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.

- ☑ P5I848P series mainboard
- ☑ QDI Utility CD
- ☑ 1HD ribbon cable
- ☑ 1 FDD cable
- ☑ User's manual
- ☐ I/O shield(option)
- ☐ USB cable(option)

Notice

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If you need any further information, please visit our web-site: "**www.qdigrp.com**".

Certificate of Compliance

CE

The following products have been tested by us with the listed standards and found in compliance with the council EMC directive 89/336/EEC. It is demonstrative for the compliance with this EMC Directive.

Submittor: **QDI Technology Limited**
23Floor, Lincoln House, Taikoo Place 979 King's
Road, Quarry Bay, HONG KONG
Product: **MotherBoard**
M/N: **P5I848P**

☑ EN 55022/A1:2000   Limits and methods of measurements of radio disturbance characteristics of information technology equipment

☑ EN 61000-3-2/A14:2000   Electromagnetic compatibility(EMC)
Part 3: Limits
Section 2: Limits for harmonic current emissions (equipment input current<=16A per phase)

☑ EN 61000-3-3/A1:2001   Electromagnetic compatibility(EMC)
Part 3: Limits
Section 3: Limits of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current<=16A

☑ EN 55024/A1:2001   Information technology equipment-Immunity charac-teristics limits and methods of measurement

Signature : _Wang Dayong_   Date : 2004.02.01

Printed Name : Wang Dayong   Position: General Manager

The statement is based on a single evaluation of one sample of above mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab.logo.

Declaration of conformity

Trade Name:	QDI Computer (U. S . A.) Inc.
Model Name:	**P5I848P**
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:	**QDI TECHNOLOGY (HK) Inc.**
Address:	23Floor, Lincoln 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 : _Wang Dayong_   Date : ____2004____

CONTENTS

Chapter 1

Chapter 2

CONTENTS

Chapter 3

Appendix

Caution

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

Caution

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

Note:

This manual is suitable for P5I848P series of mainboards. Each mainboard is carefully designed for the PC user who wants different features.

-6A: with 6 channel Audio
-L: with onboard 10/100M LAN
-K: with onboard G-bit LAN

Chapter 1

Introduction

P5I848P series of mainboards utilize Intel® 848P + ICH5 chipset, providing a fully compatible, high performance and cost-effective ATX platform. The new integrated technologies, together with AC'97 audio(2/6-channel), 8 USB, 2 SATA, and ATA100/66/33, give customers an advanced, multimedia solution at reasonable price. It provides 533/800MHz host bus speed to support Intel® LGA775 processors and the DDR266/333/400 memory. It also provides advanced features such as ACPI function. Suspending to RAM, 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.

Key Features
Form factor
- ATX form factor of 295mm x 220mm

Microprocessor
- Supports Intel® LGA(Prescott) processors
- Supports 533/800MHz host bus speed

System memory
- Provides two 184-pin DDR SDRAM interfaces
- Supports DDR266/333/400 SDRAM
- Supports 128/256/512Mb technology up to 2GB

Graphics Interface
- The AGP interface Supports 1.5V signaling with 8X data transfer

Onboard IDE
- Supports Independent timing of up to 4 drives
- Supports Ultra ATA 33/66/100
- Two fast IDE interfaces supporting four IDE devices

Onboard LAN(optional)
- 10/100(available on -L mainboard)/1000(available on -K mainboard) Mbit/sec Ethernet support
- 10/100/1000M(available on -K mainboard) LAN interface built-in on board

USB 2.0
- USB 2.0 compliant, operates at 480Mbps, about 40X times faster than USB 1.1
- Provides 8 USB 2.0 ports

Onboard I/O
- One floppy port supporting up to one 3.5″ floppy drives with 1.44M format
- One high speed 16550 compatible COM with 16 byte send/receive FIFO
- One parallel port supports SPP/EPP/ECP/ECP+EPP mode
- Supports PS/2 mouse and PS/2 keyboard
- Provides one IrDA connector
- All I/O ports can be enabled/disabled in the BIOS setup

Onboard Audio
- AC'97 2.3 Specification Compliant
- Provides onboard Line-in Jack, Microphone-in Jack and Speaker-out Jack

6-channel Onboard Audio
- Provides Front left&right, Rear left&right/Line-in Jack and Center&Woofer/Micro phone-in Jack,which can be specified by software

Advanced features
- PCI 2.2 Specification Compliant
- Supports Windows 98/2000/ME/XP soft-off

Onboard SATA
- Two SATA devices including SATA HDD and CDROM/DVD ROM devices
- Supports 150Mbps transfer rate.

BIOS

- Licensed advanced AWARD(Phoenix) BIOS, supports flash ROM, plug and play ready
- Supports IDE CDROM/USB 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 (suspend to RAM), S4(suspend to Disk, depends on OS) and S5 (soft-off)

Main Expansion Slots and Connectors

| Slot/Port (Quantity)	Description
PCI(5)	PCI slots
IDE(2)	IDE ports
FLOPPY(1)	Floppy Drive port
DDR(2)	DIMM socket
USB(8)	USB connectors
AGP(1)	AGP slot
LAN(1) (optional)	LAN connector
COM(2) (optional)	COM connectors
PARALLEL(1)	Parallel connector
IrDA(1)	IrDA connector

Chapter 2

Installation Instructions

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 direction.

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.

PS/2 Mouse connector

PS/2 Keyboard connector
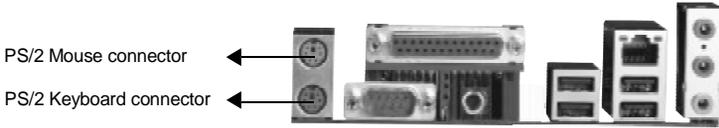
USB1, USB2,USB3,USB4 and LAN Connectors(optional)

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

LAN (optional)

USB2

USB4

USB1 USB3
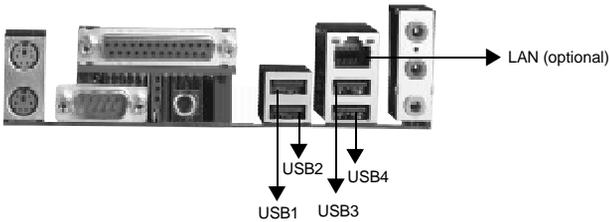
Parallel Port, Serial Port Connectors (COM1) and SPDIF Connector

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. You can enable/disable them and choose the IRQ or I/O address in "Integrated Peripherals" from AWARD BIOS SETUP. The S/PDIF (Sony / Philips Digital Interface) input allow your digital audio input from digital audio devices (optional). The S/PDIF output is capable of providing digital audio data or compressed AC3 data to an external Dolby digital decoder.

Parallel Port

COM1

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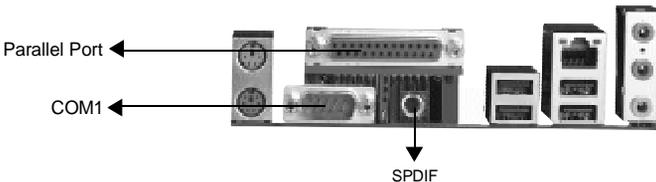
Warning: Be sure to unplug the AC power supply before adding or removing expansion cards or other system peripherals, otherwise your mainboard and expansion cards might be seriously damaged.

Line-in jack, Microphone-in jack and Speaker-out jack

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.


Line In
Speaker Out
Microphone In

6-Channel Audio

This mainboard utilizes ALC655 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 speskers, 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.
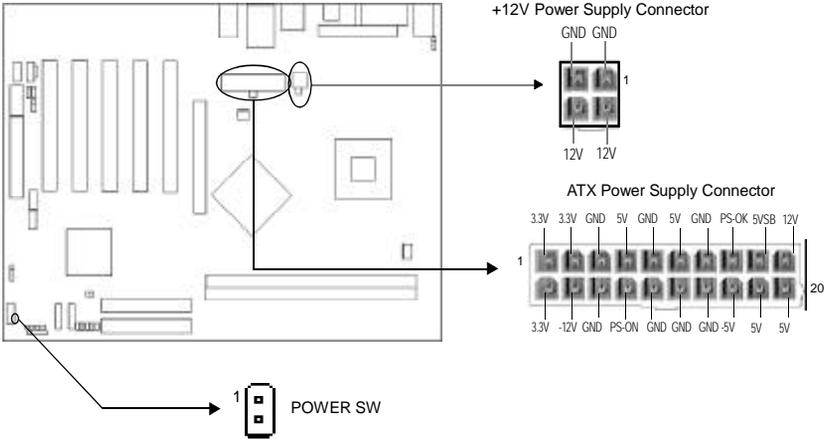
Microphone function is offered by F_AUDIO Connector on the mainboard now.

If set 2-Channel Audio mode on -6A 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.

Line in/Rear Left&Right
Speaker out/Front left&right
Microphone in/Center&Woofer
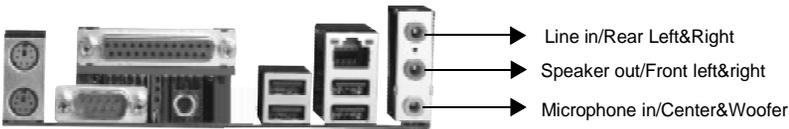
ATX 12V Power Supply Connector & Power Switch (POWER SW)

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.

+12V Power Supply Connector

GND GND

1

12V 12V

ATX Power Supply Connector

3.3V 3.3V GND   5V   GND   5V   GND PS-OK 5VSB 12V

1

20

3.3V -12V GND PS-ON GND GND GND -5V   5V   5V

1 POWER SW

Note: **I**f you change "Soft-off by PWR-BTTN" from default "Instant-off" to "Delay 4 Sec" in the "POWER MANAGEMENT SETUP" section of the BIOS, the power switch should be pressed for morethan 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.
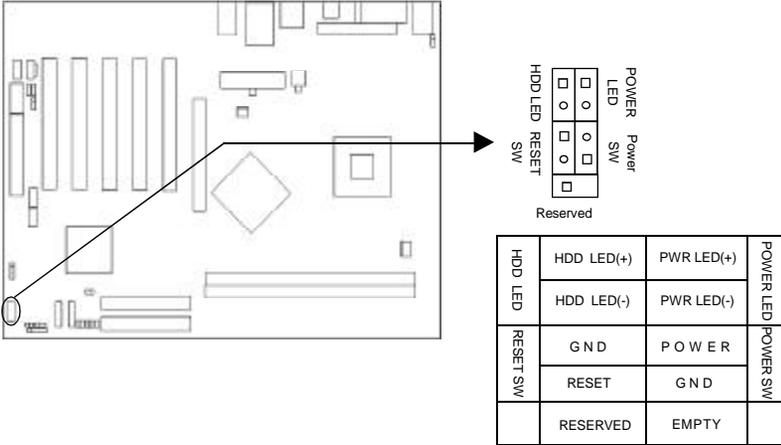
Reset Switch (RESET)

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 status, the LED is off; When the system is in S3, S4, S5 status, the LED is off. The connector has an orientation.

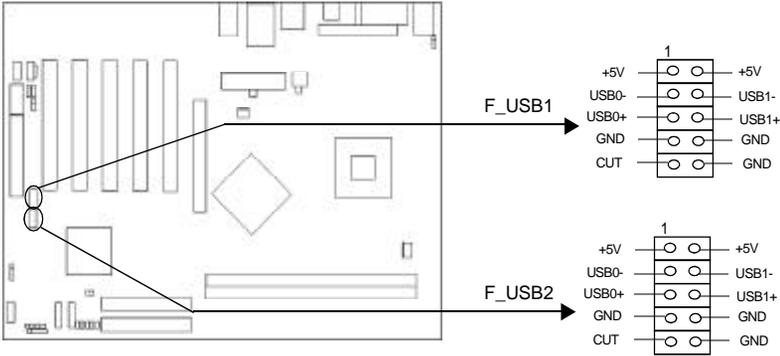|			
HDD LED	HDD LED(+)	PWR LED(+)	POWER LED
	HDD LED(-)	PWR LED(-)	
RESET SW	G N D	P O W E R	POWER SW
	RESET	G N D	
	RESERVED	EMPTY	

Fan Connectors (SYS_FAN, CPU_FAN)

The fan speed of these three fans can be detected and viewed in "PC Health" section of the CMOS SETUP.

SYS_FAN

Sensor +12V GND

CPU_FAN

GND
+12V
Sensor
Control
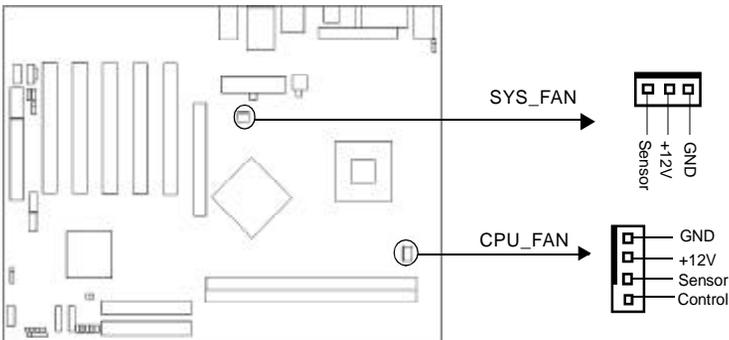
P5I848P

F_USB1; F_USB2 Connentor

Besides USB1,2,3,4 on the back panel, P5I848P series of mainboards also have two headers on board which may connect to front panel USB cable(optional) to provide additional four USB ports.


```
                      1
         +5V    ┌─ ○ ○ ─┐   +5V
        USB0-   │  ○ ○  │   USB1-
F_USB1  USB0+   │  ○ ○  │   USB1+
         GND    │  ○ ○  │   GND
         CUT    └─ ○ ○ ─┘   GND
```

```
                      1
         +5V    ┌─ ○ ○ ─┐   +5V
        USB0-   │  ○ ○  │   USB1-
F_USB2  USB0+   │  ○ ○  │   USB1+
         GND    │  ○ ○  │   GND
         CUT    └─ ○ ○ ─┘   GND
```

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 "INTE-GRATED PERIPHERALS" section of the CMOS SETUP.
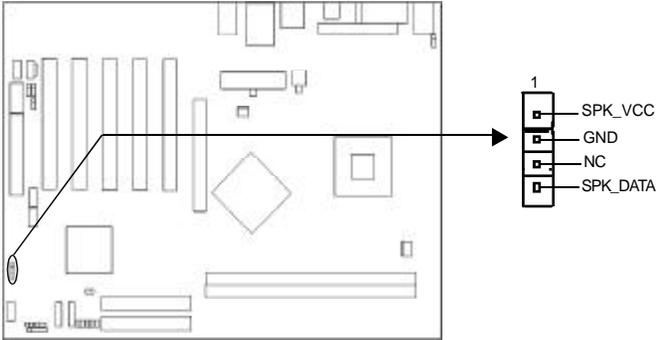


```
        VCC      IRRX    IRTX
              NC      GND
IrDA
      1 [ ▪ ▪ ▪ ▪ ▪ ]
```
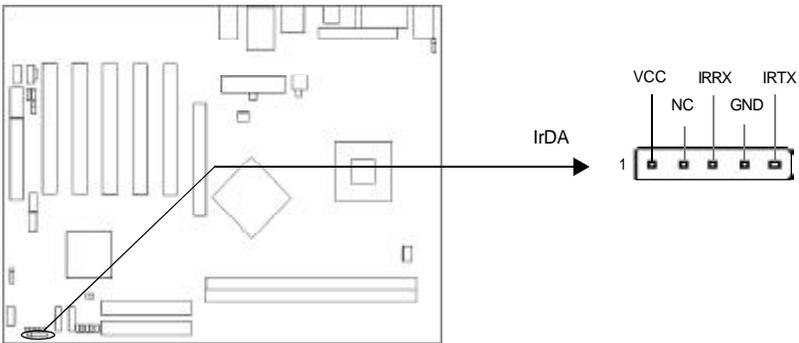
Audio Connectors (CD_IN)

CD_IN is Sony standard CD audio connector, it can be connected to a CD-ROM drive through a CD audio cable.

CD_IN

CD Right Channel
GND
CD Left Channel
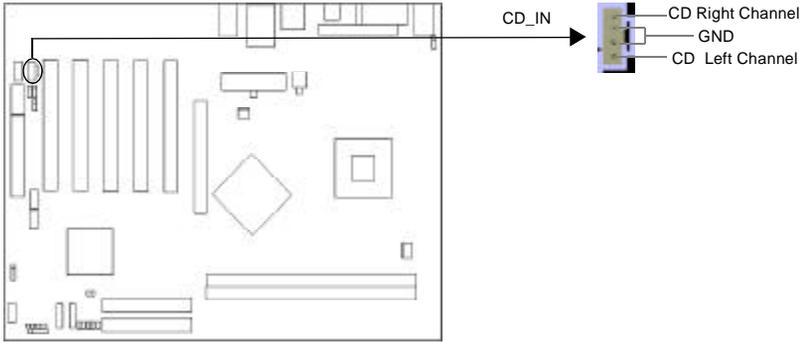
SPEAKER Connector(optional)

1

SPK_VCC
GND
NC
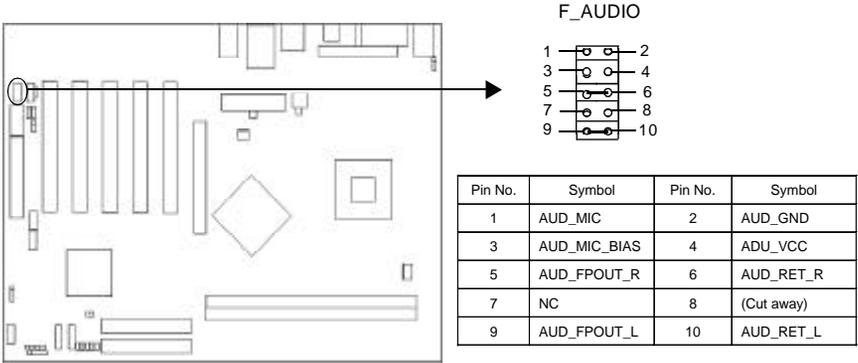SPK_DATA

Diagnosis LED(Optional)

During the POST, the LED1~LED5 representing POST steps will light up in turn. During the POST, If use the CPU of Hyper-Threading and Hyper-Threading is enable in the BIOS, the LEDs will light up in turn, then blink together. please refer to the following table to learn the POST status:

| LED1	LED2	LED3	LED4	LED5	status
blink	off	off	off	off	CPU damaged , BIOS chip absent or damaged
on	off	off	off	off	system detect CPU and initialize chipset
off	on	off	off	off	system detect memory
off	off	on	off	off	system initialize PCI
off	off	off	on	off	system initialize clockgen
off	off	off	off	on	system detect Video and invoke Video BIOS
on	on	on	on	on	Hyper-Threading OK
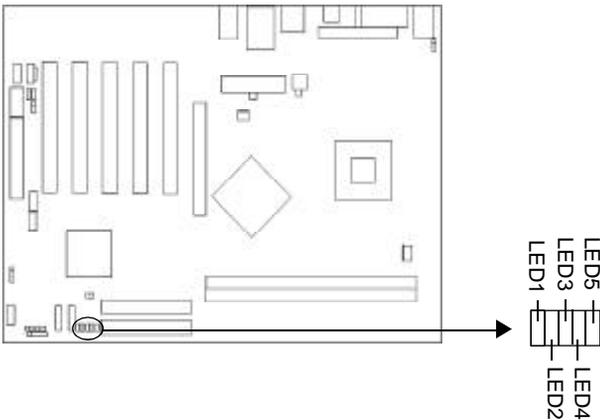
Front Audio Interface(F_AUDIO)

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.

F_AUDIO

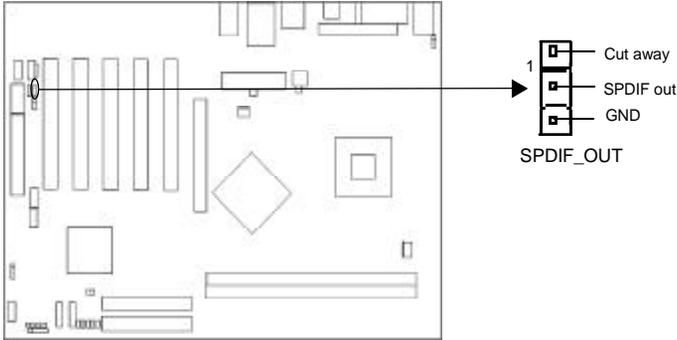| Pin No.	Symbol	Pin No.	Symbol
1	AUD_MIC	2	AUD_GND
3	AUD_MIC_BIAS	4	ADU_VCC
5	AUD_FPOUT_R	6	AUD_RET_R
7	NC	8	(Cut away)
9	AUD_FPOUT_L	10	AUD_RET_L

Onboard SATA

The mainboard provides two Serial ATA connectors, SATA is a storage interface that is compliant with SATA 1.0 Specification. With speed of up to 150Mbps. you can connect Serial ATA cable to Serial ATA hard disk.
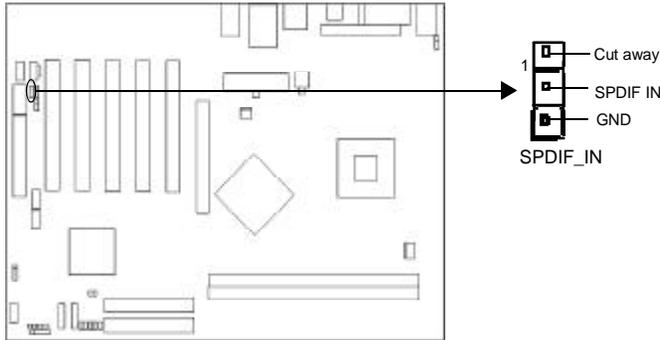
SATA1/SATA2

GND
RX+
RX-
GND
TX-
TX+
GND
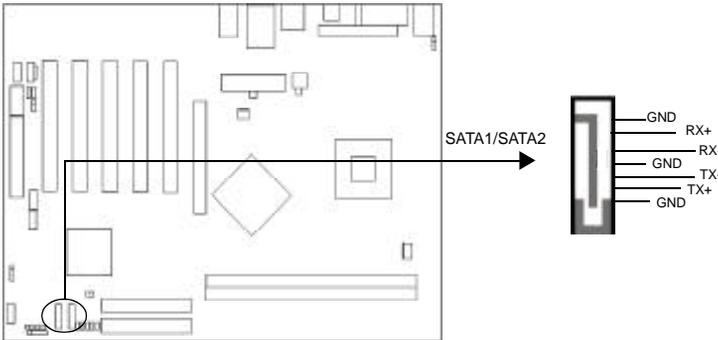
SPDIF_OUT Connector

The SPDIF output allow your digital audio input from digital audio devices.

```
1  ┌─┐── Cut away
   ├─┤── SPDIF out
   ├─┤── GND
   └─┘
   SPDIF_OUT
```

SPDIF_IN Connector

```
1  ┌─┐── Cut away
   ├─┤── SPDIF IN
   ├─┤── GND
   └─┘
   SPDIF_IN
```

Chassis Security Switch (CHSSEC)

The connector connects to the chassis security switch on the case. The system can detect the chassis intrusion through the status of this connector. If the connector has been closed once, the system will record the status and indicate the chassis has been opened. You can monitor or check this information from some software.

CHSSEC

```
Indicate signal  GND
1 [ ▫  ▫ ]
```
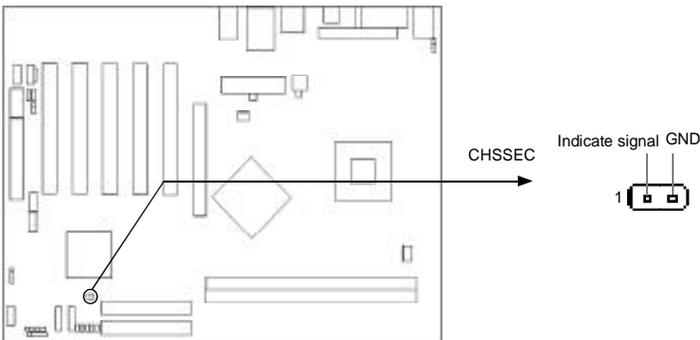
Serial Port Connector(COM2)(optional)

The serial port COM2 is not available on the back panel. Therefore, we provide a 9-pin header.

COM2(optional)

DCD ——— SIN
SOUT——— DTR
GND ——— DSR
RTS ——— CTS
RI ——— NC
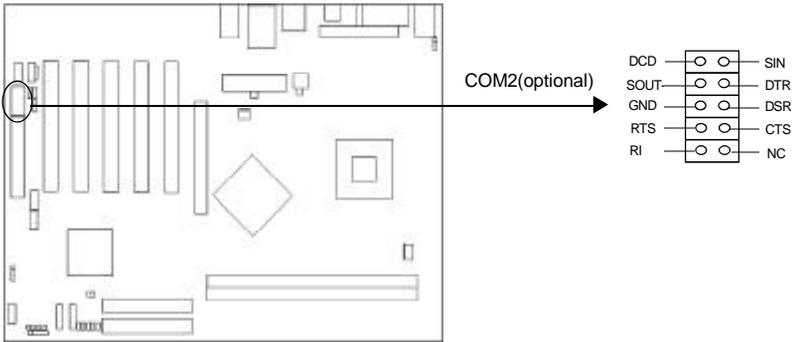
Wake-Up On Internal Modem (WOM)

Through this function, the system which is in the suspend or soft-off status can be waked up by a ring signal received from the internal modem. When this function is used, be sure an internal modem card which supports this function is used. Then connect this header to the relevant connector on the modem card, set "Power on by Ring/LAN" as Enabled 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.

1

WOM

+5V standby
Signal for waking up(active low)
GND
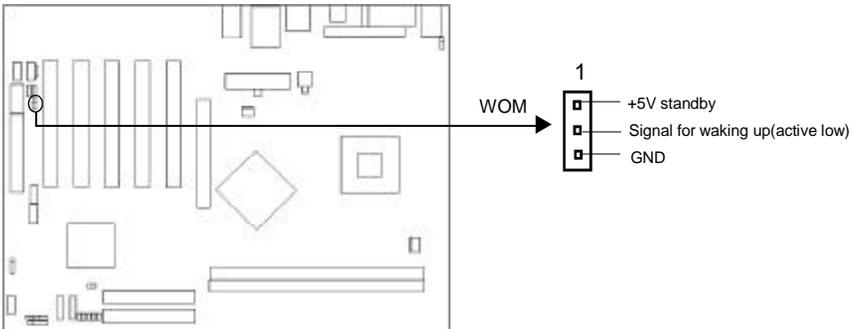
Jumper Settings

Jumpers are located on the mainboard, the clear CMOS jumper CLR_CMOS, enable keyboard password power-on function jumper JKB etc. 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
[■ ■ ■]	[■ ■ □]	1-2	set pin1 and pin2 closed
	[□ ■ ■]	2-3	set pin2 and pin3 closed
[■ ■]	[■ ■]	close	set the pins closed
	[■ ■]	open	set the pins opened

### BIOS-Protection Jumper (BIOS_WP)

The BIOS of the mainboard is inside the FWH. If the jumper BIOS_WP 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 in this status.

BIOS_WP

Flash Write Disabled [■ ■]

Flash Write Enabled [■ ■]
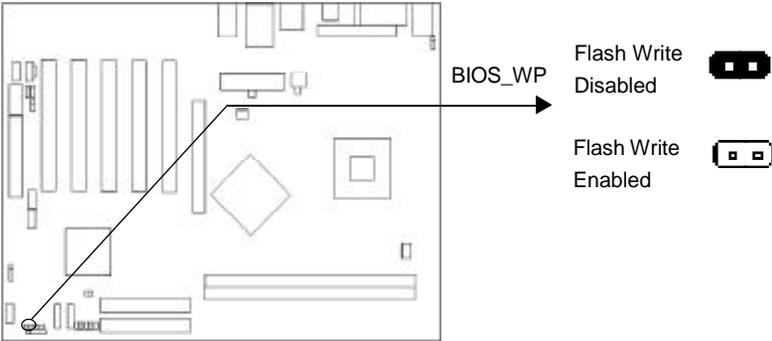
The DMI (Desktop Management Interface) system information such as the CPU type/ speed, memory size, and expansion cards will be detected by the onboard BIOS and stored in the flash ROM. Whenever the system hardware configuration is changed, DMI information will be updated automatically. However, setting jumper BIOS_WP as closed makes flashing BIOS and updating DMI information impossible. Therefore, set BIOS_WP 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.

Enable keyboard password power-on function (JKB)(optional)

The mainboard provides the advanced keyboard password power-on function. Before using this function, set JKB with pin1 & pin2 closed. Otherwise, set JKB with pin2 & pin3 closed for disabling.

JKB

Disable
1
2
3

Enable
1
2
3
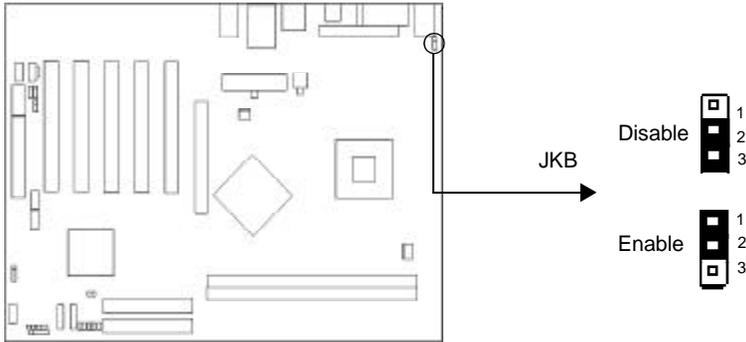
Furthermore in order to implement this function, set "POWER ON Function" to "Password" and enter the keyboard power-on password in the "INTEGRATED PERIPHERALS" section of the CMOS SETUP. Save and exit, then power off your system. In this case, the power button's power-on function is disabled.

Note: 1. If using this function, 5VSB line of the power supply should be capable of delivering enough current for all the devices con nected to the keyboard port, if not, you will be unable to power up the system using the keyboard.

2. If you set JKB with pin2 & pin3 closed, set "POWER ON Func tion" to BUTTON ONLY, don't set it to Password, or you'll be unable to power up your system by the keyboard or the power button.

3. If you encounter the above problems, clear CMOS and set the jumper pin2 and pin3 closed to disable the function,them power on the system by pushing the power button,and set "power on Fuction" back to "Button Only".

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.

Normal status

CLR_CMOS

(Unplug the AC power supply)
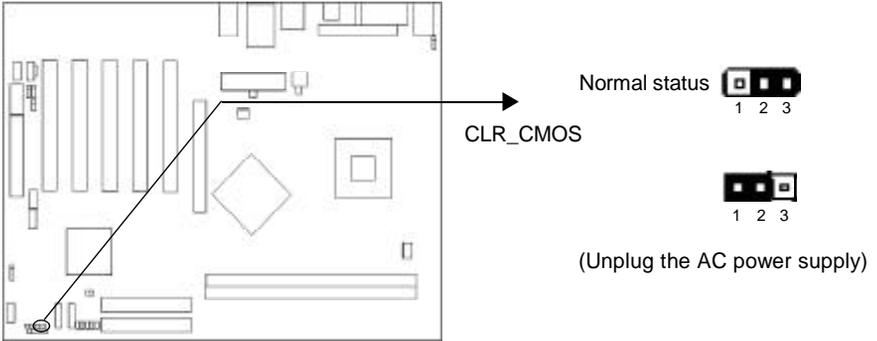
Chapter 3

BIOS Description

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 CMOS RAM so it retains the Setup information even if the power is turned off. This chapter provides you with the overview of the BIOS Setup.

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 after our current mainboard, you may therefore upgrade the BIOS, please don't forget to set BIOS_WP as open and disable the "Flash Write Protect" item in AWARD BIOS CMOS Setup 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>=8.24) from the directory \Utility located on QDI Driver CD to 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 motherboard.

4. Decompress the file download, copy the BIOS file (xx.bin) to 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

Follow the instruction through the process. Don't turn off power or reset the system until the BIOS upgrade has been completed.

If you require more detailed information concerning AWDFLASH Utility, for example, the different usage of parameters, please type A:\>AWDFLASH /?

Note: Because the BIOS Software will be updated constantly, the following BIOS screens and descriptions are for reference purposes only and may not reflect your BIOS screens exactly.

AWARD 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

When you have entered, the Main Menu appears on the screen. Use the arrow keys to select among the items and press the <Enter> key to accept or enter the sub-menu.

Main Menu

Standard CMOS Features Setup

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

QDI Innovation Features

This section describes QDI innovation EASY technology.

Advanced BIOS Features

This section allows you to configure your system for basic operation. You have the opportunity to select the system's default speed, boot-up sequence, keyboard operation, shadowing and security.

Advanced Chipset Features

The chipset features setup is used to change the values of the chipset registers. The registers control most of the system options in the computer.

Power Management Setup

The power management setup menu allows you to configure system to most save energy while operating in a manner consistent with your own style of computer use.

PnP/PCI Configurations

This section describes how to configure the PCI bus system. This section covers some very technical items and it is recommended that only experienced users should make any changes to the default setting.

Integrated Peripherals

The integrated peripherals setup allows user to configure the onboard IDE controller, floppy disk controller, the printer port and the serial ports etc..

PC Health Status

The PC health status display CPU and case fan speed.

Set Supervisor/User Password

Changes, sets, or disables password. It allows you to limit access to the system and the setup program.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.

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.

Save & Exit Setup

Saves value changes to CMOS and exits setup.

Exit Without Saving

Abandons all CMOS value changes and exits setup.

Note: if you need detailed information about BIOS, please view them in the CD.

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.   USB2.0 Driver
C.   Network Driver(optional) D.   Audio Driver
E.   DirectX

2. Accessory

A.   QFlashV1.0

3. Browse CD

You could read all the contents contained in this CD, including Utility and Documents. The files included in Utility are:

A.   Awdflash.exe   B.   Cblogo.exe
C.   Lf.exe

The files included in Documents are:

A.   Adobe Acrobat Reader V5.0

LogoEasy II

LOGOEASY II supports the high-resolution 640x480 or 800x600 image display and full-screen, top right corner or bottom right corner display. It also supports simultaneous display of logo and sign-on message of the BIOS testing system. LOGOEASY II is a tool that can be operated in multi-platforms to refresh and change LOGO graphics including DOS, WINDOWS 9X, WINDOWS NT, WINDOWS ME and WINDOWS XP.

BIOS_ProtectEasy

The BIOS of the mainboard is contained inside the Flash ROM. Severe viruses such as CIH virus are so dangerous that it may overwrite the BIOS of the mainboard. If the BIOS has been damaged, the system will be unable to boot. We provide the following solution which protects the system BIOS from being attacked by such viruses.

RecoveryEasy II

RecoveryEasy II — the latest edition of RecoveryEasy, providing a more easy-tooperate and more secure and reliable tool for backing up and recovering the hard disk data. It will make your data on the hard disk more secure, and make your computer more reliable. RcoveryEasy II will bring you invaluable experiences. It allows you to experience unprecedented security and reliability with its one-hotkey backup, one-hotkey recovery and powerful virus-free functions.

SpeedEasyII

SpeedEasy II — has just recommended is the upgraded edition of SpeedEasy In addition to some functions of SpeedEasy, including the wire jumper-free function, the users can also realize in the BIOS setup the CPU core voltage adjustability. This doubtless renders a quicker and easier mode for overclocking and will further help the users to tap the maximum potentiality of the system.

BootEasy

BootEasy technology enormously improves the long BOOT process time of computers. Reducing the wait time every user has to suffer when starting their computer. BIOS without BootEasy has to perform many routines every time when the system starts, such as checking system core of the computer and initializing system peripherals. Now with the BootEasy, BIOS will not run these repetitive Processes any longer , PC can boot-up without any redundant waiting for the displaying of starting OS. BootEasy save all the information when PC first normally boot-up, and it restores all the parameters for the system and thus let the PC boot freely and rapidly.

Note: if you need detailed information about Easy technology, please view them in the CD or visit our web-site: www.qdigrp.com.

TurboEasy

Procedures:

1. Connect the reset cable of your PC to the turbo switch in front panel.
2. Switch on power to the system and press the <Del> key to enter BIOS setup.
3. Enter"QDI Innovation Features" menu, then enable the "TurboEasy Support" item and select the Turbo CPU frequency.
4. Press the turbo switch to enable the frequency you selected in CMOS.

Using 4-/6-Channel Audio(4-/6- Channel Audio Interface)

The motherboard is equipped with Realtek ALC655 chip, which provides support for 6-channel audio output, including 2 Front, 2 Rear, 1 Center and 1 Subwoofer channel. ALC655 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.

Installing the Audio Driver

The Realtek ALC655 chipset driver has to be installed before the 4-/6-Channel audio function can be used.

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.
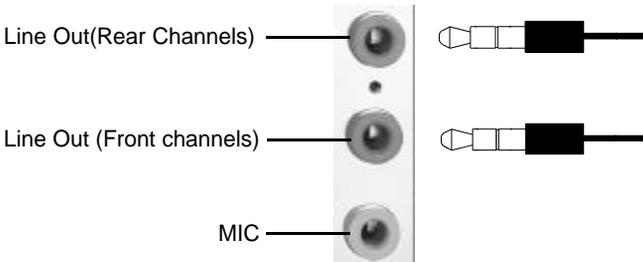
Attaching speakers

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
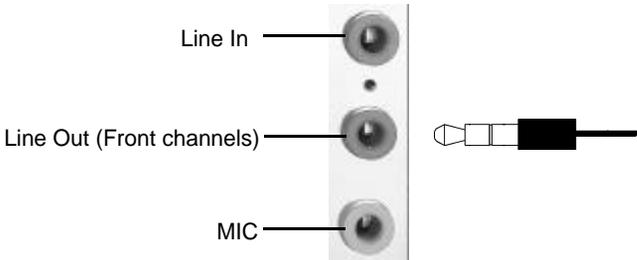
Description: Line Out, Line In and MIC functions all exist under 2-channel configuration.
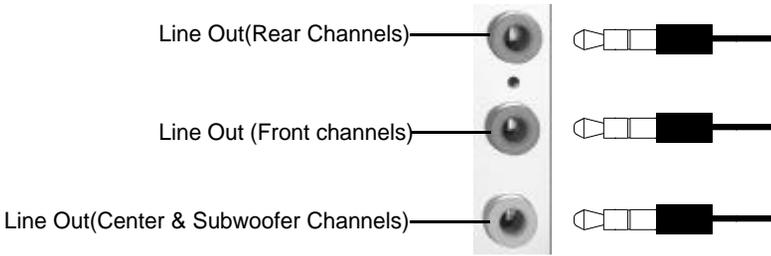
4-Channel Analog Audio Output

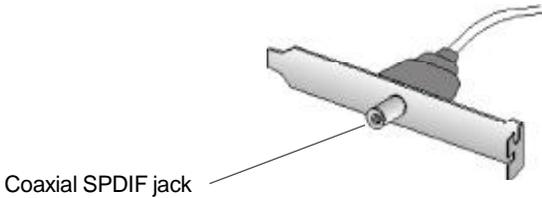**Description:** Line In is converted to Line Out function under 4-channel configuration.

P5I848P

6-Channel Analog Audio Output

Line Out(Rear Channels)

Line Out (Front channels)

Line Out(Center & Subwoofer Channels)

Description: Both Line In and MIC are converted to Line Out function under 6-channel configuration.
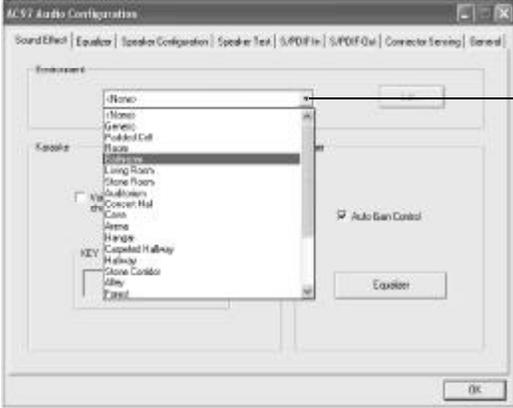
Digital Audio Output
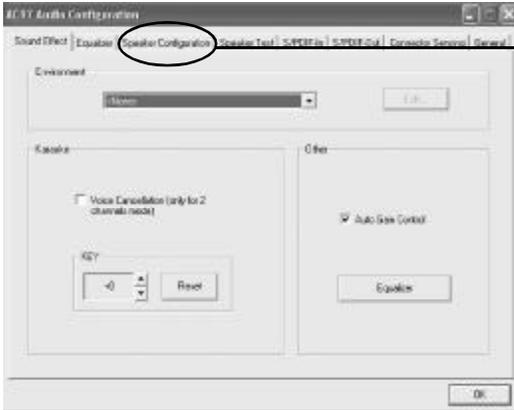
Coaxial SPDIF jack

Description:

Connnet the SPDIF speakers to the Coaxial SPDIF jack.
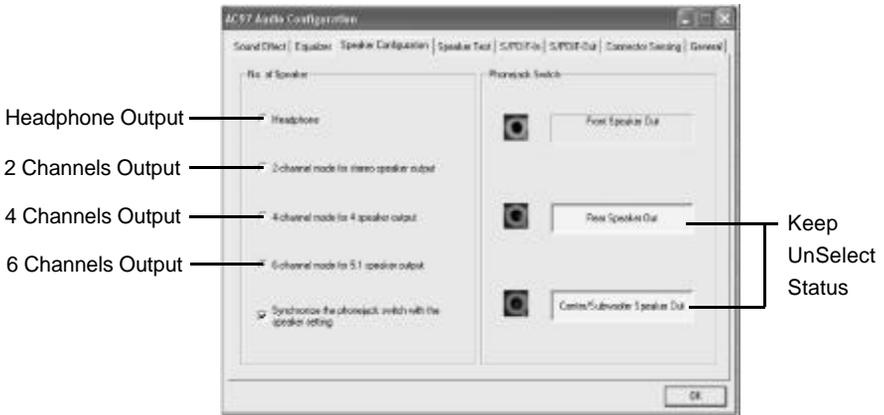
Selecting 4- or 6-Channel Setting

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.

Headphone Output

2 Channels Output

4 Channels Output

6 Channels Output

Keep
UnSelect
Status

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

1. Click the audio icon [icon] from the window tray at the bottom of the screen.

2. Click the **Speaker Test** tab.

3.   The following window appears.

Center

Front Left

Front Right

Rear Left

Rear Right

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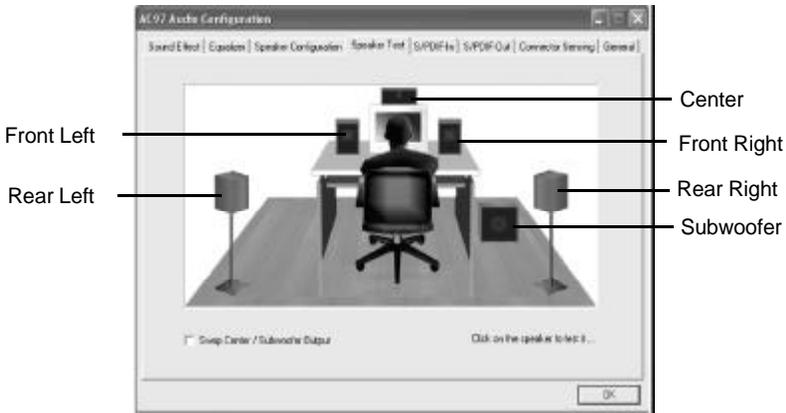
4.   Select the speaker which you want to test by clicking on it.

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.

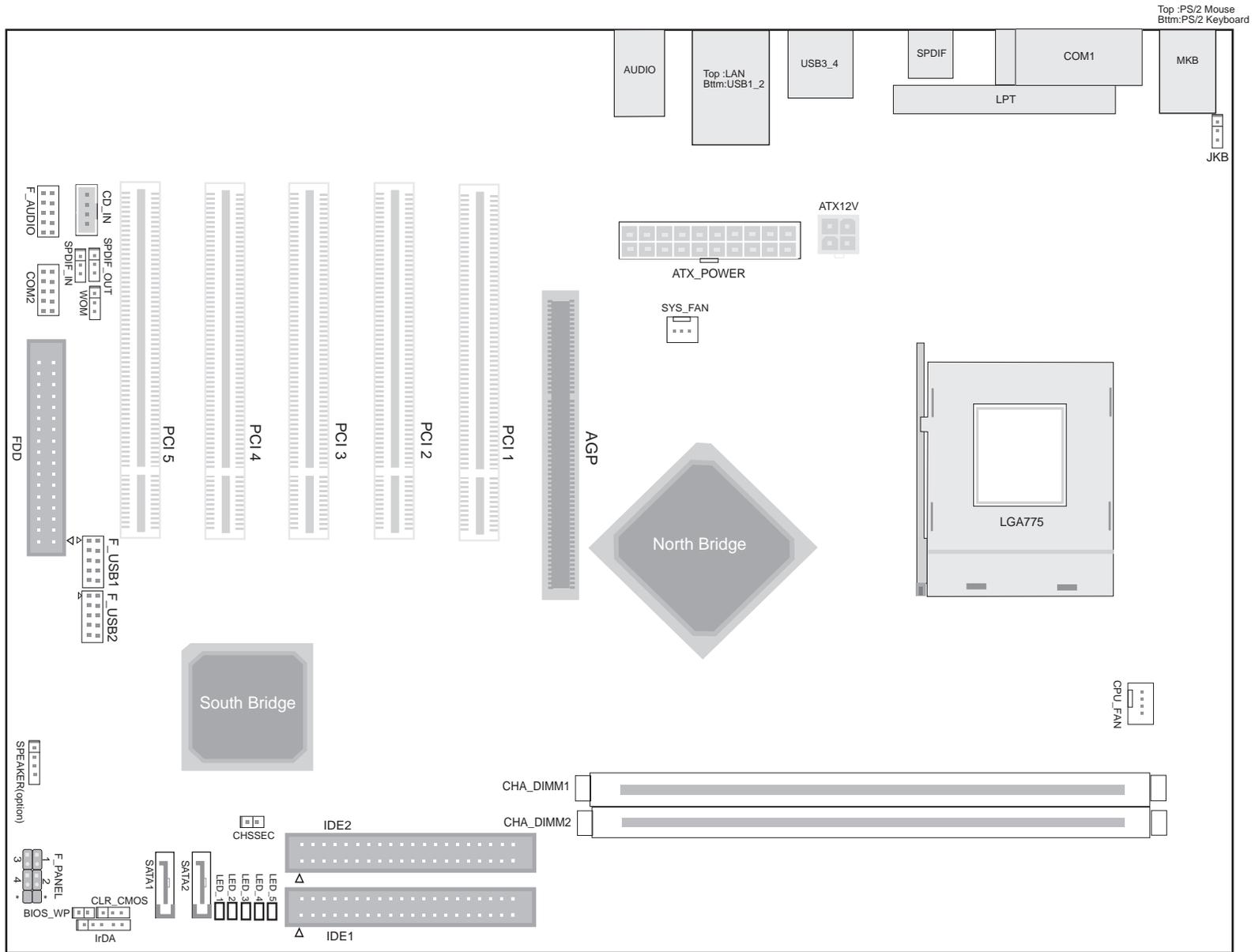3. Select **Voice Cancellation** in the "Karaoke" column.

Click This
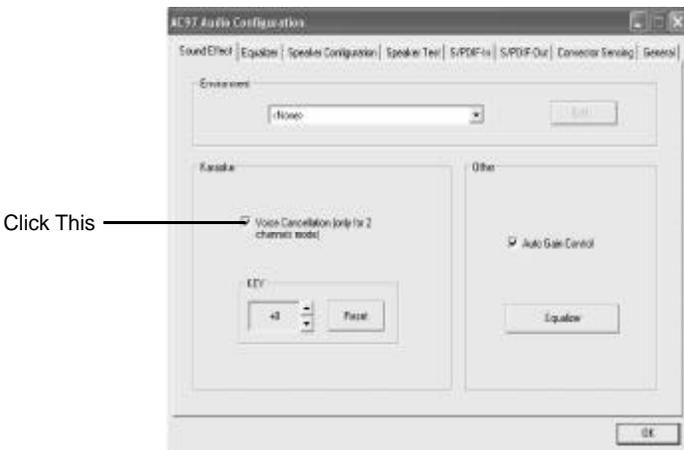
4.   Click **OK**.

Mainboard Layout
P5I848P

Note:
The layout includes all options.
It is for your reference only.

Top :PS/2 Mouse
Bttm:PS/2 Keyboard

AUDIO

Top :LAN
Bttm:USB1_2

USB3_4

SPDIF

COM1

MKB

LPT

JKB

F_AUDIO

CD_IN

SPDIF_OUT

SPDIF_IN

WOM

COM2

ATX12V

ATX_POWER

SYS_FAN

FDD

PCI 5

PCI 4

PCI 3

PCI 2

PCI 1

AGP

North Bridge

LGA775

F_USB1

F_USB2

South Bridge

CPU_FAN

CHA_DIMM1

CHA_DIMM2

SPEAKER(option)

CHSSEC

IDE2

F_PANEL

3

1

4

2

*

*

BIOS_WP

SATA1

SATA2

CLR_CMOS

LED_1

LED_2

LED_3

LED_4

LED_5

IrDA

IDE1

Note: pin1 for a jumpers are located on the side with black line.
1. PWR_LED   2. PWR_SW   * EMPTY   3. HDD_LED   4. RESET   * RESERVED