



## Item Checklist

This item checklist is only available for retail market. Completely check your package, If you discover damaged or missing items, contact your retailer.

- Superb 4LE series mainboard
- QDI Utility CD
- User's manual
- IDE ribbon cable
- Floppy ribbon cable
- I/O shield (option)
- Cable with bracket for USB Connectors (option)



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# Declaration of conformity



**QUANTUM DESIGNS(HK) LTD.**

**20th Floor, Devon House, Taikoo Place, 979 King's Road,  
Quarry Bay, Hong Kong**

declares that the product

**Mainboard  
Superb 4LE**

is in conformity with

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

- EN 55022 Limits and methods of measurements of radio disturbance characteristics of information technology equipment
- EN 50081-1 Generic emission standard Part 1:  
Residential, commercial and light industry
- EN 50082-1 Generic immunity standard Part 1:  
Residential, commercial and light industry

European Representative:

QDI COMPUTER (UK) LTD

QDI COMPUTER (SCANDINAVIA) A/S

QDI SYSTEM HANDEL GMBH

QDI EUROPE B.V.

QDI COMPUTER (FRANCE) SARL

QDI COMPUTER HANDELS GMBH

LEGEND QDI SPAIN S.L.

QDI COMPUTER (SWEDEN) AB

Signature :

A handwritten signature in black ink, appearing to read 'Xu Wenge', is written over a horizontal line.

Place / Date : HONG KONG/2003

Printed Name : Xu Wenge

Position/ Title : Assistant President

# Declaration of conformity



Trade Name: QDI Computer ( U . S . A . ) Inc.  
Model Name: **Superb 4LE**  
Responsible Party: QDI Computer ( U . S . A . ) Inc.  
Address: 41456 Christy Street  
Fremont, CA 94538  
Telephone: (510) 668-4933  
Facsimile: (510) 668-4966

Equipment Classification: FCC Class B Subassembly  
Type of Product: Mainboard  
**Manufacturer: Quantum Designs (HK) Inc.**  
Address: 20th Floor, Devon House, Taikoo Place  
979 King's Road, Quarry Bay, HONG  
KONG

## Supplementary Information:

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

Tested to comply with FCC standards.

Signature : *Ku Wengze*

Date : 2003

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**Be sure to add some Silicone Grease between the CPU and the heatsink of FAN to keep them fully contact , meanwhile to meet the heat sink requirement.**



**Be sure to add some Silicone Grease between the CPU and the heatsink to keep them fully contacted to meet the heat sink requirement.**



**This manual is suitable for mainboards of Superb 4LE series. Each mainboard is carefully designed for the PC user who wants diverse features.**

- A: with onboard Audio**
- 6A: with 6-channels onboard Audio**
- L: with onboard LAN**
- AL: with onboard Audio and LAN**
- 6AL: with 6-channels onboard Audio and LAN**



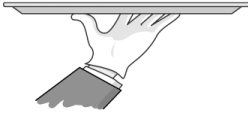
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# Chapter 1



## Introduction

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Superb 4LE series of mainboards utilize ( SIS 651 + SIS 962L) chipset, providing a fully compatible, high performance and cost-effective mATX platform. The new integrated technologies, together with AGP 4X support, AC'97 audio(2/6-channels), onboard high performance 3D VGA, integrated LAN(optional), 6 USB 2.0 ports, and ATA133, give customers an advanced, multimedia solution at reasonable price. It provides 400/533MHz host bus speed to support Intel® Pentium 4 socket 478 processors and the largest DDR memory capacity is up to 2GB. It also provides advanced features such as Wake-on-LAN, System Health Monitor function, AntiVirus function, ACPI function, Suspend to RAM and so on. The optimal implementation of the Advanced Configuration and Power interface(ACPI) specification makes the PC's power consumption drop to the lowest possible level and enable quick wakeup.

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## **Key Features**

### **Form factor**

- mATX form factor of 244mm x 205mm

### **Microprocessor**

- Supports Intel® Pentium 4 (Willamette) socket 478 processors at 1.4/1.5/1.6/1.7/1.8/1.9/2.0GHz and above
- Supports Intel® Pentium 4 (Northwood) socket 478 processors at 1.6/1.8/2.0/2.2/2.26/2.4/2.53GHz and above
- Supports Intel® Celeron socket 478 processors at 1.7/1.8/2.0GHz and above
- Supports 400/533MHz host bus speed

### **System memory**

- Provides two 184-pin DDR SDRAM interfaces
- Supports DDR200/DDR266/DDR333 SDRAM
- Supports 64/128/256/512Mb technology up to 2GB

### **Onboard IDE**

- Supports Independent timing of up to 4 drives
- Supports Ultra ATA 133/100/66/33, PIO mode
- Two fast IDE interfaces supporting four IDE devices including IDE hard disks and CDROM/DVDROM drives

### **Onboard LAN**

**( available on -L, -AL, -6AL mainboard )**

- 10/100 Mbit/sec Ethernet support
- 10/100M LAN interface built-in on board

### **USB Ports**

- USB 2.0 compliant, operates at 480Mbps, about 40X times faster than USB 1.1 which currently works at a snails pace of just 12Mbps

### **AGP Interface**

- AGP 1.5V Connector supports AGP 2.0 including AGP 4x data transfers
- Provides one standard VGA connector



## Onboard Audio(Optional)

AC'97 Audio( **available on -A, -6A, -AL, -6AL mainboard**)

- AC'97 2.1 Specification Compliant
- Provides onboard Line-in Jack, Microphone-in Jack, Speaker-out Jack with onboard amplifier and MIDI/Joystick Connector
- 5.1 channels output (available on -6A, -6AL mainboard)

## 6-channel Onboard Audio(available on -6A/-6AL mainboard)

- AC'97 2.2 Specification Compliant
- Provides Front left&right, Rear left&right/Line-in Jack and Center&Woofer/ Microphone-in Jack,which can be specified by software

## Onboard I/O

- One floppy port supporting up to two 3.5" or 5.25" floppy drives with 360K/ 720K/1.2M/1.44M/2.88M format
- Two high speed 16550 compatible UARTs ( COM1 / COM2 ) with 16 byte send/receive FIFO
- One parallel port supports SPP/EPP/ECP mode
- Infrared interface
- All I/O ports can be enabled/disabled in the BIOS setup

## BIOS

- Licensed advanced AWARD(Phoenix) BIOS, supports flash ROM, plug and play ready
- Supports IDE CDROM/SCSI and USB devices boot up

## Green function

- Supports ACPI (Advanced Configuration and Power Interface) and ODPM (OS Directed Power Management)
- Supports ACPI power status: S0 (full-on), S1 (power on suspend), S3 (STR, suspend to RAM), S4(STD,suspend to Disk,depends on OS) and S5 (soft-off)

## Expansion slots

- 1 AGP slot
- 3 PCI slots



**Advanced Features**

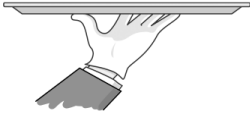
- PCI 2.2 Specification Compliant
- Provides Trend ChipAwayVirus On Guard
- Supports Windows 98/2000/ME/XP soft-off
- Supports Wake-on-LAN
- Supports Wake up by keyboard password
- Supports system monitoring(monitors CPU and system temperatures, system voltages, fan speed. available on several models)

**Main Expansion Slots and Connectors**

Slot/Port (Quantity)	Description
PCI ( 3 )	PCI slots
AGP ( 1 )	AGP slot
IDE ( 2 )	IDE Ports
FLOPPY ( 1 )	Floppy Drive port
DDR ( 2 )	DDR Sockets
USB ( 6 )	USB Connectors
UART ( 2 )	UART Connectors
PARALLEL ( 1 )	Parallel Cconnector
IrDA ( 1 )	IrDA Connector



## Chapter 2



## Installation Instructions

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This section covers External Connectors and Jumper Settings. Refer to the mainboard layout chart for locations of all jumpers, external connectors, slots and I/O ports. Furthermore, this section lists all necessary connector pin assignments for your reference. The particular state of the jumpers, connectors and ports are illustrated in the following figures. Before setting the jumpers or inserting these connectors, please pay attention to the directions.

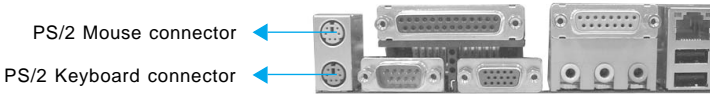
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## External Connectors

### PS/2 Keyboard/Mouse Connector

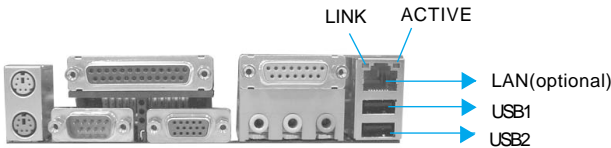
PS/2 keyboard connector is for the usage of PS/2 keyboard. If using a standard AT size keyboard, an adapter should be used to fit this connector. PS/2 mouse connector is for the usage of PS/2 mouse.



### USB1, USB2 and LAN Connectors

( LAN connector is only available on -L, -AL, -6AL mainboard )

Two USB ports are for connecting USB devices. The RJ-45 connector is for onboard LAN.



### Parallel Port, Serial Port Connector (COM1) & VGA Port

The parallel port connector can be connected to a parallel device such as a printer. The serial port COM1 connector can be connected to a serial port device such as a serial port mouse. The VGA port can be connected to a VGA monitor. You can enable/disable them and choose the IRQ or I/O address in "Integrated Peripherals" from AWARD BIOS SETUP.



### Warning:

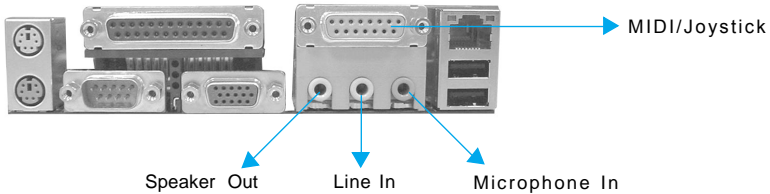
Be sure to unplug the AC power supply before adding or removing expansion cards or other system peripherals, otherwise your mainboard and expansion cards might be seriously damaged.



### Line-in jack, Microphone-in jack, Speaker-out jack and MIDI / Joystick Connector

(available on -A, -AL, -6AL)

The Line-in jack can be connected to devices such as a cassette or minidisc player to playback or record. The Microphone-in jack can be connected to a microphone for voice input. The Speaker-out jack allows you to connect speakers or headphones for audio output from the internal amplifier. The MIDI/Joystick connector allows you to connect a game joystick or a MIDI device.



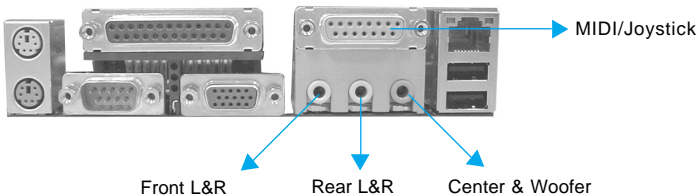
### 6-Channel Audio

(Available on -6A, -6AL series mainboard)

This mainboard utilizes ALC650 chip providing 6-channel Audio, which consists of Front Left, Front Right, Rear Left, Rear Right, Center and Woofer for a complete surround sound effect. When 6-Channel audio is available, the front Left&Right jack can be connected to the Front speakers, the Back Left&Right jack can be connected to the rear speakers and the Center&Woofer jack can be connected to the center speaker and woofer. Microphone function is offered by F\_AUDIO Connector on the mainboard now.

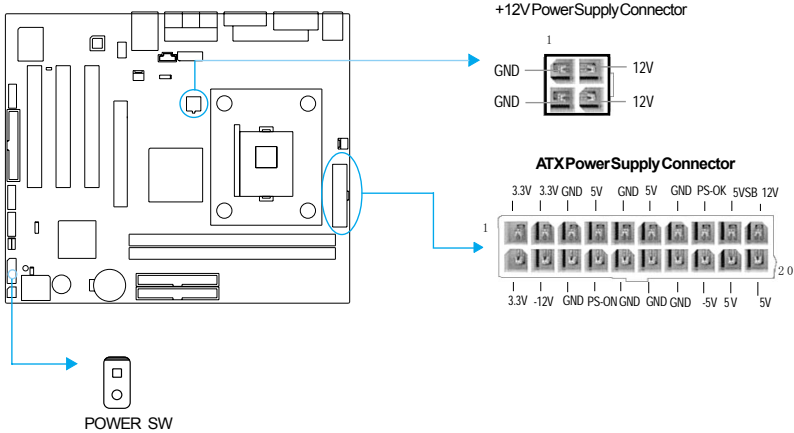
If set 2-Channel Audio mode on -6A or -6AL mainboard, you can connect two speakers to the Front Left&Right jack, at the same time use the Rear Left&Right jack as Line in jack, and use the Center&Woofer jack as Microphone in jack.

For the detail information, please refer the appendix for using 4-/6-channels audio function.



## ATX12V Power Supply Connector & Power Switch (POWER SW)

Be sure to connect the power supply plug to this connector in its proper orientation. The power switch (POWER SW) should be connected to a momentary switch. When powering up your system, first turn on the mechanical switch of the power supply (if one is provided), then push once the power switch. When powering off the system, you needn't turn off the mechanical switch, just ***Push once*** the power switch. Superb 4LE series mainboard only support ATX12V power.



**Note:**

*If you change "Power Button Override" from default "Instant-off" to "Delay 4 Sec" in the "POWER MANAGEMENT SETUP" section of the BIOS, the power switch should be pressed for more than 4 seconds before the system powers down.*

## Hard Disk LED Connector (HD\_LED)

The connector connects to the case's IDE indicator LED indicating the activity status of IDE hard disk. The connector has an orientation. If one way doesn't work, try the other way.

## Reset Switch (RESET)

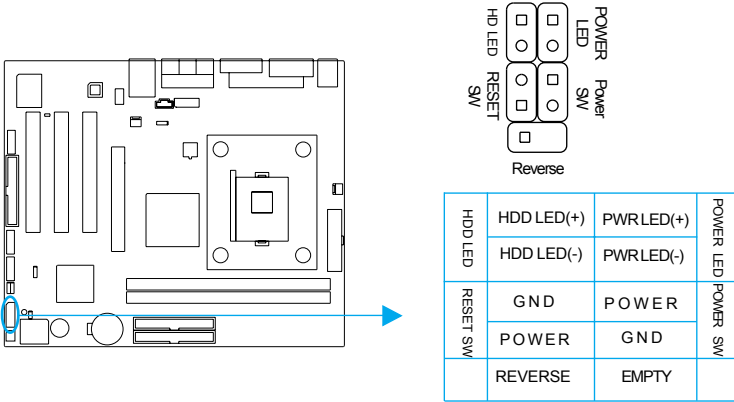
The connector connects to the case's reset switch. Press the switch once, the system resets.





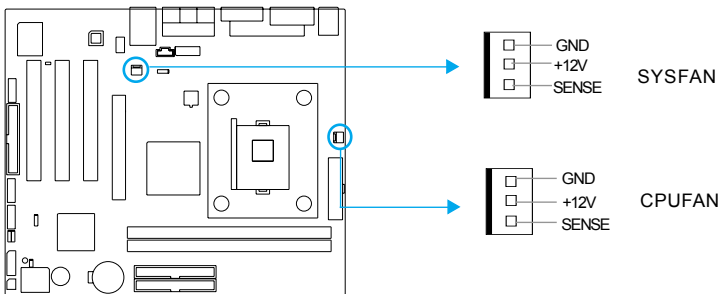
### Power LED Connector (PWR\_LED)

When the system is in S0 status, the LED is on. When the system is in S1 or S3 status, the LED is blink; When the system is in S5 status, the LED is off. The connector has an orientation.



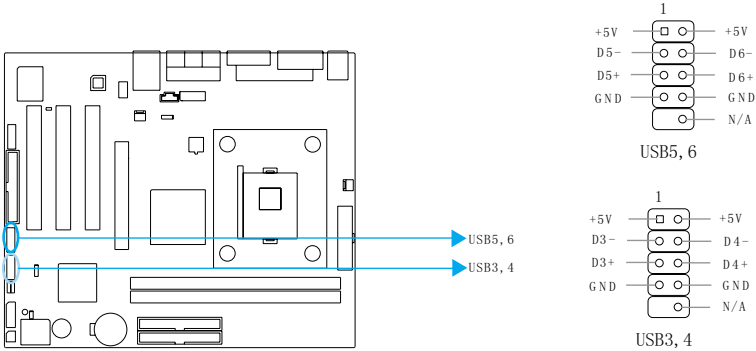
### Fan Connectors (SYSFAN, CUFAN)

The fan speed of CPUFAN and SYSFAN can be detected and viewed in “PC Health” section of the CMOS SETUP.



### USB3,4 ;USB5,6

Besides USB1,2 on the back panel, the series of mainboards also have two 10-pin headers on board which may connect to front panel USB cable( optional ) to provide additional four USB ports.

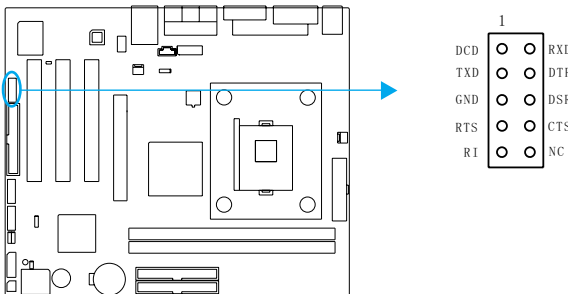


**Warning:**

*Be sure to connect correctly your cable to the connector, otherwise your mainboard and USB devices might be seriously damaged.*

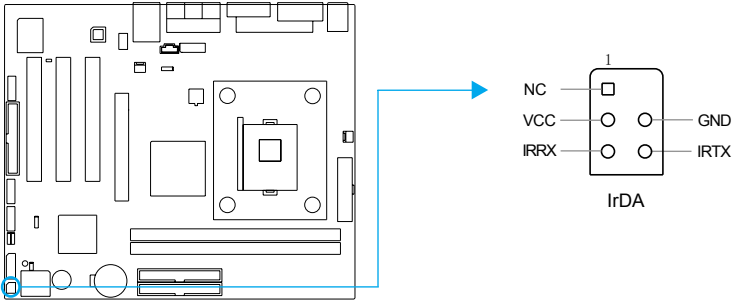
### UART COM2

Besides COM1 on the back panel, the series of mainboards also supply a COM2 connector which connects with serial mouse, MODEM and other serial device.



### Infrared Header (IrDA)

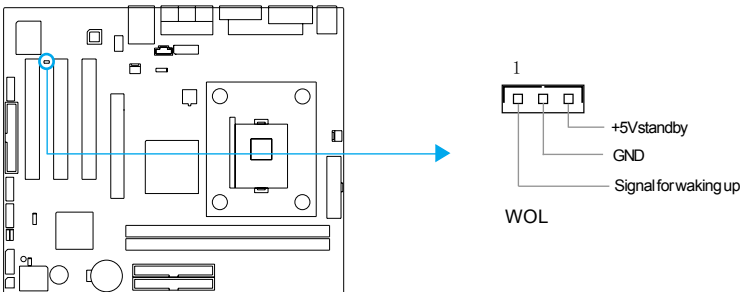
This connector supports wireless transmitting and receiving device. Before using this function, configure the settings for IR Address, IR Mode and IR IRQ from the “INTEGRATED PERIPHERALS” section of the CMOS SETUP.



### Wake-Up On LAN (WOL)

(Only for extend PCI LAN adapter supports the WOL function. On-board Lan need not connect to the connector)

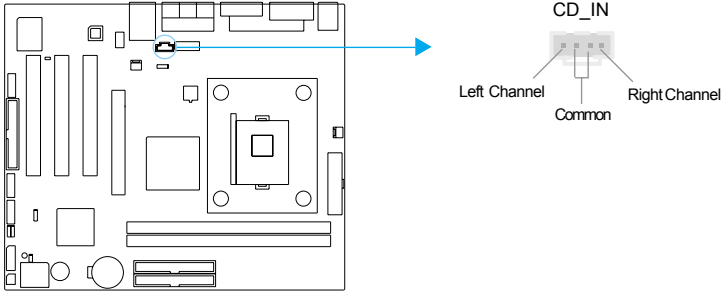
Through the Wake-Up On LAN function, a wake event occurring from the network can wake up the system. If this function is to be used, please be sure an ATX12V power supply of which 5VSB line is capable of delivering current at least 720mA, and a LAN adapter which supports this function is used. Then connect this header to the relevant connector on the LAN adapter, set “Ring power up control” as Enabled under the sub-section “PM Wake Up Events” in the “POWER MANAGEMENT SETUP” section of the CMOS SETUP. Save and exit, then boot the operating system once to make sure this function takes effect.



### **Audio Connectors (CD\_IN)**

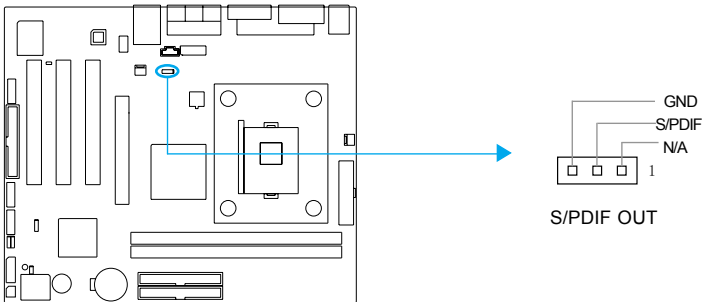
(available on -A, -AL, -6AL)

CD\_IN is Sony standard CD audio connectors, it can be connected to a CD-ROM drive through a CD audio cable.



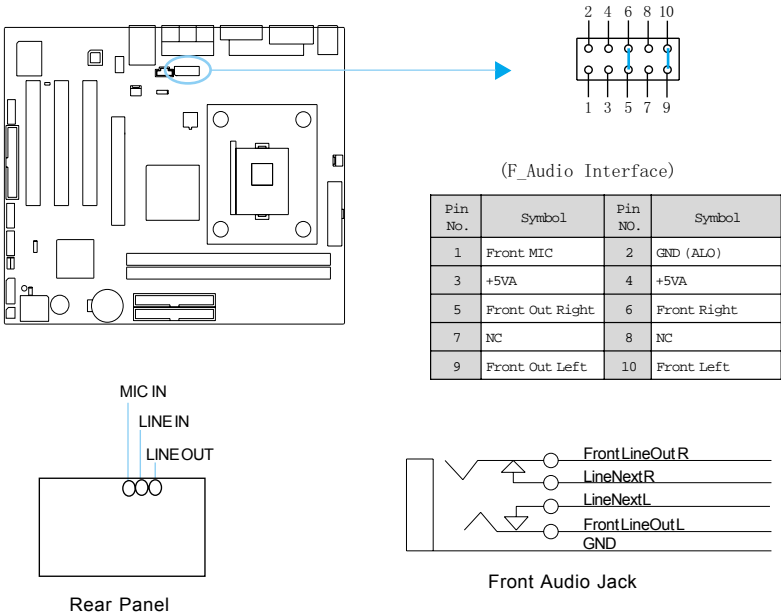
### **S/PDIF OUT (Optional)**

The S/PDIF (Sony / Philips Digital Interface) input allow your digital audio input from digital audio devices (optional). The SPDIF output is capable of providing digital audio data or compressed AC3 data to an external Dolby digital decoder.










### Audio Interface(Optional)

The audio interface provides two kinds of audio output choices: the FrontAudio, the RearAudio. Their priority level is as sequence. When the FrontAudio is available, the RearAudio will be cut off. An onboard amplifier is provided for the earphone. When the FrontAudio is absent, Pin5 and Pin6, Pin9 and Pin10 must be short connected.



### Jumper Settings

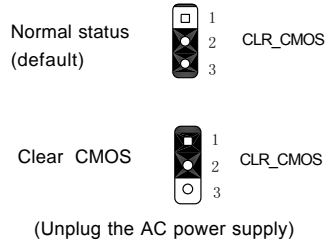
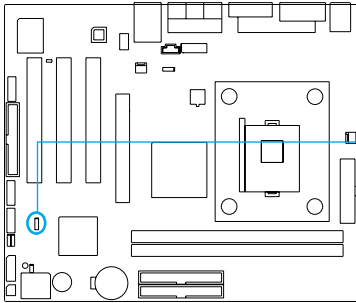
Jumpers are located on the mainboard, clear CMOS jumper CLR\_CMOS and BIOS protection jumper JAV. Pin 1 for all jumpers are located on the side with a thick white line (Pin1--  ), referring to the mainboard's silkscreen. Jumpers with three pins will be shown as  to represent pin1 & pin2 ("1-2") closed and  to represent pin2 & pin3 ("2-3") closed.

Jumper	Symbol	Description	Represent
3Pin		1-2	set pin1 and pin2 closed
		2-3	set pin2 and pin3 closed
2Pin		close	set the pins closed
		open	set the pins opened



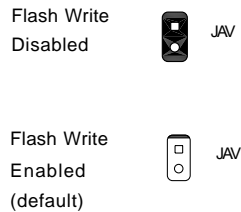
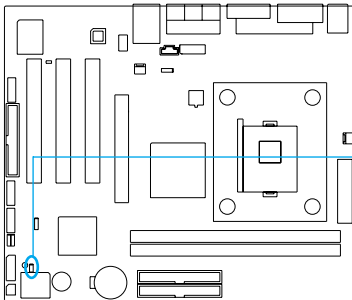
### Clear CMOS (CLR\_CMOS)

If you want to clear CMOS, unplug the AC power supply first, close CLR\_CMOS (pin1 & pin2) once, set CLR\_CMOS back to the normal status with pin2 & pin3 connected, then power on the system.



### BIOS-Protection Jumper (JAV)

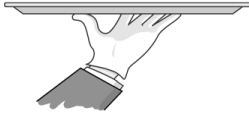
The BIOS of the mainboard is inside the FWH. If the jumper JAV is set as closed, the system BIOS is protected from being attacked by serious virus such as CIH virus, you will be unable to flash the BIOS to the mainboard. However in this status .



Setting the jumper JAV as open(default), allows you to flash the BIOS to the Flash ROM. The DMI (Desktop Management Interface) system information such as the CPU type/speed, memory size, and expansion cards will be detected by the onboard BIOS and stored in the flash ROM. Whenever the system hardware configuration is changed, DMI information will be updated automatically. However, setting jumper JAV as closed makes flashing BIOS and updating DMI information impossible. Therefore, set JAV as open when changing the system hardware configuration, or the error message “Unknown Flash Type” will be displayed on the screen, and DMI information may not be updated. Under special conditions, the jumper “JAV” should be set as OPEN.



# Chapter 3



## BIOS Description

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The mainboard uses AWARD ® BIOS Setup program that provides a Setup utility for users to modify the basic system configuration. The information is stored in a battery-backed CMOS RAM so it retains the Setup information when the power is turned off.

This chapter provides you with the overview of the BIOS Setup.

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## Utility Support

### AWDFLASH.EXE

This is a flash memory write/read utility used for the purpose of upgrading your BIOS when necessary. Before doing so, please note:

- We strongly recommend you only upgrade BIOS when encounter problems.
- Before upgrading your BIOS, review the description below to avoid making mistakes, destroying the BIOS and resulting in a non-working system.

When you encounter problems, for example, you find your system does not support the latest CPU released on our current mainboard, you may therefore upgrade the BIOS, please don't forget to set JAV as open first.

### **Follow the steps exactly for a successful upgrade.**

1. Create a bootable system floppy diskette by typing Format A:/s from the DOS prompt under DOS6.xx or Windows 9x environment.
2. Copy AWDFLASH.EXE (version $\geq$ 8.03) from the directory \Utility located on QDI Mainboard Utility CD onto your new bootable diskette.
3. Download the updated BIOS file from the Website (<http://www.qdigrp.com>). Please be sure to download the suitable BIOS file for your mainboard.
4. Decompress the file downloaded, copy the BIOS file (xx.bin) onto the bootable diskette, and note the checksum of this BIOS which is located in readme file.
5. Reboot the system from the bootable diskette created.
6. Then run the AWDFLASH utility at the **A:\** prompt as shown below:  
A:\AWDFLASH xxxx.bin



#### **Note:**

1. Follow the instruction through the process. Don't turn off power or reset the system until the BIOS upgrade has been completed.
2. AWDFLASH.EXE (version $\geq$ 8.03) utility must be used to upgrade the mainboard family BIOS instead of QDI flash utility.
3. BIOS version will update constantly. We will not be responsible for any BIOS description differ from your mainboard BIOS shown.





## AWARD(Phoenix) BIOS Description

### Entering Setup

Power on the computer, when the following message briefly appears at the bottom of the screen during the POST (Power On Self Test), press <Del> key to enter the AWARD BIOS CMOS Setup Utility.

**Press <Del> to enter SETUP**

Once you have entered, the Main Menu (Figure 1) appears on the screen. The main menu allows you to select from eleven setup functions and two exit choices. Use the arrow keys to select among the items and press the <Enter> key to accept or enter the sub-menu.



Figure-1 Main Menu

### Load Optimized Defaults

The Optimized Defaults are common and efficient. It is recommended users load the optimized defaults first, then modify the needed configuration settings.

### Standard CMOS Features Setup

The basic CMOS settings included in “Standard CMOS Features” are Date, Time, Hard Disk Drive Types, Floppy Disk Drive Types, and VGA etc. Use the arrow keys to highlight the item, then use the <PgUp> or <PgDn> keys to select the value desired in each item.



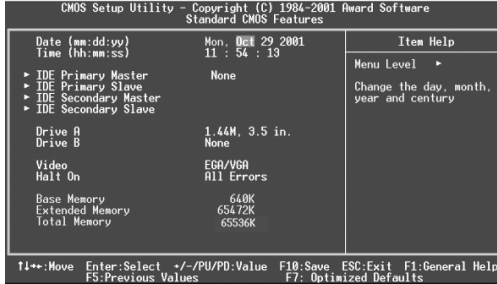


Figure-2 Standard CMOS Setup Menu

For the items marked, press enter, a window will pop up as shown below. You can view detailed information or make modifications.

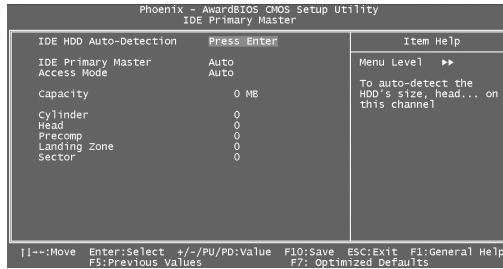


Figure-2-1 IDE Primary Master Setup Menu

## Hard Disk

### Primary Master/Primary Slave/Secondary Master/Secondary Slave

These categories identify the HDD types of 2 IDE channels installed in the computer system. There are three choices provided for the Enhanced IDE BIOS: None, Auto, and Manual. 'None' means no HDD is installed or set; 'Auto' means the system can auto-detect the hard disk when booting up; by choosing 'Manual', the related information should be entered regarding the following items. Enter the information directly from the keyboard and press < Enter>:

CYLS	number of cylinders	HEAD	number of heads
PRECOMP	write pre-compensation	LANDZ	landing zone
SECTOR	number of sectors	MODE	HDD access mode



The Award BIOS supports 3 HDD modes: NORMAL, LBA and LARGE.

### **CHS mode**

Generic access mode in which neither the BIOS nor the IDE controller will make any transformation during accessing. The maximum number of cylinders, heads and sectors for CHS mode are 1024,16 and 63.

If the user sets his HDD to NORMAL mode, the maximum accessible HDD size will be 528 megabytes even though its physical size may be greater than that.

### **LBA (Logical Block Addressing) mode**

A new HDD accessing method to overcome the 528 Megabyte bottleneck. The number of cylinders, heads and sectors shown in setup may not be the number physically contained in the HDD.

During HDD accessing, the IDE controller will transform the logical address described by sector, head and cylinder number into its own physical address inside the HDD.

### **Large mode**

Some IDE HDDs contain more than 1024 cylinder without LBA support (in some cases, users do not want LBA). The Award BIOS provides another alternative to support these kinds of HDD.

BIOS tricks DOS (or other OS) into dividing the number of cylinders is less than 1024 by dividing it by 2. At the same time, the number of heads is multiplied by 2. A reverse transformation process will be made inside INT13h in order to access the right HDD address.

If using Auto detect, the BIOS will automatically detect the IDE hard disk mode and set it as one of the three modes.

### **Remark**

To support LBA or LARGE mode of HDDs, there must be some softwares involved which are located in Award HDD Service Routine(INT13h).It may fail to access a HDD with LBA (LARGE) mode selected if you are running under an Operating System which replaces the whole INT 13h.



**Video**

Set this field to the type of video display card installed in your system.

EGA/ VGA	Enhanced Graphics Adapter / Video Graphic Array. For EGA, VGA, SEGA, SVGA, or PGA monitor adapters.
CGA 40	Color Graphic Adapter, powering up in 40 column mode.
CGA 80	Color Graphic Adapter, powering up in 80 column mode.
MONO	Monochrome adapter, including high resolution monochrome adapters.

**Halt On**

This category determines whether or not the computer will stop if an error is detected during powering up.

No errors	The system boot will not stop for any errors that may be detected.
All errors	Whenever the BIOS detects a non-fatal error, the system will stop and you will be prompted.
All, But Keyboard	The system boot will not stop for a keyboard error; but it will stop for all other errors.
All, But Diskette	The system boot will not stop for a disk error; but it will stop for all other errors.
All, But Disk/Key	The system boot will not stop for a keyboard or disk error, but it will stop for all other errors.

**Memory**

This is a Display-Only Category, 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.
Extended Memory	The BIOS determines how much extended memory is presented during the POST.
Total Memory	Total memory of the system .



## QDI Innovation Features

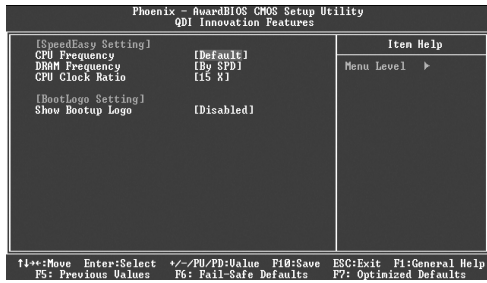


Figure-3 QDI Innovation features Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
<b>[SpeedEasy Setting]</b>		
• CPU Frequency	<i>default</i> 100/133MHz	Set CPU frequency.
• DRAM Frequency	<i>By SPD</i> 200/266 333MHZ	Set DRAM frequency by SPD. Set DRAM frequency manually.
• CPU Clock Ratio	<i>Min=15</i> <i>Max=24</i>	Select the multiplication of processor core frequency. If a Ratio-locked processor installed, this item will be hidden. This item is only for users who understand all the CPU parameters. This function will not take effect for bus ratio locked processor.
<b>[BootLogo Setting]</b>		
• Show Bootup Logo	<i>Enabled</i> <i>Disabled</i>	The logo will be shown automatically when system boots up, otherwise, no logo appears on the screen.



**Warning:**

*Be sure your selection is right. CPU over speed will be dangerous! We will not be responsible for any damages caused.*

## Advanced BIOS Features Setup

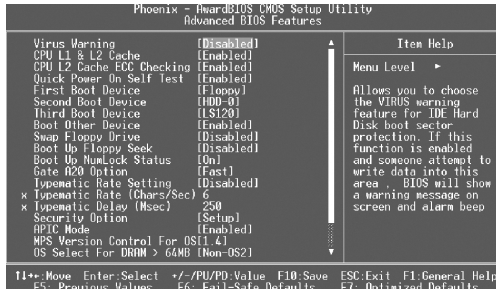


Figure-4 Advanced BIOS Features Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
● Virus warning	<i>Enabled</i>	Allows you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep.
	<i>Disabled</i>	Invalidates this function.
● CPU L1&L2 Cache	<i>Enabled</i>	Enable CPU L1/L2 cache.
	<i>Disabled</i>	Disable CPU L1/L2 cache.
● CPU L2 Cache ECC Checking	<i>Enabled</i>	Enables CPU L2 Cache ECC function.
	<i>Disabled</i>	Disables CPU L2 Cache ECC function.
● Quick Power	<i>Enabled</i>	Allow the system to skip certain tests while booting. On Self Test This will decrease the time needed to boot the system.
	<i>Disabled</i>	Normal POST.
● First (Second, Third) Boot Device Boot Other Device .....	<i>Disabled</i>	Select Your Boot Device Priority. It could be Disabled, Floppy, LS120,ZIP100, HDD-0, HDD-1,HDD-2, HDD-3, SCSI, CDROM, LAN.
	<i>Floppy</i>	
	<i>CDROM</i>	



<u>Item</u>	<u>Option</u>	<u>Description</u>
• Swap Floppy Drive	<i>Enabled</i> <i>Disabled</i>	If the system has two floppy drives, choose enable to assign physical drive B to logical drive.
• Boot Up Floppy Seek	<i>Enabled</i> <i>Disabled</i>	Tests floppy drives to determine whether they have 40 or 80 tracks.
• Boot Up NumLock Status	<i>On</i> <i>Off</i>	Select power on state for NumLock.
• Gate A20 Option	<i>Normal</i> <i>Fast</i>	Let chipset control GateA20 and Normal - a pin in the keyboard controller controls GateA20.
• Typematic Rate Setting	<i>Enabled</i> <i>Disabled</i>	Keystrokes repeat at a rate determined by the keyboard controller - when enabled, the typematic rate and typematic delay can be selected.
• Typematic Rate (chars/sec)	6~30	The rate at which character repeats when you hold down a key.
• Typematic Delay (Msec)	250~1000	The delay before keystrokes begin to repeat.
• Security Option	<i>Setup</i> <i>System</i>	Select whether the password is required every time the system boot or only when you enter setup.
• APIC mode	<i>Enabled</i> <i>Disabled</i>	Enable the APIC mode(Advanced Programmable Interrupt Controller). Disable the APIC mode.
• MPS Version control for OS	1.1 1.4	Set the MPS Version Control for OS.
• OS Select For DRAM>64MB	<i>Non-OS2</i> <i>OS2</i>	Select OS2 only if you are running OS/2 operating system with more than 64MB of RAM.



<u>Item</u>	<u>Option</u>	<u>Description</u>
● HDD S.M.A.R.T. Capability	<i>Enabled</i>	Enable hard disk S.M.A.R.T. support.
	<i>Disabled</i>	Invalidate this feature.
● Report no FDD	<i>Yes</i>	Report NO Floppy Disk Drive for WIN 95 to release for WIN 95 IRQ6.
	<i>No</i>	Do not report No Floppy Disk Drive for WIN95.
● Video BIOS Shadow	<i>Enabled</i>	Video BIOS will be copied to RAM. Video Shadow will increase the video speed.
	<i>Disabled</i>	Invalidates this feature.
● Small Logo EPA show	<i>Enabled</i>	The EPA logo will be shown automatically when system boots up, otherwise, no logo appears on the screen.
	<i>Disabled</i>	





## Advanced Chipset Features Setup

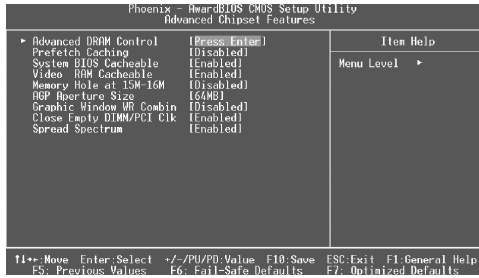


Figure-5 Advanced Chipset Features Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Advanced DRAM Control	<i>Press Enter</i>	Press enter to set the items about DRAM.
• DRAM Timing control	<i>by SPD Manual</i>	Sets DDR Timing.
• CAS Latency Setting	<i>2T/2.5T/3T</i>	Define CAS latency time.
• DRAM Addr/Command Rate	<i>AUTO 1T/2T</i>	DRAM address and command delay time setting.
• Prefetch Caching	<i>Enable Disable</i>	Enable precharge caching. Invalidates this function.
• System BIOS Cacheable	<i>Enabled Disabled</i>	Besides conventional memory, system BIOS area is also cacheabl Video BIOS area is not cacheable.
• Video RAM Cacheable	<i>Enabled Disabled</i>	Besides conventional memory, video RAM area is also cacheable. Video RAM area is not cacheable.



<u>Item</u>	<u>Option</u>	<u>Description</u>
● Memory hole at 15M-16M	<i>Enabled</i>	Memory hole at 15-16M is reserved for expanded ISA card.
	<i>Disabled</i>	Do not set this memory hole.
● AGP Aperture Size (MB)	<i>4/8/16/32</i>	Set the effective size of the Graphics Aperture to be used in the particular GART Configuration.
	<i>64/128/256</i>	
● Graphic Window WR combin	<i>Enabled</i>	Set Graphic Window to improve 3D performance. Invalidates this function.
	<i>Disabled</i>	
● Close Empty DIMM/PCI Clk	<i>Enabled</i>	Close empty DIMM or PCI clock to reduce EMI.
	<i>Disabled</i>	Do not close empty DIMM or PCI clock.
● Spread Spectrum	<i>Enabled</i>	Enable Clock Spread Spectrum to reduce EMI.
	<i>Disabled</i>	Disable Clock Spread Spectrum.



## Power Management Setup

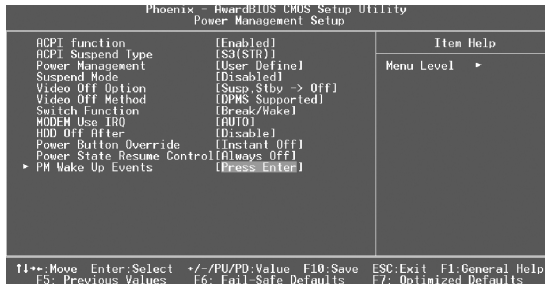


Figure-6 Power Management Setup Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
● ACPI function	<i>Enabled</i>	Enable ACPI function.
	<i>Disabled</i>	Disable this function.
● ACPI Suspend Type	<i>S1(POS)</i>	Select the ACPI suspend type.
	<i>S3(STR)</i>	
	<i>S1&amp;S3</i>	
● Power Management	<i>User Define</i>	Users can configure their own Power Management Timer.
	<i>Min Saving</i>	Pre - defined timer values are used. All timers are in their MAX values.
	<i>Max Saving</i>	Pre - defined timer values are used. All timers are in their MIN values.
● Suspend Mode	<i>Disabled</i>	The system never enter Suspend mode by timer.
	<i>1Min ~1Hour</i>	Define the continuous idle time before the system enters Suspend mode. If any items defined in “PM Events” are on and activated, the system will be woken up.



<u>Item</u>	<u>Option</u>	<u>Description</u>
● Video Off Option	<i>Suspend-&gt;Off</i> <i>Always On</i>	Screen blanks after the system enters either standby mode or suspend mode. Screen is always on.
● Video Off Method	<i>Blank Screen</i> <i>V / H SYNC + Blank</i> <i>DPMS</i>	The system BIOS will only blank off the screen when disabling video. In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA card to monitor. This function is enabled only for VGA cards supporting DPMS. <b>Note: When the green monitor does not detect the V/H-SYNC signals, the electron gun will be turned off.</b>
● Switch function	<i>break/wake</i> <i>Disabled</i>	Enable Power Switch to wake up. Disable Power Switch to wake up.
● MODEM Use IRQ	<i>3, 4, 5, 7, 9</i> <i>10, 11 Auto</i>	Special wake-up event for Modem.
● HDD Off After	<i>Disabled</i> <i>1 - 15 Min</i>	HDD's motor will not turn off by timer. Define the continuous HDD idle time before the HDD enters power saving mode (motor off).
● Power Button Override	<i>Instant-Off</i> <i>Delay 4 sec.</i>	The system will immediately power off once the power button is pressed. The system will power off when power button is pressed for more than 4 seconds.
● Power State Resume Control	<i>Always Off</i> <i>Always On</i> <i>keep</i> <i>pre-states</i>	System is always off when put on AC power. System is on once put on AC power. Keep the preceding states.



<u>Item</u>	<u>Option</u>	<u>Description</u>
<ul style="list-style-type: none"> <li>• IRQ(3~7,9~15) NMI</li> </ul>	<i>Enabled</i>	Enables IRQ“X” to wake up.
	<i>Disabled</i>	Disables IRQ“X” to wake up.
<ul style="list-style-type: none"> <li>• IRQ 8 Break Suspend</li> </ul>	<i>Enabled</i>	Allows the system to be waken up by IRQ 8.
	<i>Disabled</i>	Does not allow the system to be waken up by IRQ8.
<ul style="list-style-type: none"> <li>• Ring power up control</li> </ul>	<i>Enabled</i>	Allow the system to be powered on when a Ring indicator signal comes up to UART1 or UART2 from external modem .
	<i>Disabled</i>	Do not allow Ring wake up.
<ul style="list-style-type: none"> <li>• MACPME Power Up Control</li> </ul>	<i>Enabled</i>	Allows the system to be waken up by onboard LAN.
	<i>Disabled</i>	Does not allow the system to be powered on by onbard LAN.
<ul style="list-style-type: none"> <li>• PCIPME Power Up Control</li> </ul>	<i>Enabled</i>	Allows the system to be waken up by PCI card.
	<i>Disabled</i>	Does not allow the system to be powered on by PCI card.
<ul style="list-style-type: none"> <li>• Power up by Alarm</li> </ul>	<i>Enabled</i>	RTC alarm can be used to generate a wake-up event to power up the system.
	<i>Disabled</i>	RTC has no alarm function.



## PNP/PCI Configuration Setup

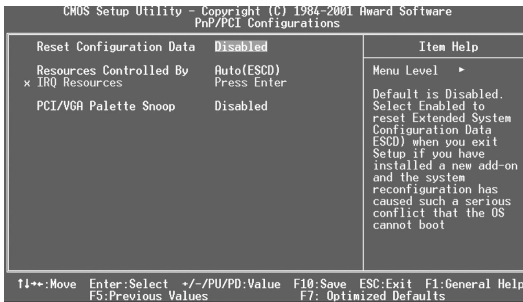


Figure-7 PNP/PCI Configuration Setup Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
● Reset Configuration Data	<i>Enabled</i>	Default setting is Disabled. Select Enabled to reset Extended System Configuration Data ESCD when you exit Setup, if you have installed a new add-on and the system reconfiguration has caused serious conflicts preventing the OS from booting.
	<i>Disabled</i>	Disable the configuration data function.
● Resources Controlled By	<i>Auto(ESCD)</i>	BIOS can automatically configure all boot and Plug and Play compatible devices. If you choose Auto, you cannot select IRQ DMA and memory base address fields, because BIOS automatically assigns them.
	<i>Manual</i>	
● PCI/VGA Palette Snoop	<i>Disabled</i>	Default setting. Non-standard VGA cards such as graphics accelerators or MPEG video cards may not show colors properly. Enabling this item can solve this problem.
	<i>Enabled</i>	



## Integrated Peripherals

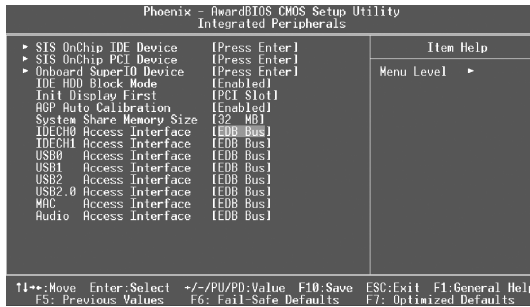


Figure-8 Integrated Peripherals Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
● SIS On-Chip IDE device	<i>Press Enter</i>	Press enter to set On-Chip IDE device.
● Internal PCI/IDE	<i>Disabled</i> <i>Primary</i> <i>Secondary</i> <i>Both</i>	Set the ports of Onboard IDE.
● IDE Primary Primary/Secondary Master/Slave PIO	<i>Mode 0 - 4</i> <i>Auto</i>	Define the IDE primary master/ slave PIO mode. The IDE PIO mode is defined by auto - detection.
● IDE Primary Master/Slave UDMA	<i>Auto</i> <i>Disabled</i>	Ultra DMA mode will be enabled if an Ultra DMA device is detected. Disable this function.
● IDE Burst Mode	<i>Enabled</i> <i>Disabled</i>	Enables IDE Burst Mode. Disables IDE Burst Mode.
● SIS On-Chip PCI device	<i>Press Enter</i>	Press enter to set On-Chip PCI device.
● SIS USB Controller	<i>Enabled</i> <i>Disabled</i>	Enable onchip USB controller. Disable onchip USB controller.



<u>Item</u>	<u>Option</u>	<u>Description</u>
• USB Ports Number	3~6	Select the USB ports number.
• USB 2.0 Support	<i>Enabled</i> <i>Disabled</i>	Enable USB 2.0 to support. Disable USB 2.0 to support.
• USB Keyboard	<i>Enabled</i> <i>Support</i>	Support USB Keyboard under legacy OS. <i>Disabled</i> Disable this function.
• SIS S/W Modem	<i>Enabled</i> <i>Disabled</i>	Enable CNR AC97 Modem. Disable CNR AC97 Modem.
• SIS 10/100METHERNET	<i>Enabled</i> <i>Disable</i>	The onboard LAN is enabled. The onboard LAN is disabled.
• Onboard Super IO Device	<i>Press Enter</i>	Press enter to set Super IO device.
• Onboard FDC Controller	<i>Enabled</i> <i>Disabled</i>	Onboard floppy disk controller is enabled. Onboard floppy disk controller is disabled.
• Onboard Serial Port 1/2	<i>3F8/IRQ4,</i> <i>2F8/IRQ3,</i> <i>3E8/IRQ4,</i> <i>2E8/IRQ3,</i> <i>Auto</i>  <i>Disabled</i>	Define the onboard serial port address and required interrupt number.  Onboard serial port address and IRQ are automatically assigned. Onboard serial port is disabled.
• UART Mode Select	<i>Normal</i>  <i>IrDA</i> <i>ASK IR</i>	Defines Serial Port as standard serial port.  Supports IRDA mode. Supports SHARP ASK-IR protocol with maximum baud rate up to 57600bps.
• UR2 Duplex Mode	<i>Half /Full</i>	Default is recommended.
• Onboard Parallel Port	<i>378/IRQ7</i>  <i>278/IRQ5</i> <i>3BC/IRQ7</i> <i>Disabled</i>	Define parallel port address and IRQ channel.  Onboard parallel port is disabled.





<u>Item</u>	<u>Option</u>	<u>Description</u>
• Parallel Port Mode	<i>SPP</i> <i>EPP</i> <i>ECP</i> <i>ECP+EPP</i>	Define the parallel port mode.
• ECP Mode Use DMA	3 1	Set ECP Mode Use DMA is 1 or 3.
• Game Port Address	<i>Disabled</i> 201,209	This option is used to configure Game Port Address.
• Midi Port Address	<i>Disabled</i> 290/300 330	This option is used to configure Midi Port Address.
• Midi Port IRQ	5/10	This option is used to configure Midi Port IRQ.
• IDE HDD Block Mode	<i>Enabled</i>  <i>Disabled</i>	Allow IDE HDD to read/write several sectors at once. IDE HDD only reads/writes a sector once.
• Init Display First	<i>PCI Slot</i> <i>AGP</i>	Initialize the PCI VGA first. Initialize the AGP first.
• AGP Auto Calibration	<i>Enabled</i> <i>Disabled</i>	Enable the AGP auto calibration. Disable the AGP auto calibration.
• System share Memory Size	4~64MB	Set the system share memory size.
• IDE0/1 Access Interface	<i>EDB BUS</i> <i>PCI BUS</i>	Access IDE0/1 using EDB BUS. Access IDE0/1 using PCI BUS.
• USB0/1/2/2.0 Access Interface	<i>EDB BUS</i> <i>PCI BUS</i>	Access USB1 using EDB BUS. Access USB1 using PCI BUS.
• MAC Access Interface	<i>EDB BUS</i> <i>PCI BUS</i>	Access MAC using EDB BUS. Access MAC using PCI BUS.
• Audio Access Interface	<i>EDB BUS</i> <i>PCI BUS</i>	Access Audio using EDB BUS. Access Audio using PCI BUS.



## PC Health Status

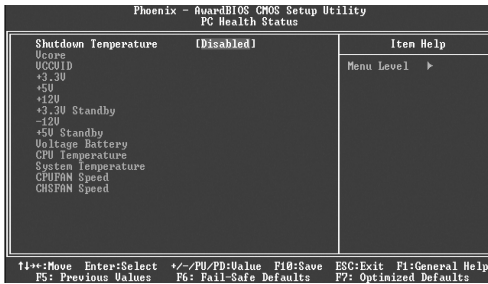


Figure-9 PC Health Status Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
<ul style="list-style-type: none"> <li>Shutdown Temperature</li> </ul>	<p>60°C/140°F 65°C/149°F 70°C/158°F 75°C/167°F</p> <p><i>Disabled</i></p>	<p>The system will shut down automatically under the ACPI OS when the CPU temperature reaches the previous setting, 60°C/140°F, 65°C/149°F, 70°C/158°F, 75°C/167°F.</p> <p>The system remains on regardless of how much the CPU temperature is.</p>
<ul style="list-style-type: none"> <li>Vcore</li> <li>VCCVID</li> <li>+3.3 V</li> <li>+5 V</li> <li>+12 V</li> <li>+3.3V Standby</li> <li>-12 V</li> <li>+5V Standby</li> </ul>		<p>Display current voltage value including all significant voltages of the mainboard.</p>
<ul style="list-style-type: none"> <li>Voltage Battery</li> </ul>		<p>Display the voltage of battery.</p>
<ul style="list-style-type: none"> <li>CPU/System Temperature</li> </ul>		<p>The temperature of CPU/System.</p>
<ul style="list-style-type: none"> <li>CPUFAN Speed</li> <li>CHSFAN Speed</li> </ul>		<p>RPM (Revolution Per Minute) Speed of fan.</p> <p>Fan speed value is based on an assumption that tachometer signal is two pulses per revolution. In other cases, you should regard it relatively.</p>



## Password Setting

When this function is selected, the following message appears at the center of the screen to assist you in creating a password.

### **ENTER PASSWORD**

Type the password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection.

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

### **PASSWORD DISABLED**

If you have selected “**System**” in “Security Option” of “BIOS Features Setup” menu, you will be prompted for the password every time the system reboots or any time you try to enter BIOS Setup.

If you have selected “**Setup**” at “Security Option” from “BIOS Features Setup” menu, you will be prompted for the password only when you enter BIOS Setup.

Supervisor Password has higher priority than User Password. You can use Supervisor Password when booting the system or entering BIOS Setup to modify all settings. Also you can use User Password when booting the system or entering BIOS Setup but can not modify any setting if Supervisor Password is enabled.

## Boot with BIOS defaults

If you have made all the changes to CMOS values and the system can not boot with the CMOS values selected in setup, clear CMOS after power-down, then power on again. System will boot with BIOS default settings.



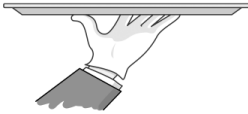


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## Chapter 4



### Driver Installation

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The mainboard supplies to you some integrated functions, such as on-board VGA, on-board AC'97 audio function, on-board network adapter and on-board USB 2.0 ports. The all drivers must be installed completely before they are started to use. This chapter provides you with the overview of the driver installation and 4-/6-channels audio function setting.

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# Driver Installation

Please follow these procedures to install drivers.

- 1, Install Windows operation system.
- 2, Insert into driver disc into CDROM drive, the installation screen appears.
- 3, If the installation screen does not appear, please open “Explorer” and run the program Setup.EXE in CD drive.
- 4, Click “Install Driver” to enter into driver installation item.

## Chipset Software

- 5, Install SIS Chipset driver
  - (1) Click “Chipset Software”.
  - (2) Welcome dialog appears, refer to Figure 5-1.

Figure 5-1



- (3) Click Next button to start installation.
- (4) The system display a dialog what about if restarting the system now after install completely, please refer the Figure 5-2

Figure 5-2



- (5) Click “No, I will restart my computer later.” and click “Finish” button.



## On-board VGA Driver

### 6. Install SIS On-board VGA driver

- (1) Click “VGA Driver”.
- (2) Installation screen is appeared, please refer the Figure 6-1.

Figure 6-1



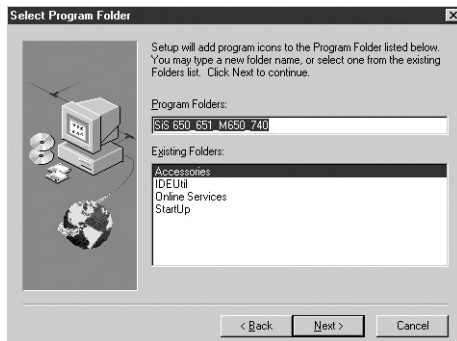
- (3) Click “Next” button, the “Setup Type” dialog appears. Please refer the Figure 6-2.

Figure 6-2



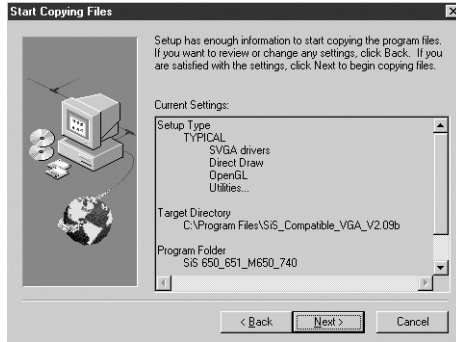
- (4) Click “Next” button, “Select Program Folder” dialog appears, please refer the Figure 6-3.

Figure 6-3



- (5) Click “Next” button, system displays “Start Copying Files” dialog, please refer the Figure 6-4.

*Figure 6-4*



- (6) Click “Next” button to start installation.
- (7) The system display a dialog what about if restarting the system now after install completely, please refer the Figure 6-5.

*Figure 6-5*



- (8) Click “No, I will restart my computer later.” and click “Finish” button.





## On-board Audio Driver

7, Install ALC audio driver (Available on -A, -6A, -AL, -6AL motherboard)

- (1) Click “Audio Driver”
- (2) Installation dialog appears, please refer the Figure 7-1.



Figure 7-1

- (3) Click “Next” button to start installation.
- (4) The system display a dialog what about if restarting the system now after install completely, please refer the Figure 7-2

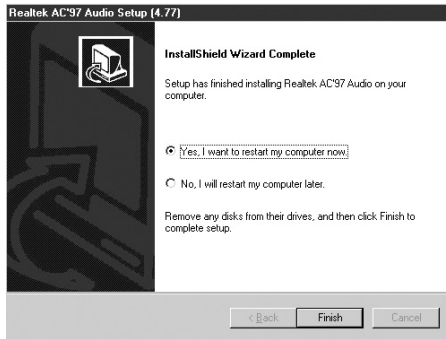


Figure 7-2

- (5) Click “No, I will restart my computer later.” and click “Finish” button.

## **On-board Network Driver**

8, Install on-board network driver (Available on -L, -AL, -6AL motherboard)

- (1) Click “Network Driver”
- (2) Welcome dialog appears, please refer the Figure 8-1.

*Figure 8-1*



- (3) Click “Next” button to start installation.
- (4) The “Insert Disk” dialog appears while the system requests the system installation CD disc. Please change into Windows installation CD disc and click “OK” button, the installation is begun.
- (5) The system display a dialog what about if restarting the system now after install completely, please refer the Figure 8-2.

*Figure 8-2*



- (6) Please choose “Yes, I want to restart my computer now.” and click “Finish” button. The system resarts.
- (7) The system appears “New Hardware found” dialog after the system is started. And the system requests the Windows installation CD disc. Please put your system CD disk into CD drive, and click “OK” to copy the system files.



## USB 2.0 Driver

9, Install USB 2.0 Driver (Depends on OS, Only Windows 2000 and Windows XP can support USB 2.0)

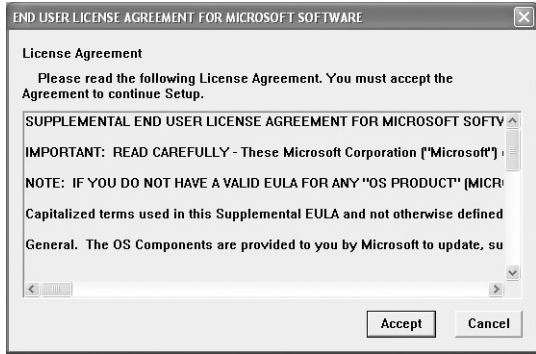
- (1) Click “USB2.0”
- (2) A dialog about SIS USB Host appears—please refer the Figure 9-1.

Figure 9-1



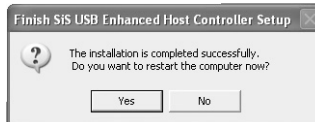
- (3) Click “Yes” button, a dialog about license appears, please refer the Figure 9-2.

Figure 9-2



- (4) Click “Accept” button to start installation.
- (5) The system display a dialog what about if restarting the system now after install completely, please refer the Figure 9-3

Figure 9-3



- (6) Please choose “Yes, I want to restart my computer now.” and click “Finish” button. The system restarts.

10, Driver installing finishes.



# Appendix

## QDI Utility CD

A QDI Utility CD is supplied with this mainboard, the contents contained in it are showed as below:

### 1. Driver Install

Using this choice, you can install all the drivers for your mainboard . You should install the drivers in order, and you need to restart your computer until all the drivers are installed.

- A. Chipset software
- B. VGA Driver
- C. USB2.0 Driver
- D. Network Driver(optional)
- E. Audio Driver(optional)
- F. DirectX

### 2. Accessory

Norton AntiVirus 2002

### 3. Browse CD

You could read all the contents contained in this CD, including Utility and Documents.

The files included in **Utility** are:

Awdflash.exe

## Norton AntiVirus

When you install Norton AntiVirus and accept options, your computer is safe. Norton AntiVirus automatically checks boot records for viruses at system startup, Checks programs for viruses at the time you use them, scans all local hard drives for viruses once per week, and monitors your computer for any activity that might indicate the work of a virus in action. It also scans files you download from the internet and checks floppy disks for boot viruses when you use them.

The list below shows the most important tasks Norton AntiVirus helps you perform:Scan for viruses on your computer;Remove viruses from your computer; Update your virus protection with LiveUpdate;Quarantine an infected file. you can go to the Symantec Web site to view an online tutorial:

<http://www.symantec.com/techsupp/tutorial>



## **Using 4/6-Channel Audio(4 Or 6 Channels Audio Interface) (Optional)** (available on -6A, -6AL mainboard)

The motherboard is equipped with Realtek ALC650 chip, which provides support for 6-channel audio output, including 2 Front, 2 Rear, 1 Center and 1 Subwoofer Channel. ALC650 allows the board to attach 4 or 6 speakers for better surround sound effect. The section will tell you how to install and use 4/6-channel audio function on the board.

### **Instaling the Audio Driver**

The Realtek ALC650 chipset driver has to be installed before the 4-/6Channel audio function can be used. Please refer the Chapter 4 for driver installation.

### **Using 4-/6-channel Audio Function**

You can start to use the 4-/6-channel audio function After the driver is installed completely. The first, you can connect 4 or 6 speakers to the audio output connector. Then open utility to set the work parameter.

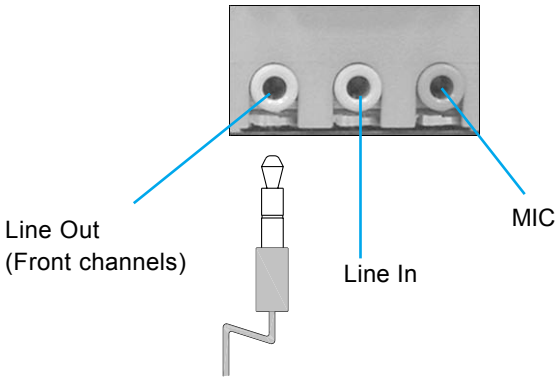
### **Attaching speakers**

To perform multichannel audio operation, connect multiple speakers to the system. You should connect the same number of speakers as the audio channels you will select in the software utility.

### **2-Channel Analog Audio Output**

The audio connectors on the back panel already provide 2-channel analog audio output function. The back panel's audio connectors can be transformed to 4/6-channel analog audio connectors automatically when you select correct setting in the software utility. For information about the setting, refet to Selecting 4- or 6-Channel Setting later in the section ,Make sure all speakers are connected to Line Out connectors. Diverse configurations for 2-, 4- and 6-channel using back panel connectors are described below.

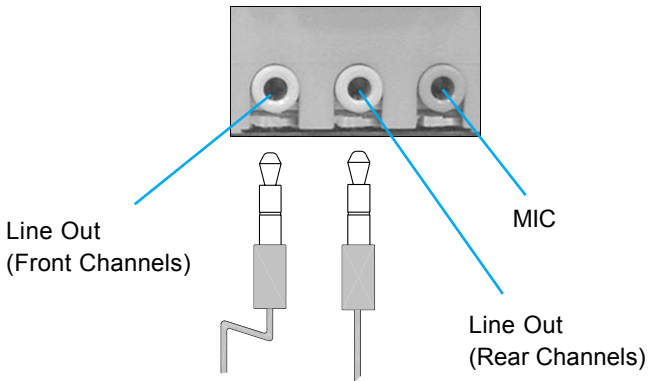




**Description:**

Line Out, Line In and MIC functions all exist under 2-channel configuration.

**4-Channel Analog Audio Output**

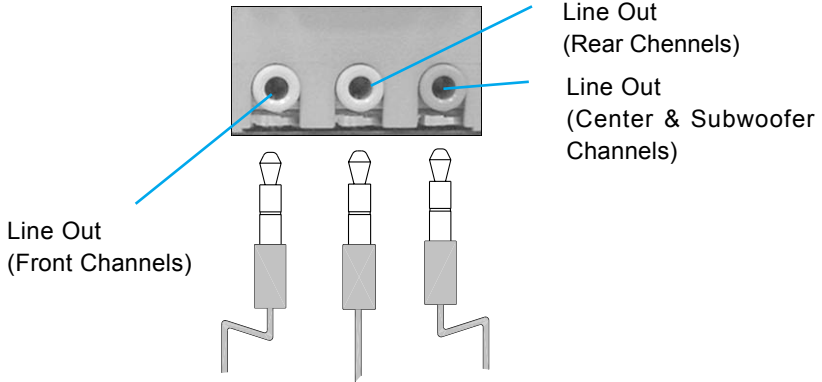


**Description:**

Line In is converted to Line Out function under 4-channel configuration.



## 6-Channel Analog Audio Output

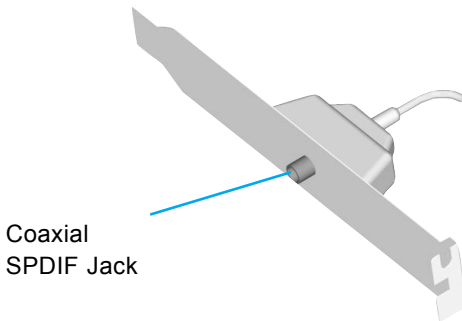


### Description:

Both Line In and MIC are converted to Line Out function under 6-channel configuration.

## Digital Audio Output

(available on -A, -6A, -AL, -6AL motherboard)




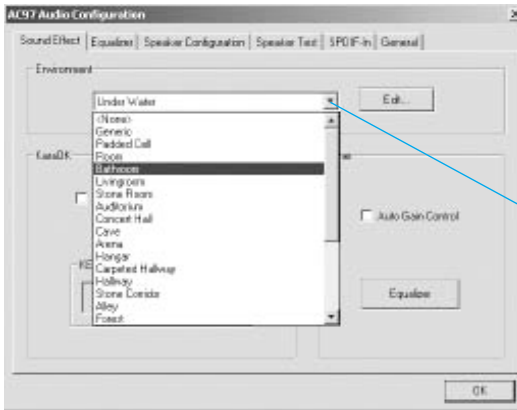
### Description:

Connect the SPDIF speakers to the Coaxial SPDIF jack.



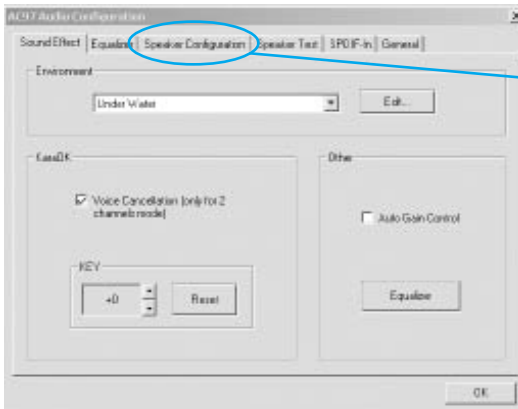
## Selecting 4- or 6-Channel Setting

1. Click the audio icon  from the window tray at the bottom of the screen.
2. Select any surround sound effect you prefer from the “Environment” pull-down menu under the Sound Effect tab.



Click here and the pull-down menu will appear

3. Click the **Speaker Configuration** tab.

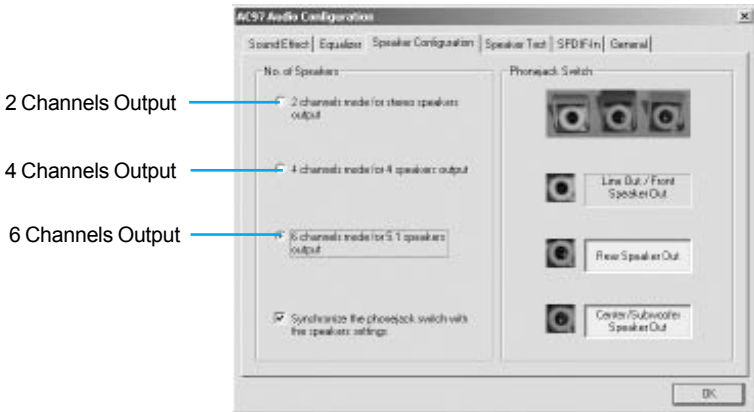


Click here





4. The following window appears.




5. Select the multi-channel operation you prefer from **No. of Speakers**.
6. Click OK

### ***Testing the Connected Speakers***

To ensure 4- or 6-channel audio operation works properly, you may need to test each connected speaker to make sure every speaker work properly. If any speaker fails to sound, then check whether the cable is inserted firmly to the connector or replace the bad speakers with good ones.

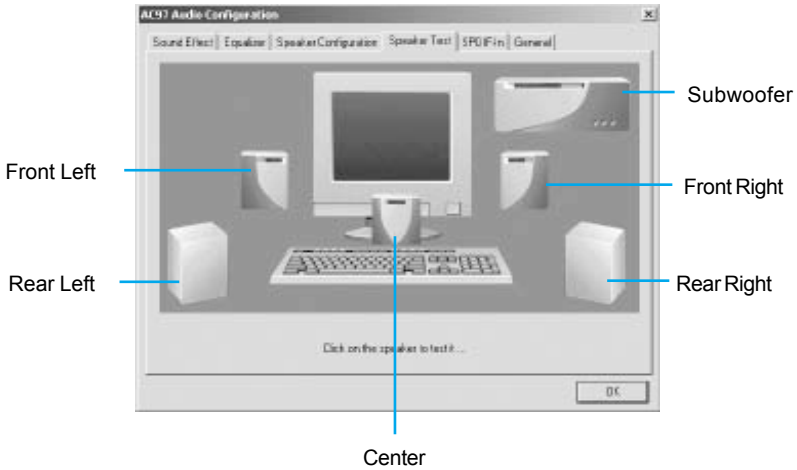
### **Testing Each Speaker**

The following window appears.

1. Click the audio icon  from the window tray at the bottom of the screen.
2. Click the Speaker Test tab.



3. The following window appears.




4. Select the speaker which you want to test by clicking on it.

### ***Playing KaraOK***

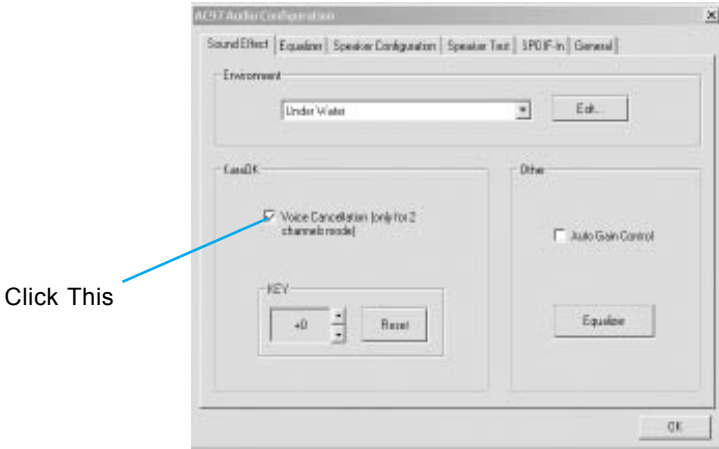
The KaraOK function will automatically remove human voice (lyrics) and leave melody for you to sing the song. **The function is applied only for 2-channel audio operation**, so make sure "2-channels mode" is selected in the "No. of Speakers" column before playing KaraOK.

### **Playing KaraOK**

1. Click the audio icon  from the window tray at the bottom of the screen.
2. Make sure the Sound Effect tab is selected.



3. Select Voice Cancellation in the “KaraOK” column.



4. Click OK.

