configuration.

? **Set Supervisor password**

Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.

? **Set User password**

Change, set, or disable password. It allows you to limit access to the system.

? **Save & Exit Setup**

Save CMOS value settings to CMOS and exit setup.

? **Exit Without Saving**

Abandon all CMOS value changes and exit setup.

Standard CMOS Features

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Standard CMOS Features

		Item Help
Date (mm:dd:yy)	Mon, Feb 21 2000	
Time (hh:mm:ss)	22:31:24	MenuLevel
⅂IDE Primary Master	[Press Enter None]	
⅂IDE Primary Slave	[Press Enter None]	
⅂IDE Secondary Master	[Press Enter None]	
⅂IDE Secondary Slave	[Press Enter None]	
Drive A	[1.44M, 3.5"]	
Drive B	[None]	
Floppy 3 Mode Support	[Disabled]	
Halt On	[All, But Keyboard]	
Base Memory	640K	
Extended Memory	130048K	
Total Memory	131072K	
⅂⅂⅂⅂: 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		

Figure 2: Standard CMOS Features

✍ Date

The date format is <week> , <month>, <day> , <year>.

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

✍ Time

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

? IDE Primary Master, Slave / Secondary Master, Slave

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

Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category.

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

♣ Capcity:	The hard disk size. The unit is Mega Bytes.
♣ Access Mode:	The options are: Auto / Large / LBA / Normal.
♣ Cylinder:	The cylinder number of hard disk.
♣ Head	The read / Write head number of hard disk.
♣ Precomp	The cyliner number at which the disk driver changes the write current.
♣ Landing Zone	The cylinder number that the disk driver heads (read/write) are seated when the disk drive is parked.
♣ SECTORS	The sector number of each track define on the hard disk.

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

? Drive A / Drive B

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

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

? Floppy 3 Mode Support (for Japan Area)

♣ Disabled	Normal Floppy Drive. (Default value)
♣ Drive A	Enabled 3 mode function of Drive A.
♣ Drive B	Enabled 3 mode function of Drive B.
♣ 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 Keyboar   The system boot will not stop for a keyboard error; it will stop for
                    all other errors. (Default value)

&All, But Diskette The system boot will not stop for a disk error; it will stop for all
                    other errors.

&All, But Disk/Key The system boot will not stop for a keyboard or disk error; it will
                    stop for all other errors.

Memory

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

Base Memory

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

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

Extended Memory

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

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

Advanced BIOS Features

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Advanced BIOS Features

		Item Help
First Boot Device	[Floppy]	
Second Boot Device	[HDD-0]	MenuLevel
Third Boot Device	[CDROM]	
Boot Up Floppy Seek	[Disabled]	
DRAM Data Integrity Mode	Non-ECC	
InitDisplay First	[AGP]	

↑↓↑↓: 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

Figure 3: Advanced BIOS Features

? **First / Second / Third Boot device**

This feature allows you to select the boot device priority.

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

8

? **Boot Up Floppy Seek**

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

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

    Disabled   BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360 K. (Default value)

? **DRAM Data Integrity Mode**

This feature allows you to set the DRAM data Integrity Mode

    Non-ECC   Set the DRAM data Integrity Mode is Non-ECC (Default)

    ECC   Set the DRAM data Integrity Mode is ECC.

? **Init Display First**

This feature allows you to select the first initation of the monitor display from which card, when you install an AGP VGA card and a PCI VGA card on board.

    PCI   Set Init Display First to PCI Slot.

    AGP   Set Init Display First to AGP. (Default value)

Integrated Peripherals

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Integrated Peripherals

		Item Help
On-Chip Primary PCI IDE	[Enabled]	
On-Chip Secondary PCI IDE	[Enabled]	MenuLev el
IDE1 Conductor Cable	[Auto]	
IDE2 Conductor Cable	[Auto]	
USB Controller	[Enabled]	
USB Key board Support	[Disabled]	
USB Mouse Support	[Disabled]	
Onboard H/W Audio	[Enabled]	
Onboard Serial Port 1	[3F8/IRQ4]	
Onboard Serial Port 2	[2F8/IRQ3]	
UART Mode Select	[Normal]	
☞UR2 Duplex Mode	Half	
Onboard Parallel Port	[378/IRQ7]	
Parallel Port Mode	[SPP]	
☞ECP Mode Use DMA	3	
CIR Port Address	[Disabled]	
☞CIR Port IRQ	11	

↑↓↑↓: Mov e Enter:Select+/-/PU/PD:Value F10:Sav e ESC:Ex it F1:General Help

F3:Language F5:Prev ious Values F6:Fail-Safe Defaults F7:Optimized Defaults

Figure 4: Integrated Peripherals

✍ On-Chip Primary PCI IDE

When enabled, allows you to use the onboard primary PCI IDE. If a hard disk controller card is used, set at Disabled.

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

    ♣Disabled   Disable onboard 1st channel IDE port.

✍ On-Chip Secondary PCI IDE

When enabled, allows you to use the onboard secondary PCI IDE. If a hard disk controller card is used, set at Disabled.

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

    ♣Disabled   Disable onboard 2nd channel IDE port.

✍ IDE1 Conductor Cable

    ♣Auto   Will be automatically detected by BIOS (Default Value)

    ♣ATA66/100 Set IDE1 Conductor Cable to ATA66/100 (Please make sure your IDE device and cable is compatible with ATA66/100)

    ♣ATA33   Set IDE1 Conductor Cable to ATA33 (Please make sure your IDE device and cable is compatible with ATA33)

✍ IDE2 Conductor Cable

    ♣Auto   Will be automatically detected by BIOS (Default Value)

    ♣ATA66/100 Set IDE2 Conductor Cable to ATA66/100 (Please make sure your IDE device and cable is compatible with ATA66/100)

    ♣ATA33   Set IDE2 Conductor Cable to ATA33 (Please make sure your IDE device and cable is compatible with ATA33).

✍ USB Controller

Disable this option if you are not using the onboard USB feature.

    ♣Enabled   Enabled USB Controller. (Default value)

    ♣Disabled   Disabled USB Controller.

? USB Keyboard Support

When a USB keyboard is installed, please set at Enabled.

- Enabled   Enabled USB Keyboard Support.
- Disabled   Disabled USB Keyboard Support. (Default value)

? USB Mouse Support

- Enabled   Enabled USB Mouse Support.
- Disabled   Disabled USB Mouse Support. (Default value)

? Onboard H/W Audio

- Enable   Enable onboard sound function.(Default value)
- Disable   Disable onboard sound function.

? Onboard Serial Port 1

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

? Onboard Serial Port 2

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

? **UART Mode Select**

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

- ASKIR   Using as IR and set to ASKIR Mode.
- IrDA   Using as IR and set to IrDA Mode.
- Normal   Using as standard serial port (Default Value)
- SCR   Using as smart card Interface.

? **UR2 Duplex Mode**

This feature allows you to select the IR modes.

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

? **OnBoard Parallel port**

This feature allows you to select from a given set of parameters if the parallel port uses the onboard I/O controller.

- 378/IRQ7   Enable On Board LPT port and address is 378.(Default Value)
- 278/IRQ5   Enable On Board LPT port and address is 278.
- 3BC/IRQ7   Enable On Board LPT port and address is 3BC.

? **Parallel Port Mode**

This feature allows you to connect with an advanced print via the port mode it supports.

- SPP   Using Parallel port as Standard Parallel Port using IRQ7. (Default Value)
- EPP   Using Parallel port as Enhanced Parallel Port IRQ5.
- ECP   Using Parallel port as Extended Capabilities Port using IRQ7.
- ECP+EPP   Using Parallel port as ECP & EPP mode.

✍ ECP Mode Use DMA

This feature allows you to select Direct Memory Access(DMA) channel if the ECP mode selected.

    ☝1   Set ECP mode use DMA 1.

    ☝3   Set ECP mode use DMA 3. (Default value)

✍ CIR Port Address

This feature allows you to select CIR port address or disable it.

    ☝Disabled   Disabled this function. (Default Value)

    ☝310   Set CIR Port Address to 310.

    ☝320   Set CIR Port Address to 320.

✍ CIR Port IRQ

This feature allows you to select CIR IRQ , if CIR is enabled.

    ☝5   Set 5 for CIR Port IRQ.

    ☝11   Set 11 for CIR Port IRQ. (Default Value)

Power Management Setup

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Power Management Setup

		Item Help
ACPI Suspend Type	[S1(POS)]	
Soft-Off by PWR-BTTN	[Instant-off]	MenuLevel
PME Event Wake Up	[Enabled]	
Modem RingOn/WakeOnLan	[Enabled]	
Resume by Alarm	[Disabled]	
☞Date(of Month) Alarm	Everyday	
☞Time(hh:mm:ss) Alarm	0 : 0 : 0	
Power On By Mouse	[Disabled]	
Power On By Keyboard	[Disabled]	
☞KB Power On Password	Enter	
AC Back Function	[Soft-Off]	
↑↓→←: 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		

Figure 5: 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 sec to Power off. Enter suspend if button is pressed less than 4 sec.

? PME Event Wake up

When set at Enabled, any PCI-PM event awarkes the system from a PCI-PM controlled state.

- Disabled   Disabled PME Event Wake up function.
- Enabled   Enabled PME Event Wake up function. (Default Value)

? Modem Ring On / Wake On LAN

An incoming call via modem awakes the system from its soft-off mode./When set at Enabled, an input signal comes from the other client/server on the LAN awarks the system from a soft off state if connected over LAN.

- Disabled   Disabled Modem Ring On / Wake On LAN function.
- Enabled   Enabled Modem Ring On / Wake On LAN function. (Default Value)

? Resume by Alarm

You can set "Resume by Alarm" item to enabled and key in Data/time to power on system.

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

If RTC Alarm Lead To Power On is Enabled.

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

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

✎ Power On By Mouse

    ♨Disabled   Disabled this function. (Default value)

    ♨Mouse Click   Set mouse double click to power on system.

✎ Power On By Keyboard

This feature allows you to set the method for powering-on the system.

The option "Password" allows you to set up to 5 alphanumeric characters to power-on the system.

The option "Any Key" allows you to touch the keyboard to power on the system.

The option "Keyboard 98" allows you to use the standard keyboard 98 to power on the system.

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

    ♨Disabled   Disabled this function. (Default value)

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

✎ KB Power ON Password

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

✎ AC Back Function

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

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

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

PnP/PCI Configurations

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PnP/PCI Configurations

		Item Help
PCI1/PCI5 IRQ Assignment	[Auto]	
PCI2/PCI6 IRQ Assignment	[Auto]	MenuLev el
PCI3 IRQ Assignment	[Auto]	
PCI4 IRQ Assignment	[Auto]	
↑↓↑↓: Mov e Enter:Select +/-/PU/PD:Value F10:Sav e ESC:Ex it F1:General Help		
F3:Language F5:Prev ious Values F6:Fail-Safe Defaults F7:Optimized Defaults		

Figure 6: PnP/PCI Configurations

? **PCI1/PCI5 IRQ Assignment**

    Auto   Auto assign IRQ to PCI 1/ PCI 5. (Default v alue)

    3,4,5,7,9.,10,11,12,15   Set 3,4,5,7,9,10,11,12,15 to PCI1/ PCI5.

? **PCI2/PCI6 IRQ Assignment**

    Auto   Auto assign IRQ to PCI 2/ PCI 6. (Default v alue)

    3,4,5,7,9.,10,11,12,15   Set 3,4,5,7,9,10,11,12,15 to PCI2/ PCI6.

? **PCI3 IRQ Assignment**

    Auto   Auto assign IRQ to PCI 3. (Default v alue)

    3,4,5,7,9.,10,11,12,15   Set 3,4,5,7,9,10,11,12,15 to PCI3.

? **PCI4 IRQ Assignment**

    Auto   Auto assign IRQ to PCI 4. (Default v alue)

    3,4,5,7,9.,10,11,12,15   Set 3,4,5,7,9,10,11,12,15 to PCI4.

PC Health Status

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PC Health Status

Reset Case Open Status	[Disabled]	
Case Opened	No	
VCORE	1.746V	Item Help
VCC18	1.792V	
+3.3V	3.296V	MenuLev el
+ 5V	5.080 V	
+12V	11.904V	
Current CPU Temperature	39°C	
Current CPU FAN Speed	4821 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]	
↿↿↿↿: Mov e Enter:Select +/-/PU/PD:Value F10:Sav e ESC:Ex it F1:General Help F3:Language F5:Prev ious Values F6:Fail-Safe Defaults F7:Optimized Defaults		

Figure7: PC Health Status

☞ **Reset Case Open Status**

☞ **Case Opened**

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

If the case hav e been opened, "Case Opened" w ill show "Yes".

If y ou w ant to reset "Case Opened" v alue, set "Reset Case Open Status" to

"Enabled" and sav e CMOS, y our computer w ill restart.

? **Current Voltage (V) VCORE /VCC18/ +5 V / +12 V**

Detect sy stem's v oltage status automatically.

✍ Current CPU Temperature (°C)

Detect CPU Temp. automatically.

✍ Current CPU FAN / POWER / SYSTEM FAN Speed (RPM)

Detect Fan speed status automatically.

✍ CPU Warning Temperature

☙60°C / 140°F	Monitor CPU Temp. at 60°C / 140°F.
☙70°C / 158°F	Monitor CPU Temp. at 70°C / 158°F.
☙80°C / 176°F	Monitor CPU Temp. at 80°C / 176°F.
☙90°C / 194°F	Monitor CPU Temp. at 90°C / 194°F.
☙Disabled	Don't monitor current temperature.(Default value)

✍ Fan Fail Warning (CPU / POWER / SYSTEM)

☙Disabled	Fan Fail Alarm Function Disabled. (Default value)
☙Enabled	Fan Fail Alarm Function Enabled.

Frequency/Voltage Control

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Frequency/Voltage Control

CPU Clock Ratio	[x 15]	Item Help
CPU Host Clock Control	[Disable]	MenuLev el
☞CPU Host Frequency (MHz)	100	
☞PCI/AGP Divider	[Disabled]	
☞Host/DRAM Clock ratio	[Auto]	
Memory Frequency (MHz)	266	
PCI/AGP Frequency (MHz)	33/66	
DIMM Ov er Voltage Control	[Normal]	
APG Ov erVoltage Control	[Normal]	
↑↓↑↓↑ : Mov e Enter:Select+/-/PU/PD:Value F10:Sav e ESC:Ex it F1:General Help		
F3:Language F5:Prev ious Values F6:Fail-Safe Defaults F7:Optimized Defaults		

Figure 8: Frequency /Voltage Control

☞Those items will be av ailable when "CPU Host Clock Control" is set to Enabled.

✍ CPU Clock Ratio

Set CPU Ratio if CPU Ratio is unlocked.

    🖐X8~X 24   It's depends on CPU Clock Ratio.

✍ CPU Host Clock Control

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

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

    🖐Enable   Enable CPU Host Clock Control.

✍ CPU Host Frequency (MHz)

    🖐100MHz ~ 200MHz Set CPU Host Clock from 100MHz to 200MHz.

☞ **PCI/AGP Divider**

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

☞ **Host/DRAM Clock Ratio**

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

🍃 2.0   Memory Frequency = Host clock X 2.0.

🍃 2.66   Memory Frequency = Host clock X 2.66.

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

☞ **PCI/AGP Frequency(Mhz)**

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

☞ **Memory Frequency(Mhz)**

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

☞ **DIMM OverVoltage Control**

🍃 Normal   The default AGP voltage is 1.5V. (Default value)

🍃 1.6V~1.8V   Set AGP voltage from 1.6V~1.8V.

☞ **AGP OverVoltage Control**

🍃 Normal   Auto detect CPU voltage . (Default value)

🍃 1.050V~1.825V Set CPU voltage from 1.050V~1.825V.

Top Performance

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⅂Standard CMOS Features	Select Language
⅂Advanced BIOS Features	Load Fail-Safe Defaults
⅂Integrated Peripherals	Load Optimized Defaults
⅂Power Ma	
⅂PnP/PCI	
⅂PC Health	
⅂Frequency	
Top Perform	
ESC:Quit	
F8:Dual BIO	

Top Performance

Disabled.................... [✍]

Enabled...................[ ]

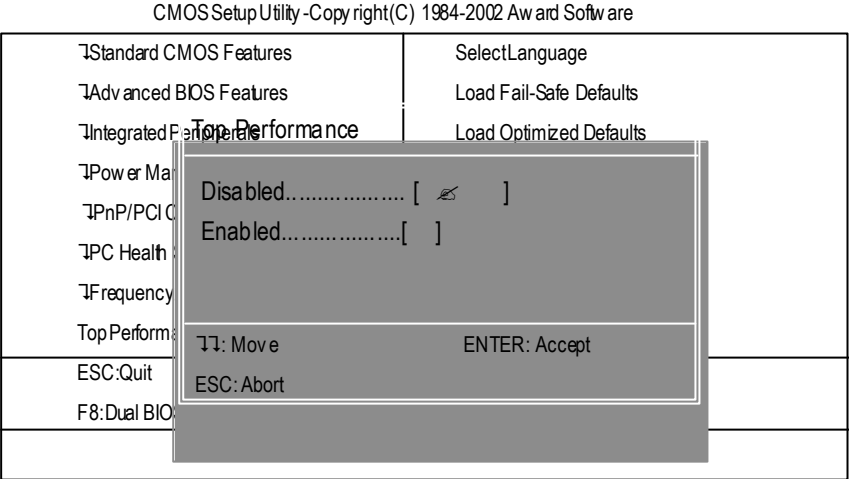↑↓: Move   ENTER: Accept

ESC: Abort

Figure 9: Top Performance

Top Performance

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

✍ Disabled   Disable this function. (Default Value)

✍ Enabled   Enable Top Performance function.

Select Language

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☐Standard CMOS Features	SelectLanguage
☐Adv anced BIO:	
☐Integrated Perip	
☐Pow er Manage	efaults
☐PnP/PCI Confi	
☐PC Health Stat	
☐Frequency/Vol	
TopPerformance	
ESC:Quit	
F8:Dual BIOS /C	

Select Language

English   [■]
Francaia .... [   ]
Dentsch .... [   ]
Espanol .... [   ]
繁體中文 .... [   ]
简体中文 .... [   ]
日本語 .... [   ]

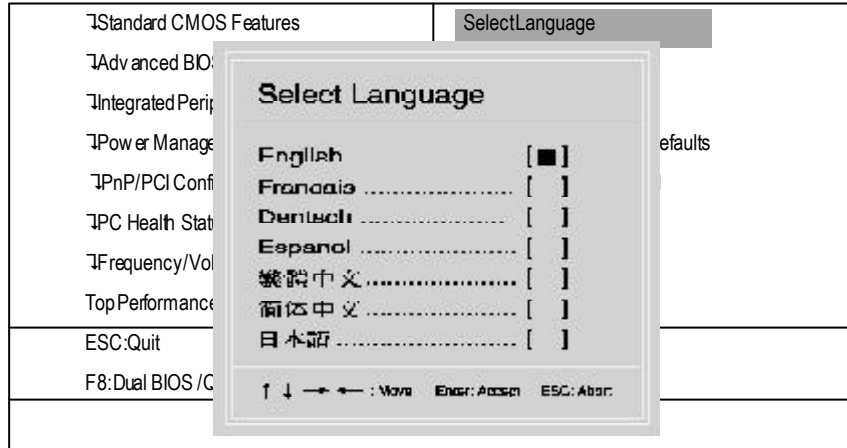↑ ↓ → ← : Move   Enter: Accept   ESC: Abort

Figure 10:Select Language

Select Language

Multi Language is supports 7 languages. There are English, Japanese, French, Spanish, Germany, Simplified Chinese, Traditional Chinese.
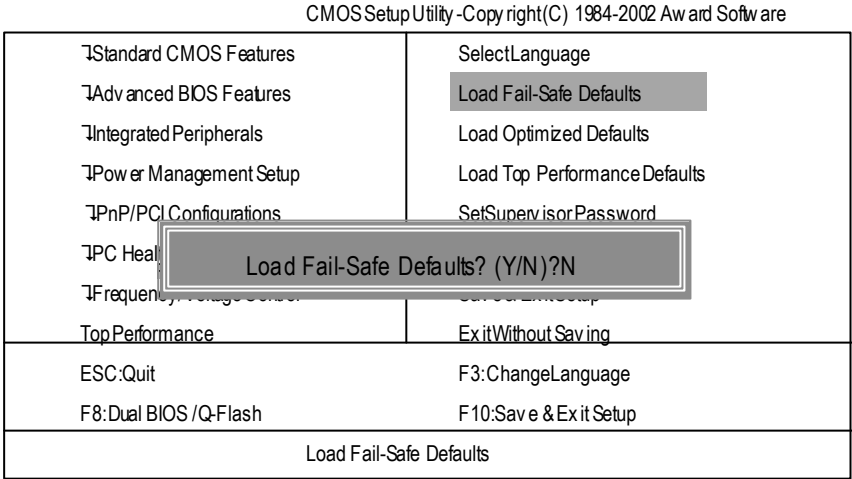
Load Fail-Safe Defaults

CMOS Setup Utility - Copyright (C) 1984-2002 Award Software

⊐Standard CMOS Features	Select Language
⊐Advanced BIOS Features	Load Fail-Safe Defaults
⊐Integrated Peripherals	Load Optimized Defaults
⊐Power Management Setup	Load Top Performance Defaults
⊐PnP/PCI Configurations	Set Supervisor Password
⊐PC Heal	Load Fail-Safe Defaults? (Y/N)?N
⊐Frequency.	Saved Exit Setup
Top Performance	Exit Without Saving
ESC:Quit	F3:Change Language
F8:Dual BIOS /Q-Flash	F10:Save & Exit Setup
Load Fail-Safe Defaults	

Figure 9: Load Fail-Safe Defaults

✍ **Load Fail-Safe Defaults**

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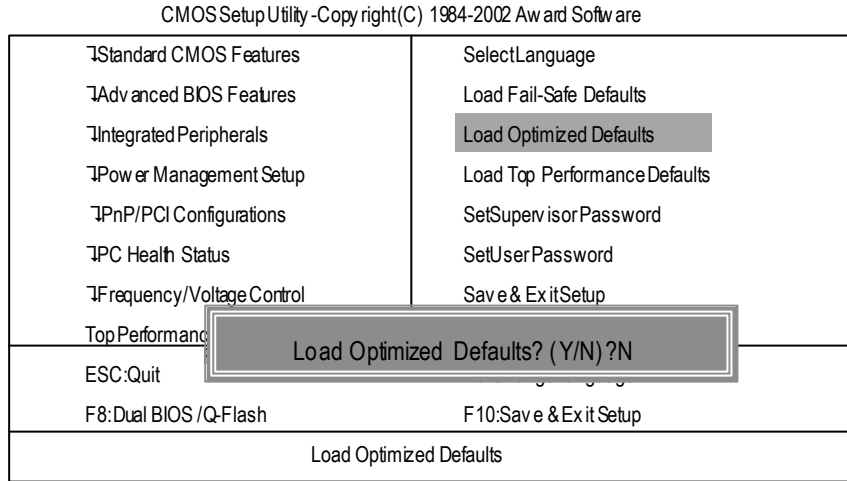
Load Optimized Defaults

CMOS Setup Utility -Copy right(C) 1984-2002 Aw ard Softw are

‌Standard CMOS Features	Select Language
‌Adv anced BIOS Features	Load Fail-Safe Defaults
‌Integrated Peripherals	Load Optimized Defaults
‌Pow er Management Setup	Load Top Performance Defaults
‌PnP/PCI Configurations	Set Supervisor Password
‌PC Health Status	Set User Password
‌Frequency/Voltage Control	Sav e & Exit Setup
Top Performanc	Load Optimized Defaults? (Y/N) ?N
ESC:Quit	
F8:Dual BIOS /Q-Flash	F10:Sav e & Exit Setup
Load Optimized Defaults	

Figure 10: Load Optimized Defaults

? **Load Optimized Defaults**

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

Set Supervisor/User Password

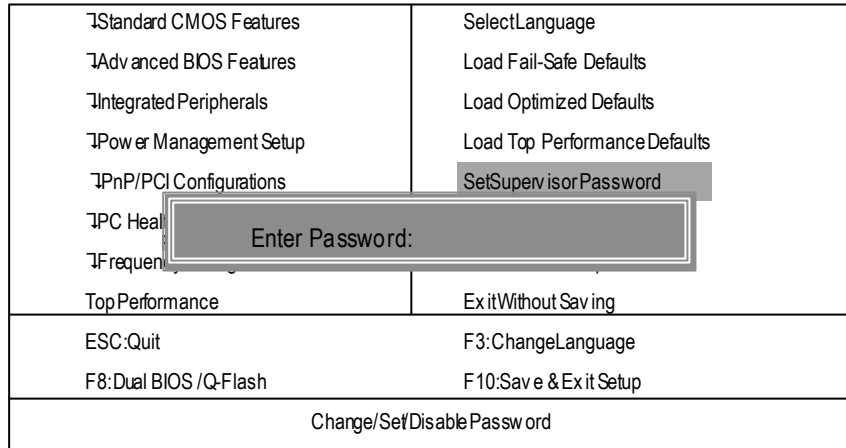CMOS Setup Utility -Copyright(C) 1984-2002 Award Software

Standard CMOS Features	Select Language
Advanced BIOS Features	Load Fail-Safe Defaults
Integrated Peripherals	Load Optimized Defaults
Power Management Setup	Load Top Performance Defaults
PnP/PCI Configurations	Set Supervisor Password
PC Heal	Enter Password:
Frequen	
Top Performance	Exit Without Saving
ESC:Quit	F3:Change Language
F8:Dual BIOS /Q-Flash	F10:Save & Exit Setup
Change/Set/Disable Password	

Figure 12: Password Setting

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

Type the password, up to eight characters, and press <Enter>. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

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

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

If you select "System" at "Security Option" 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 "Security Option" in Advance BIOS Features Menu, you will be prompted only when you try to enter Setup.

Save & Exit Setup

CMOS Setup Utility -Copyright(C) 1984-2002 Award Software

Standard CMOS Features	Select Language
Advanced BIOS Features	Load Fail-Safe Defaults
Integrated Peripherals	Load Optimized Defaults
Power Management Setup	Load Top Performance Defaults
PnP/PCI Configurations	Set Supervisor Password
PC Health Status	Set User Password
Frequency/Voltage Control	Save & Exit Setup
Top Performance	Exit Without Saving

Save to CMOS and EXIT (Y/N)? Y

ESC:Quit	
F8:Dual BIOS /Q-Flash	F10:Save & Exit Setup
Save Data to CMOS	

Figure 13: Save & Exit Setup

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

Type "N" will return to Setup Utility.

Exit Without Saving

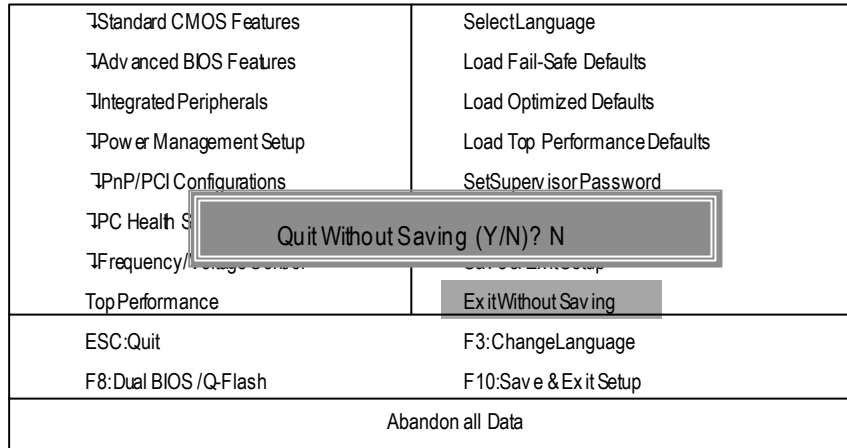CMOS Setup Utility -Copyright(C) 1984-2002 Award Software

⊓Standard CMOS Features	SelectLanguage
⊓Advanced BIOS Features	Load Fail-Safe Defaults
⊓Integrated Peripherals	Load Optimized Defaults
⊓Power Management Setup	Load Top Performance Defaults
⊓PnP/PCI Configurations	SetSupervisor Password
⊓PC Health S **Quit Without Saving (Y/N)? N**	
⊓Frequency/	
TopPerformance	ExitWithout Saving
ESC:Quit	F3:ChangeLanguage
F8:Dual BIOS /Q-Flash	F10:Save &Exit Setup
Abandon all Data	

Figure 14: Exit Without Saving

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

Type "N" will return to Setup Utility.

Performance List

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

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

CPU	Intel Pentuim® 4 2GHz processor
DRAM	(128 x 2) MB SDRAM (PQI PC166)
CACHE SIZE	256KB included in CPU
DISPLAY	Gigabyte GV-GF3000D
STORAGE	Onboard IDE (Quantum AS30000AT 30GB)
O.S	Windows 2000+ SP1
DRIVER	Display Driver at 1024 x 768 x 64K colors x 75Hz
	IUCD ver. 1.8 For Intel chipset M.B.

Processor	Intel Pentium® 4
	2GHz (100 x 20)
WCPUID 2.8 Clock Frequency	
Internal MHz	2000.03
SiSoft Sandra 2001	
CPU/FPU Benchmark	3754/1046/2446
CPU Multi-Media Benchmark	7939/9738
Drives Benchmark	23362
Memory Benchmark	596/614
SPECviewperf 6.12	
Pro CDRS-03	13.12
Med MCAD-01	18.09
Light-04	4.952
DX-06	13.50
DRV-07	14.06
Aw adv s-04	39.80
QUAKE III Arena (without sound)	
640*480*16 Demo1	184.5
1024*768*32 Demo2	138.2

Block Diagram
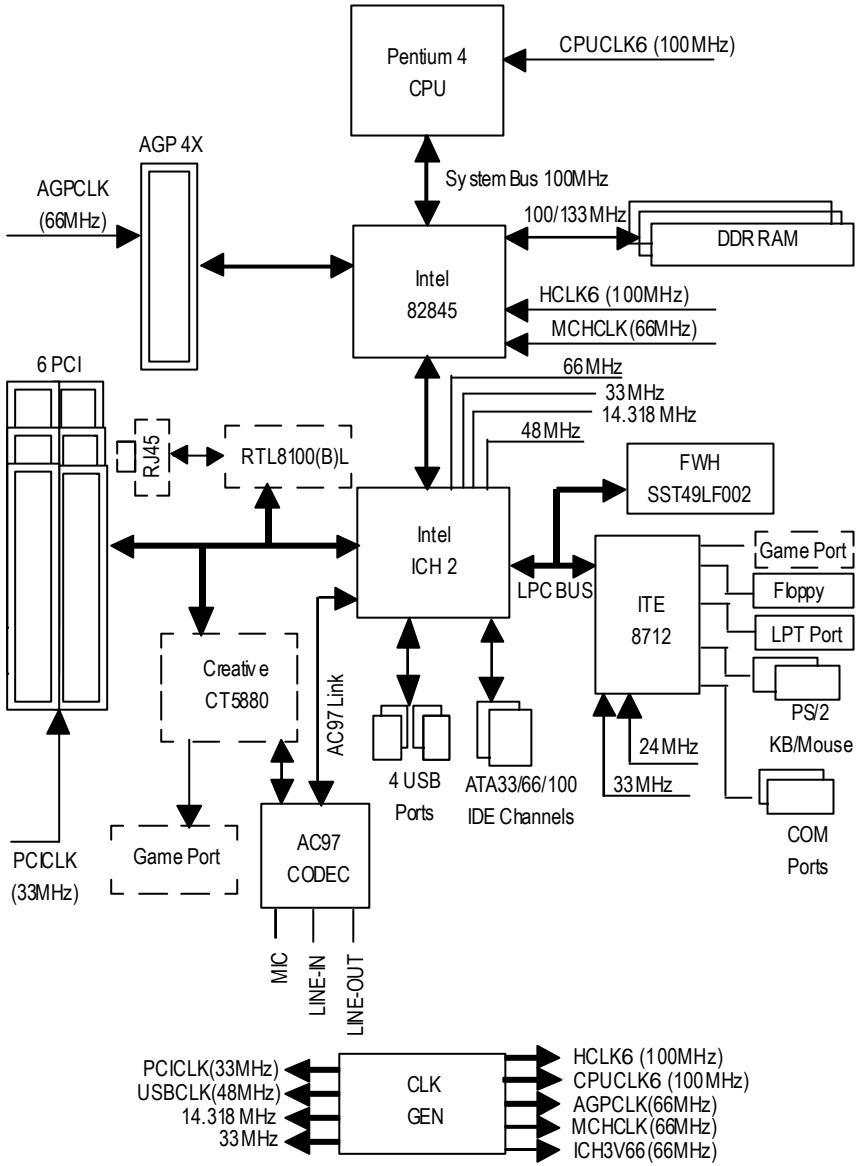
Dual BIOS / Q-Flash Introduction

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 <Del> immediately during POST (Power On Self Test) it will allow you to enter Award BIOS CMOS SETUP, then press <F8> to enter Flash utility.

CMOS Setup Utility -Copyright(C) 1984-2001 Award Software

ꔷ Standard CMOS Features	Select Language
ꔷ Advanced BIOS Features	Load Fail-Safe Defaults
ꔷ Advanced Chipset Features	Load Optimized Defaults
ꔷ Integrated Peripherals	Set Supervisor Password
ꔷ Power Management Setup	Set User Password
ꔷ PnP/PCI Configurations	Save & Exit Setup
ꔷ PC Health S	Enter Dual BIOS / Q-Flash Utility (Y/N)? Y
ꔷ Frequency/	
ESC:Quit	F3:Change Language
F8:Dual BIOS /Q-Flash	F10:Save & Exit Setup

b. Dual BIOS / Q-Flash Utility

```
        Dual BIOS / Q-Flash Utility V845.4MF3
        (C) 2001, GIGA-BYTE Technology Co., LTD.


   Wide Range Protection        :Disabled
   Halt On BIOS Defects         :Disabled
   Auto Recovery                :Enabled
   Boot From                    :MainBIOS
   BIOS Recovery                :Main to Backup


   F3: Load Default             F5:Start BIOS Recovery
   F7: Save And Restart         F9:Exit Without Saving
   F8: Update BIOS from disk    F10:Recovery from Disk


   Use <Space> key to toggle setup
```

c. Dual BIOS Item explanation:

Wide Range Protection: Disabled(Default), Enabled

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.

Halt On BIOS Defects : Disabled(Default), Enabled

If the BIOS occurs a checksum error or the Main BIOS occurs a WIDE RANGE PROTECTION
error and Halt On BIOS Defects 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 :**Disabled**, it will show **<*or the other key to continue.*>**

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

Auto Recovery : Enabled(Default), Disabled

 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.)

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.

BIOS Recovery : Main to Backup

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.)

C. What is Q-Flash Utility?

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

D. How to use Q-Flash Flash?

F3: Load Default	F5: Start BIOS Recovery
Load current BIOS default value.	Press F5 to recovery new BIOS version.
F7: Save and Restart	**F9: Exit Without Saving**
Save revised setting and restart the computer.	Exit without changing.
F8: Update BIOS from Disk	**F10: Recovery from Disk**
Update boot-up BIOS.	Update another BIOS (different from boot-up BIOS)

DualBIOS™ Technology FAQ

GIGABYTE Technology is pleased to introduce DualBIOS technology, a hot spare for your system BIOS. This newest "Value-added" feature, in a long series of innovations from GIGABYTE, is available on GA-6OXET Series motherboard. Future GIGABYTE motherboards will also incorporate this innovation.

What's DualBIOS™?

On GIGABYTE motherboards w6ith DualBIOS there are physically two BIOS chips. For simplicity we'll call one your "Main BIOS" and the other we'll call your "Backup" BIOS (your "hot spare"). If your Main BIOS fails, the Backup BIOS almost automatically takes over on your next system boot. Almost automatically and with virtually zero down time! Whether the problem is a failure in flashing your BIOS or a virus or a catastrophic failure of the Main BIOS chip, the result is the same - the Backup BIOS backs you up, almost automatically.

I. Q: What is DualBIOS™ technology?

Answer:

DualBIOS technology is a patented technology from Giga-Byte Technology. The concept of this technology is based on the redundancy and fault tolerance theory. DualBIOS™ technology simply means there are two system BIOSes (ROM) integrated onto the motherboard. One is a main BIOS, and the other is a backup BIOS. The mainboard will operate normally with the main BIOS, however, if the main BIOS is corrupt or damaged for various reasons, the backup BIOS will be automatically used when the system powered-On. Your PC will operate as before the main BIOS was damaged, and is completely transparent to the user.

II. Q: Why does anyone need a motherboard with DualBIOS™ technology?

Answer:

In today's systems there are more and more BIOS failures. The most common reasons are virus attacks, BIOS upgrade failures, and/or deterioration of the BIOS (ROM) chip itself.

1. New computer viruses are being found that attack and destroy the system BIOS. They may corrupt your BIOS code, causing your PC to be unstable or even not boot normally.
2. BIOS data will be corrupted if a power loss/surge occurs, or if a user resets the system, or if the power button is pressed during the process of performing a system BIOS upgrade.
3. If a user mistakenly updates their mainboard with the incorrect BIOS file, then the system may not be able to boot correctly. This may cause the PC system hang in operation or during boot.
4. A flash ROM's life cycle is limited according to electronic characteristics. The modern PC utilizes the Plug and Play BIOS, and is updated regularly. If a user changes peripherals often, there is a slight chance of damage to the flash ROM.
   With Giga-Byte Technology's patented DualBIOS™ technology you can reduce the possibility of hangs during system boot up, and/or loss BIOS data due to above reasons. This new technology will eliminate valuable system down time and costly repair bills cause by BIOS failures.

III. Q: How does DualBIOS™ technology work?

Answer:

1. DualBIOS™ technology provides a wide range of protection during the boot up procedure. It protects your BIOS during system POST, ESCD update, and even all the way to PNP detection/assignment.

2. DualBIOS™ provides automatic recovery for the BIOS. When the first BIOS used during boot up does not complete or if a BIOS checksum error occurs, boot-up is still possible. In the DualBIOS™ utility, the "Auto Recovery" option will guarantee that if either the main BIOS or backup BIOS is corrupted, the DualBIOS™ technology will use the good BIOS and correct the wrong BIOS automatically.

3. DualBIOS™ provides manual recovery for the BIOS. DualBIOS™ technology contains a built-in flash utility, which can flash your system BIOS from backup to main and/or visa versa. There is no need for an OS-dependent flash utility program.

4. DualBIOS™ contains a one-way flash utility. The built-in one-way flash utility will ensure that the corrupt BIOS is not mistaken as the good BIOS during recovery and that the correct BIOS (main vs. backup) will be flashed. This will prevent the good BIOS from being flashed.

IV. Q: Who Needs DualBIOS™ technology?

Answer:

1. Every user should have DualBIOS™ technology due to the advancement of computer viruses.

    Everyday, there are new BIOS-type viruses discovered that will destroy your system BIOS. Most commercial products on the market do not have solutions to guard against this type of virus intrusion. The DualBIOS™ technology will provide a state-of-the-art solution to protect your PC:

    Case I.) Vicious computer viruses may wipe out your entire system BIOS. With a conventional single system BIOS PC, the PC will not be functional until it is sent for repairs.

    Case II.) If the "Auto Recovery" option is enabled in the DualBIOS™ utility, and if a virus corrupts your system BIOS, the backup BIOS will automatically reboot the system and correct the main BIOS.

    Case III.) A user may override booting from the main system BIOS. The DualBIOS™

utility may be entered to manually change the boot sequence to boot from the backup BIOS.

2. During or after a BIOS upgrade, if DualBIOS™ detects that the main BIOS is corrupt, the backup BIOS will take over the boot-up process automatically. Moreover, it will verify the main and backup BIOS checksums when booting-up. DualBIOS™ technology examines the checksum of the main and backup BIOS while the system is powered on to guarantee your BIOS operates properly.

3. Power Users will have the advantage of having two BIOS versions on their mainboard. The benefit is being able to select either version BIOS to suit the performance system needs.

4. Flexibility for high-end desktop PCs and workstation/servers. In the DualBIOS™ utility, the option can be set, "Halt On When BIOS Defects," to be enabled to halt your system with a warning message that the main BIOS has been corrupted. Most workstation/servers require constant operation to guarantee services have not been interrupted. In this situation, the "Halt On When BIOS Defects" message may be disabled to avoid system pauses during normal booting. Another advantage you gain from Giga-Byte's DualBIOS™ technology is the ability to upgrade from dual 2 Mbit BIOS to dual 4 Mbit BIOS in the future if extra BIOS storage is need.

Four Speaker & SPDIF Introduction

Four Speaker Introduction

A. What is Four Speaker?

The Creative CT5880 audio chip can support up to 4 speaker output. If you select "Four speaker out", Line In will be reconfigured as another line out to support a second pair of speakers.

B. How to use Four Speaker?

Microsoft Windows 98 Second Edition setup procedure:
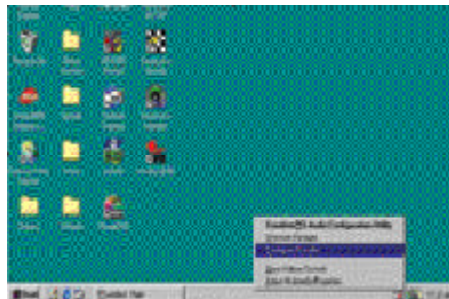
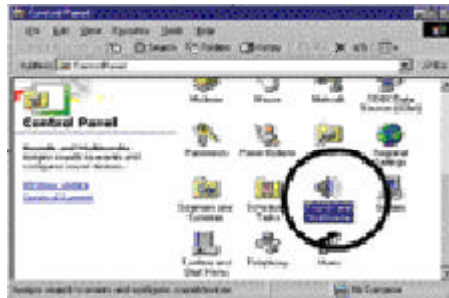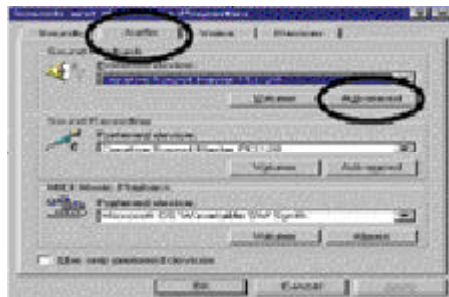Click the audio icon along the task bar and select "Configure 3D Audio"

Select two speaker (Default)

Select "Four speaker" item.

Microsoft Windows Me setup procedure:

Go to "Control Panel" and double click "Sounds and Multimedia".

Select "Audio" Page, and click "Advanced" button.
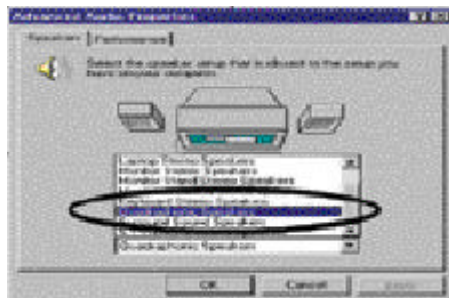
Select "Quadraphonic Speakers" and click ok.

C. Four Speaker Application

The four speaker function will only be supported in application softwares that use Microsoft DirectX and Creative EAX, for example, the game titles, software DVD player and MP3 player.
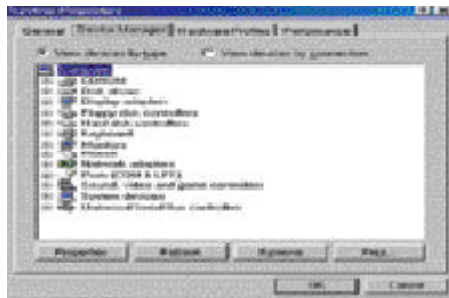
SPDIF Introduction

A. What is SPDIF?

The SPDIF output is capable of providing digital signal to AC3 decoder which can support upto 5.
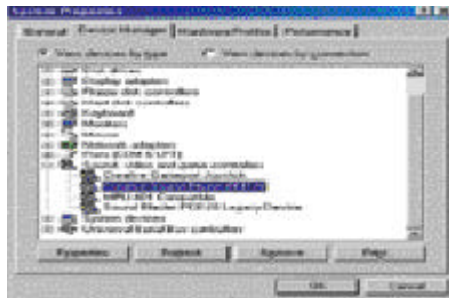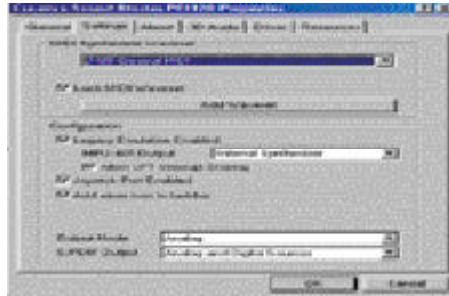1 speakers.

B. How to use SPDIF?
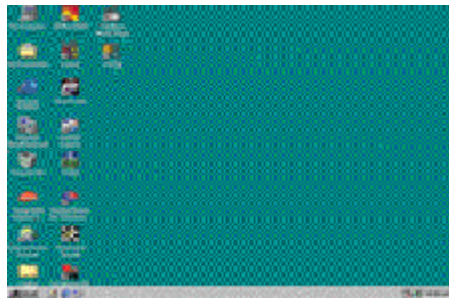
Click your mouse right button in "My Computer" and select the "Properties" item.
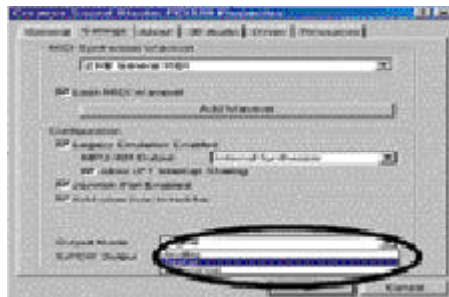

Click "Device Manager" item.

Click "Sound, vidio and game controllers" item and select the "Creative Sound Blaster PCI128" item.

Click "Settings" item and select the "Output Mode" item.

Click "Digital" item, Line Out will be reconfigure to SPDIF Out.

Recommend you to select "Autosense", It will automatically detect the type (mono or stereo) of the audio connector that you plug into Line Out audio jack, then configure Line Out to either SPDIF or Speaker accordingly.

@ BIOS Introduction

Gigabyte announces @ BIOS

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

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

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

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

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

Easy TuneIII™ Introduction

Gigabyte announces *EasyTune*III
Windows overdrive utility

"Overdrive" might be one of the most common issues in computer field. But have many users ever tried it? The answer is probably "no". Because "overdrive" is thought to be very difficult and includes a lot of technical know-how, some-times "overdrive" is even considered as special skills found only in some enthusiasts.

But as to the experts in "overdrive", what's the truth? They may spend quite a lot of time and money to study, try and use many different hardware and software tools to do "overdrive". And even with these technologies, they still learn that it's quite a risk because the safety and stability of an "overdrive" system is unknown.

Now everything is different because of a Windows overdrive utility EasyTuneIII—announced by Gigabyte. This utility has totally changed the gaming rule of "overdrive". This is the first overdrive utility suitable for both normal and power users. Users can choose either "Easy Mode" or "Advanced Mode" to run "overdrive" at their convenience. For users who choose "Easy Mode", they just need to click "Auto Optimize" to have auto and immediate CPU overclocking. This software will then over-drive CPU speed automatically with the result being shown in the control panel. If someone prefers to "overdrive" by oneself, there is also another choice. Click "Advanced Mode" to enjoy "sport drive" class overclocking. In "Advanced Mode", one can change the system bus speed in small incre-ments to get ultimate system performance. And no matter which mainboard is used, if it's a Gigabyte's product*, EasyTuneIII helps to perform the best of system.

Besides, different from other traditional over-clocking methods, Easy TuneIII doesn't require users to change neither BIOS nor hardware switch/ jumper setting; on the other hand, they can do "overdrive" at only one click. Therefore, this is a safer way for "overdrive" as nothing is changed on software or hardware. If user runs EasyTuneIII over system's limitation, the biggest lost is only to restart the computer again and the side effect is then well controlled. Moreover, if one well-per-formed system speed been tested in EasyTuneIII, user can "Save" this bus speed and "Load" it in next time. Obviously, Gigabyte EasyTuneIII has already turned the "overdrive" technology toward to a newer generation.

This wonderful software is now free bundled in Gigabyte motherboard attached driver CD. Users may make a test drive of "Easy TuneIII" to find out more amazing features by themselves.

Driver Installing

Picture below are shown in Windows ME (IUCD driver version 1.9)

Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device

icon in "My computer", and execute the setup.exe.

A. Installing Intel 845 Chipset Driver

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

B. Installing Sound Driver
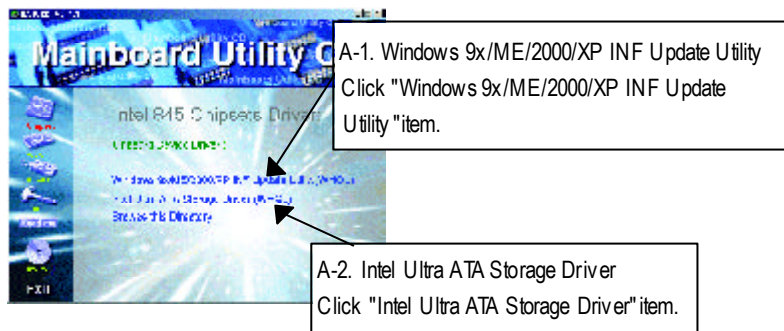
> Double click this item to install sound driver.

C. Installing Tool

- Norton: This item installs the Norton auti-virus 2001 software.
- Direct X: This item installs the Microsoft v8.0a driver.
- Adobe Acrobat Reader: This item installs the Adobe Acrobat Reader v5.0.
- @BIOS Writer Utility: This is a smart BIOS update software. It could help you to download the BIOS from internet and update it.
- Intel LDCM:
- SIV(Hardware Monitor):
- Easy TuneIII Setup: This software will then overdrive CPU speed automatically with the result being shown in the control panel.
- Mainboard DMI Viewer:
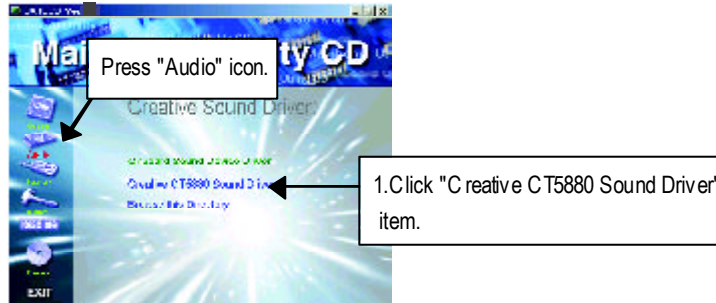- Utility Manager Tools:

A: Intel 845 Chipset Driver Installation

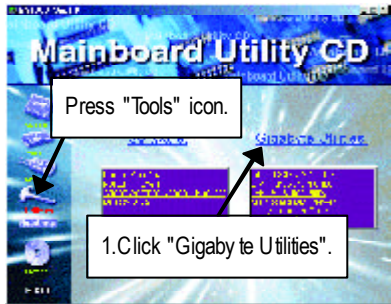Follow the setup that showing on the scween to install the Utility.

A-1. Windows 9x/ME/2000/XP INF Update Utility
Click "Windows 9x/ME/2000/XP INF Update Utility "item.

A-2. Intel Ultra ATA Storage Driver
Click "Intel Ultra ATA Storage Driver"item.

B: Sound Driver Installation

Press "Audio" icon.

1.Click "Creative CT5880 Sound Driver" item.

Appendix C: EasyTuneIII Utilities Installation

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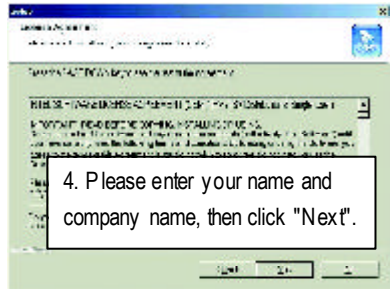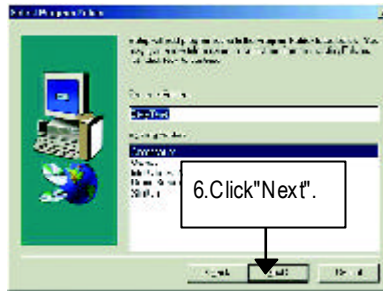

Press "Tools" icon.

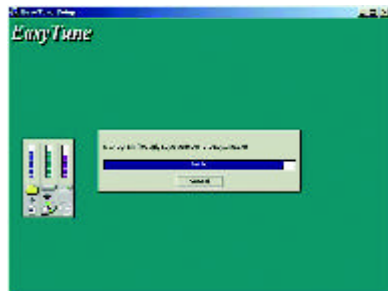1.Click "Gigabyte Utilities".

(1)

2.Click "Easy Tune III Setup".

(2)

3.Click"Next".

(3)

4. Please enter your name and company name, then click "Next".

(4)

(5)

(6)

(7)

(8)

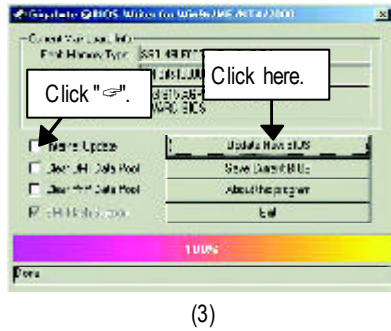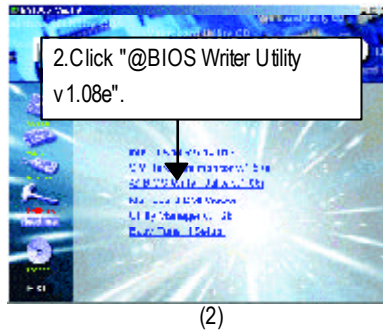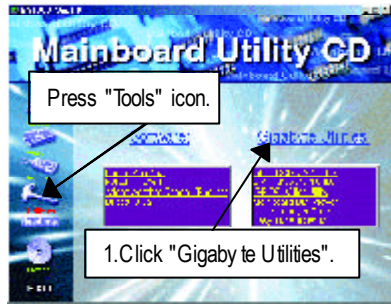5.Click"Next".

6.Click"Next".

7.Click "Finish" to restart computer.

BIOS Flash Procedure

BIOS update procedure:

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

Press "Tools" icon.

1.Click "Gigabyte Utilities".

(1)

2.Click "@BIOS Writer Utility v1.08e".

(2)

Click "☞".

Click here.

(3)

Methods and steps:

I. Update BIOS through Internet

  a. Click "Internet Update" icon

  b. Click "Update New BIOS" icon

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

  d. Select the exact model name on your motherboard

  e. System will automatically download and update the BIOS.

II. Update BIOS NOT through Internet:

  a. Do not click "Internet Update" icon

  b. Click "Update New BIOS"

  c. Please select "All Files" in dialog box while opening the old file.

  d. Please search for BIOS unzip file, downloading from internet or any other methods (such as: 8IRX.F1).

  e. Complete update process following the instruction.

III. Save BIOS

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

IV. Check out supported motherboard and Flash ROM:

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

Note:

  a. In method I, if it shows two or more motherboard's model names to be selected, please make sure your motherboard's model name again. Selecting wrong model name will cause the system unbooted.

  b. In method II, be sure that motherboard's model name in BIOS unzip file are the same as your motherboard's. Otherwise, your system won't boot.

  c. In method I, if the BIOS file you need cannot be found in @BIOS^{TM} server, please go onto Gigabyte's web site for downloading and updating it according to method II.

  d. Please note that any interruption during updating will cause system unbooted

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

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

Flash BIOS Procedure:

STEP 1:

(1) Please make sure you have set "Auto" for BIOS Feature Setup (BIOS Flash Protection). For more detail please refer to page 32.

(2) Please make sure your system has installed the extraction utility such as winzip or pkunzip. Firstly you have to install the extraction utility such as winzip or pkunzip for unzip the files. Both of these utilities are available on many shareware download pages like http://www. shareware.cnet.

com

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

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

(1) With an available floppy disk in the floppy drive. Please leave the diskette "UN-write protected" type. Double click the "My Computer" icon from Desktop, then click "3.5 diskette (A)" and right click to select "Format (M)"
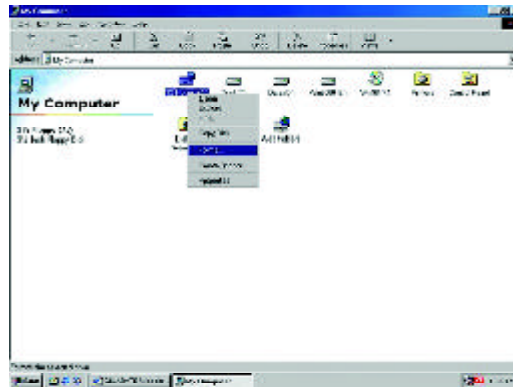
(2) Select the "Quick (erase)" for Format Type, and pick both "Display summary when finished" and "Copy system files", after that press "Start". That will format the floppy and transfer the needed system files to it.

Beware: This procedure will erase all the prior data on that floppy, so please proceed accordingly.
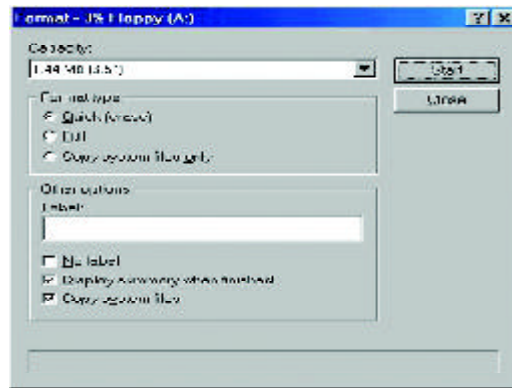
(3) After the floppy has been formatted completely, please press "Close".
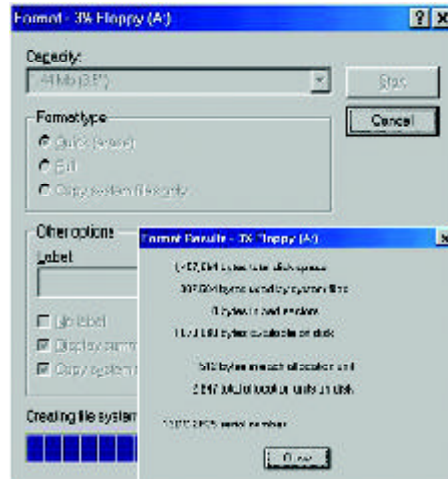
STEP 3: Download BIOS and BIOS utility program.

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

(2) From Support zone, click the "Motherboards BIOS & Drivers".
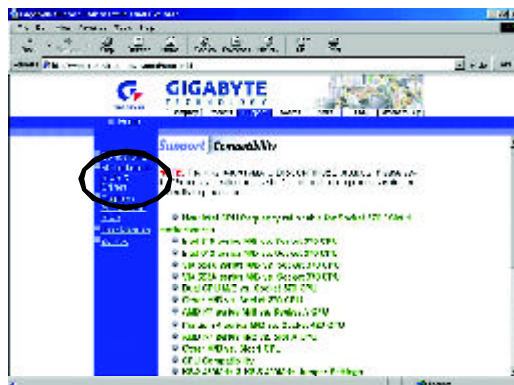
(3) We use GA-7VTX motherboard as example. Please select GA-7VTX by Model or Chipset optional menu to obtain BIOS flash files.
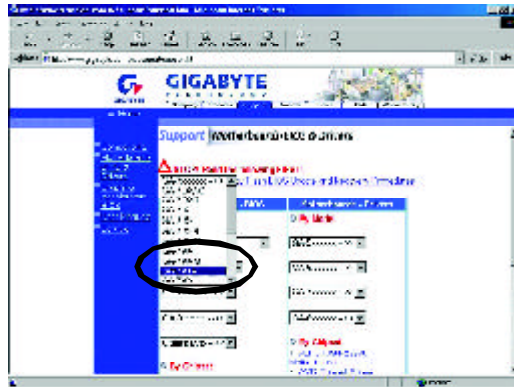
(4) Select an appropriate BIOS version (For example: F4), and click to download the file. It will pop up a file download screen, then select the "Open this file from its current location" and press "OK".
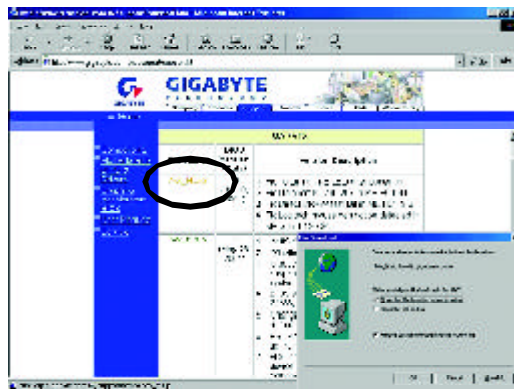
(5) At this time the screen shows the following picture, please click "Extract" button to unzip the files.

(6) Please extract the download files into the clean bootable floppy disk A mentioned in STEP 2, and press "Extract".
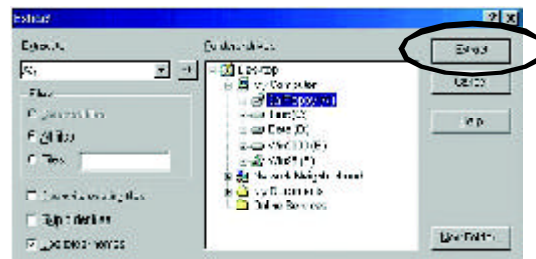
STEP 4: Make sure the system will boot from the floppy disk.

(1) Insert the floppy disk (contains bootable program and unzip file) into the floppy drive A. Then, restart the system. The system will boot from the floppy disk. Please press <DEL> key to enter BIOS setup main menu when system is boot up.
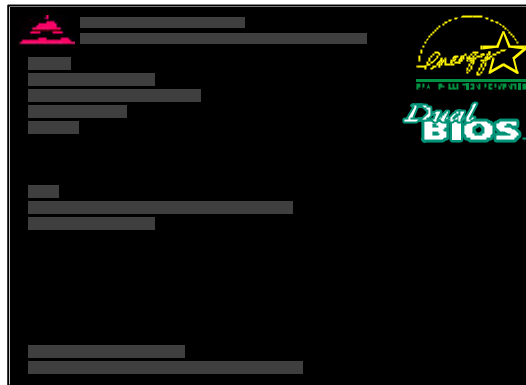
(2) Once you enter the BIOS setup utility, the main menu will appear on the screen. Use the arrows to highlight the item "BIOS FEATURES SETUP".

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

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

```
                AMIBIOS SETUP - BIOS FEATURES SETUP
          ( C.) 2001 American Megatrends, Inc. All Rights Reserved

1st Boot Device           :Floppy
2nd Boot Device           : IDE-0
3rd Boot Device           : CDROM
S.M.A.R.T. for Hard Disks  : Disabled
BootUp Num-Lock            : On          ESC: Quit        ↑↑↑↑: Select Item
Floppy Drive Seek          : Disabled    F1  : Help       PU/PD/+/-: Modify
PasswordCheck              : Setup       F5  : Old Values (Shift)F2: Color
                                         F6  : Load BIOS Defaults
                                         F7  : Load Setup Defaults
```

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

```
                AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.24b
               (C) 2001 American Megatrends, Inc. All Rights Reserved

STANDARD CMOS SETUP                   INTEGRATED PERIPHERALS
BIOS FEATURES SETUP                   HARDWARE MONITOR & MISC SETUP
CHIPSET FEATURES SETUP                SUPERVISOR PASSWORD
POWER MANAGEMENT SETUP                USER PASSWORD
PNP/ PCI CONFIG         Save to CMOS and EXIT (Y/N)? Y
LOAD BIOS DEFAULTS                    SAVE & EXIT SETUP
LOAD SETUP DEFAULTS                   EXIT WITHOUT SAVING

ESC: Quit        ↑↑↑↑↑: Select Item   (Shift)F2 : Change Color    F5: Old Values
F6: Load BIOS Defaults      F7: Load Setup Defaults      F10:Save & Exit

                     Save Data to CMOS & Exit SETUP
```

STEP 5: BIOS flashing.

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

```
Starting Windows 98...


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


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


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

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

(3) It will pop up a screen and asks "Are you sure to flash the BIOS?" Press [Enter] to continue the

procedure, or press [ESC] to quit.

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

BIOS corrupted and system totally inoperative.

Are you sure to flash the BIOS?
[Enter] to continue Or [Esc] to cancel?

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

EXIT?
[Enter] to continue Or [Esc] to cancel?

STEP 6: Load BIOS defaults.

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

(1) Take out the floppy diskette from floppy drive, and then restart the system. The boot up screen will indicate your motherboard model and current BIOS version.
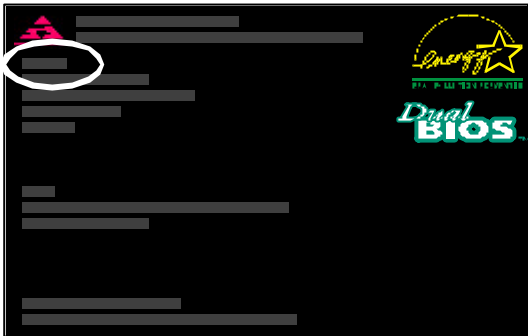
(2) Don't forget to press <DEL> key to enter BIOS setup again when system is boot up. Use the arrows to highlight the item "LOAD SETUP DEFAULTS" then press "Enter". System will ask "Load Setup Defaults (Y/N)?" Press "Y" and "Enter" keys to confirm.

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.24b	
(C) 2001 American Megatrends, Inc. All Rights Reserved	
STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	HARDWARE MONITOR & MISC SETUP
CHIPSET FEATURES SETUP	SUPERVISOR PASSWORD
POWER MANAGEMENT SETUP	Load Setup Defaults? (Y/N)?N
PNP / PCI CONFIG	
LOAD BIOS DEFAULTS	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
ESC: Quit ↑↓←→ : Select Item (Shift)F2 : Change Color F5: Old Values	
F6: Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit	
Load Setup Defaults	

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

```
            AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.24b
           (C) 2001 American Megatrends, Inc. All Rights Reserved

  STANDARD CMOS SETUP              INTEGRATED PERIPHERALS

  BIOS FEATURES SETUP              HARDWARE MONITOR & MISC SETUP

  CHIPSET FEATURES SETUP           SUPERVISOR PASSWORD

  POWER MANAGEMENT SETUP           USER PASSWORD
                 Save to CMOS and EXIT (Y/N)? Y
  PNP/ PCI CONFIG

  LOAD BIOS DEFAULTS               SAVE & EXIT SETUP

  LOAD SETUP DEFAULTS              EXIT WITHOUT SAVING

  ESC: Quit        ↑↓←→: Select Item   (Shift)F2 : Change Color   F5: Old Values
  F6: Load BIOS Defaults     F7: Load Setup Defaults    F10:Save & Exit

                     Save Data to CMOS & Exit SETUP
```

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

Acronyms

Acronyms	Meaning
ACPI	Advanced Configuration and Power Interface
APM	Advanced Power Management
AGP	Accelerated Graphics Port
AMR	Audio Modem Riser
ACR	Advanced Communications Riser
BIOS	Basic Input / Output System
CPU	Central Processing Unit
CMOS	Complementary Metal Oxide Semiconductor
CRIMM	Continuity RIMM
CNR	Communication and Networking Riser
DMA	Direct Memory Access
DMI	Desktop Management Interface
DIMM	Dual Inline Memory Module
DRM	Dual Retention Mechanism
DRAM	Dynamic Random Access Memory
DDR	Double Data Rate
ECP	Extended Capabilities Port
ESCD	Extended System Configuration Data
ECC	Error Checking and Correcting
EMC	Electromagnetic Compatibility
EPP	Enhanced Parallel Port
ESD	Electrostatic Discharge
FDD	Floppy Disk Device
FSB	Front Side Bus
HDD	Hard Disk Device
IDE	Integrated Dual Channel Enhanced
IRQ	Interrupt Request

to be continued......

Acronyms	Meaning
IOAPIC	Input Output Advanced Programmable Input Controller
ISA	Industry Standard Architecture
LAN	Local Area Network
I/O	Input / Output
LBA	Logical Block Addressing
LED	Light Emitting Diode
MHz	Megahertz
MIDI	Musical Interface Digital Interface
MTH	Memory Translator Hub
MPT	Memory Protocol Translator
NIC	Network Interface Card
OS	Operating System
OEM	Original Equipment Manufacturer
PAC	PCI A.G.P. Controller
POST	Power-On Self Test
PCI	Peripheral Component Interconnect
RIMM	Rambus in-line Memory Module
SCI	Special Circumstance Instructions
SECC	Single Edge Contact Cartridge
SRAM	Static Random Access Memory

Technical Support/RMA Sheet

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

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

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

Problem Description:

_____

_____