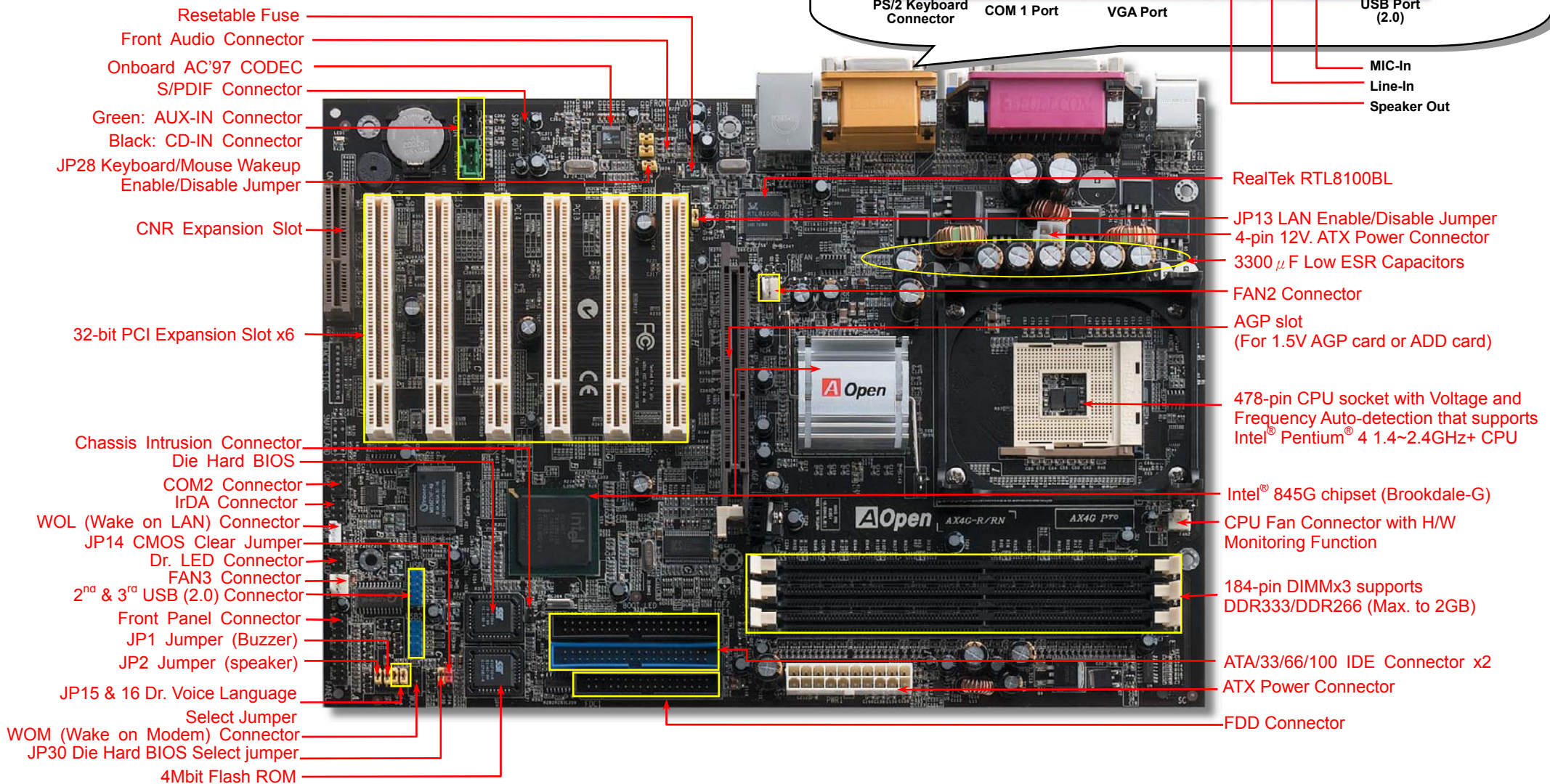
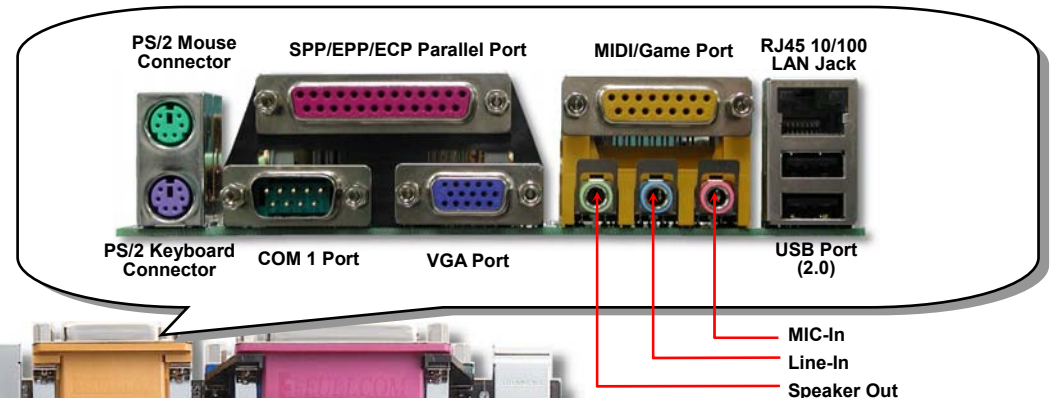


## AX4G Pro



# Before You Start



Everything you need to boot this motherboard is included in this Easy Installation Guide. For more information, a complete **Online User's Manual** can be found in the **Bonus Pack CD Disc**. Thanks for the help of saving our earth.

## Accessory Checklist

- ☒ This Motherboard x1
- ☒ This Easy Installation Guide x1
- ☒ User Manual x 1
- ☒ 40-wire IDE Cable x1
- ☒ 80-wire IDE Cable x1
- ☒ Floppy Disk Drive Cable x1
- ☒ I/O Shield x1
- ☒ Bonus Pack CD x1
- ☒ NORTON AntiVirus CD x1
- ☒ S/PDIF Module x1 (User Upgrade Optional)



PART NO: 49.88N10.E02

DOC. NO: AX4GP-EG-E0206B

## 1. JP14 Clear CMOS

You can clear CMOS to restore system default setting. To clear the CMOS, follow the procedure below.

1. Turn off the system and unplug the AC power.
2. Remove ATX power cable from connector PWR2.
3. Locate JP14 and short pins 2-3 for a few seconds.
4. Return JP14 to its normal setting by shorting pin 1 & pin 2.
5. Connect ATX power cable back to connector PWR2.



Pin 1



Normal Operation  
(default)



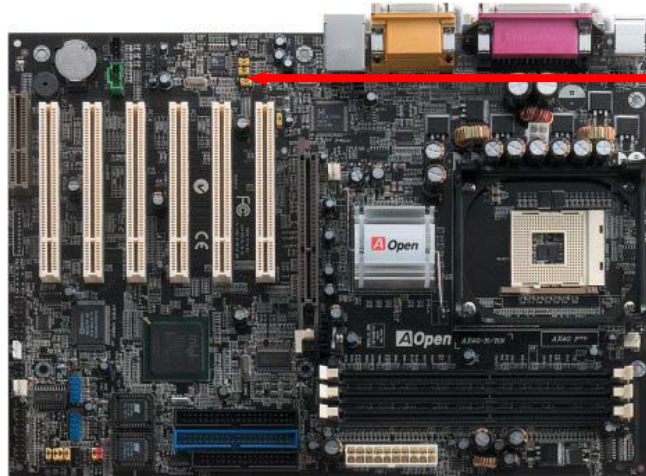
Clear CMOS

**Tip:** When should I Clear CMOS?

1. Boot fail because of overclocking...
2. Forget password...
3. Troubleshooting...

## 2. JP28 Keyboard/Mouse Wake-up Enable/Disable Jumper

This motherboard provides keyboard / mouse wake-up function. You can use JP28 to enable or disable this function, which could resume your system from suspend mode with keyboard or mouse installed. The factory default setting is set to "Disable"(1-2), and you may enable this function by setting the jumper to 2-3.



JP28

KB/Mouse Wake-up



Disable  
(Default)

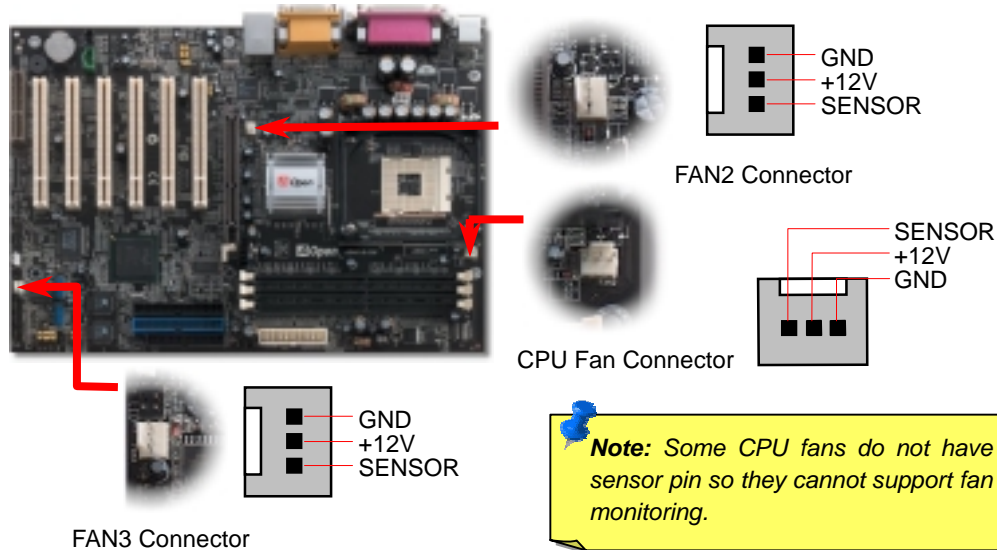


Enable

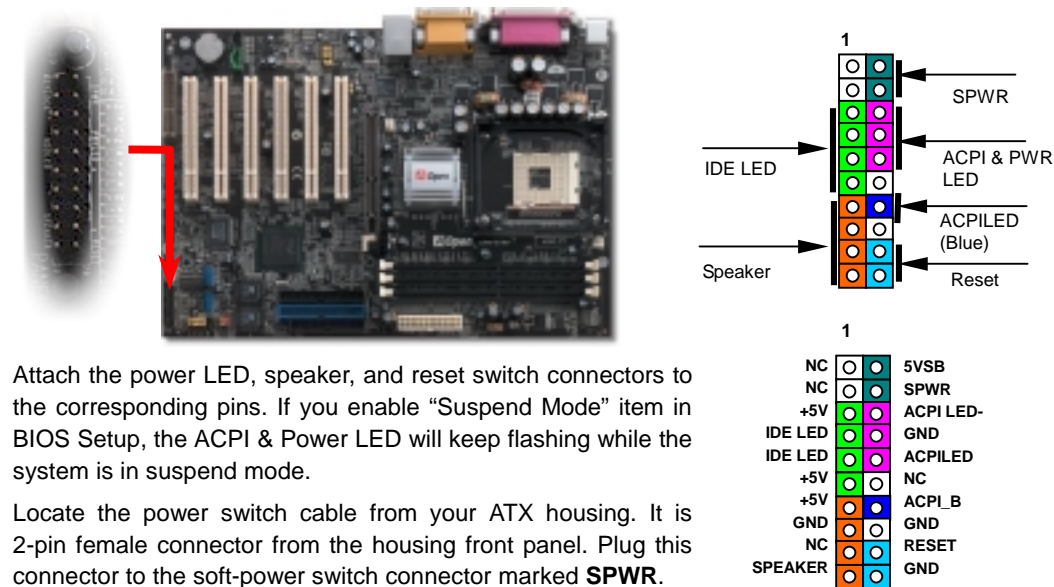


### 3. Installing CPU & System Fan

Plug in the CPU fan cable to the 3-pin **CPU FAN** connector. If you have chassis fan, you can also plug it on **System Fan** (FAN2) or **FAN3** (AUX Fan) connector.



### 4. Connecting Front Panel Cable



Attach the power LED, speaker, and reset switch connectors to the corresponding pins. If you enable "Suspend Mode" item in BIOS Setup, the ACPI & Power LED will keep flashing while the system is in suspend mode.

Locate the power switch cable from your ATX housing. It is 2-pin female connector from the housing front panel. Plug this connector to the soft-power switch connector marked **SPWR**.

### 5. Setting CPU Voltage & Frequency

#### Setting CPU Core Voltage

This motherboard supports CPU VID function. The CPU core voltage will be automatically detected and the range is from 1.10V to 1.85V. It is not necessary to set CPU core voltage.

#### Setting CPU Frequency

This motherboard is CPU jumper-less design, you can set CPU frequency through the BIOS setup, and no jumpers or switches are needed.

**BIOS Setup > Frequency / Voltage Control > CPU Speed Setting**

**Core Frequency = CPU FSB Clock \* CPU Ratio**

CPU Ratio	8x, 9x, 10x... 21x, 22x, 23x, 24x
CPU FSB	100~248MHz

Northwood CPU	CPU Core Frequency	FSB Clock	System Bus	Ratio
Pentium 4 1.6G	1600MHz	100MHz	400MHz	16x
Pentium 4 1.6G	1600MHz	133MHz	533MHz	12x
Pentium 4 1.7G	1700MHz	133MHz	533MHz	13x
Pentium 4 1.8G	1800MHz	100MHz	400MHz	18x
Pentium 4 2.0G	2000MHz	100MHz	400MHz	20x
Pentium 4 2.2G	2200MHz	100MHz	400MHz	22x
Pentium 4 2.4G	2400MHz	100MHz	400MHz	24x
Pentium 4 2.4G	2400MHz	133MHz	533MHz	18x

Willamette CPU	CPU Core Frequency	FSB Clock	System Bus	Ratio
Pentium 4 1.5G	1500MHz	100MHz	400MHz	15x
Pentium 4 1.6G	1600MHz	100MHz	400MHz	16x
Pentium 4 1.7G	1700MHz	100MHz	400MHz	17x
Pentium 4 1.8G	1800MHz	100MHz	400MHz	18x
Pentium 4 1.9G	1900MHz	100MHz	400MHz	19x
Pentium 4 2.0G	2000MHz	100MHz	400MHz	20x

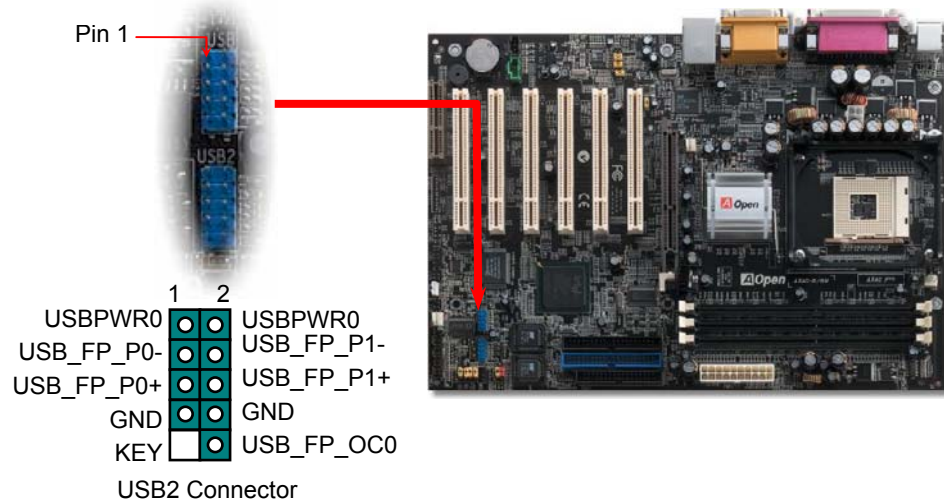
**Warning:** Intel® 845 G chipset supports maximum 400/533MHz (100/133MHz\*4) system bus and 66MHz AGP clock; higher clock setting may cause serious system damage.

**Note:** Since the latest processor, Northwood, would detect the clock ratio automatically, you may not be able to adjust the clock ratio in BIOS manually.



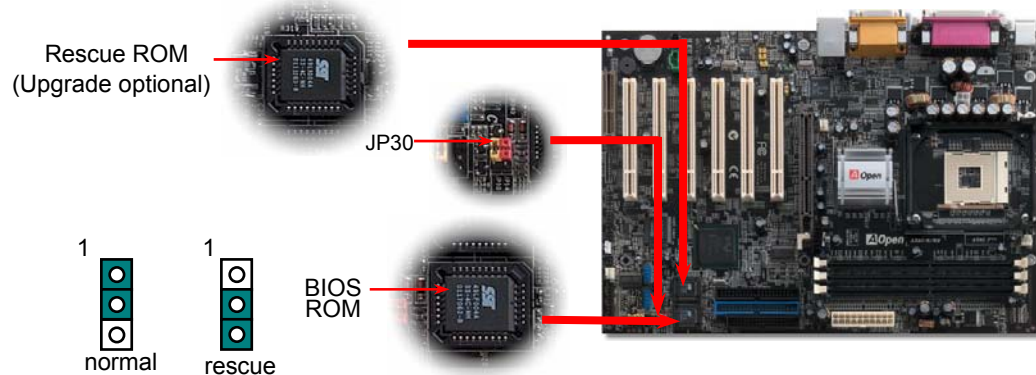
## 6. Support Six USB Connectors (2.0)

This motherboard provides six USB2.0 connectors. Compared to traditional USB 1.0/1.1 with the speed of 12Mbps, USB 2.0 has a fancy speed up to 480Mbps, which is 40 times faster than the traditional one.



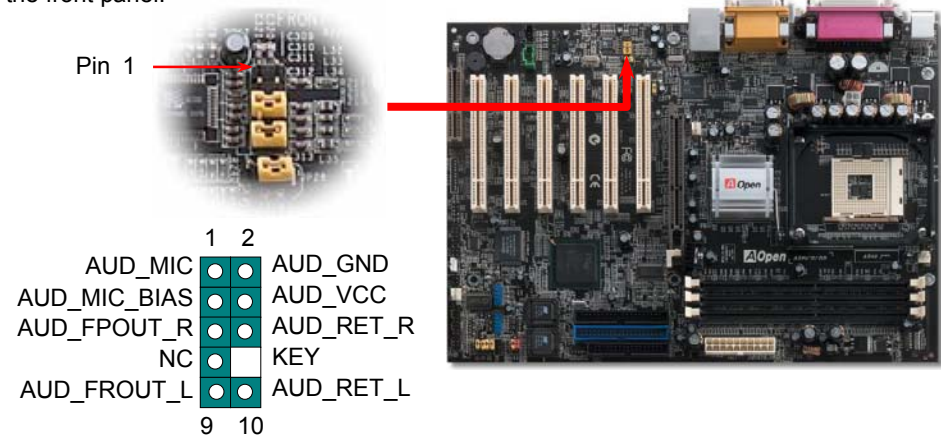
## 7. Die-Hard BIOS (User Upgrade Optional)

Recently, many viruses have been found that they may destroy bios code and data area. Therefore, this motherboard implements a very effective hardware protection method that does not involve any software or BIOS coding, hence it is 100% virus free. You may restore the originally mounted BIOS with 2<sup>nd</sup> BIOS ROM by setting JP30 to pin 2-3 if it fails to act normally. This motherboard comes with one BIOS ROM, you may contact our local distributor or reseller for purchasing the extra BIOS ROM. Please visit our website: [www.aopen.com](http://www.aopen.com) for details.



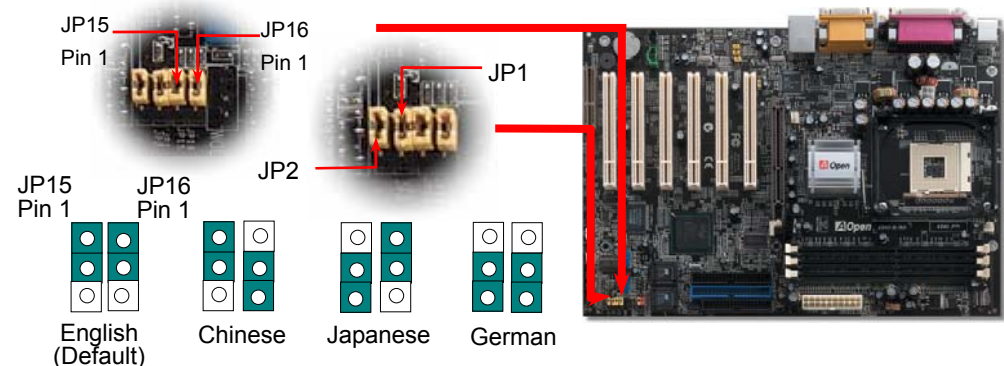
## 8. Front Audio Connector

If the housing has been designed with an audio port on the front panel, you'll be able to connect onboard audio to front panel through this connector. By the way, please remove 5-6 and 9-10 jumper caps from the Front Audio Connector before connecting the cable. Please do not remove these 5-6 and 9-10 yellow jumper caps if there's no audio port on the front panel.



## 9. Dr. Voice

The **Dr. Voice** is a great feature of AX4G Pro motherboard, which can identifies what kind of problems had occurred in the operating system. It can even clearly "tell" whether there is a component issue or an installed issue, such as CPU, memory module, AGP, PCI add-on card, FDD, HDD or keyboard by voice. The Dr. Voice provides four kinds of language versions, **English, German, Japanese and Chinese** for your choosing. You can select preferred language version by **JP15 & JP16** jumpers. However, if you want to disable this function, you may also set JP1 and JP2 to pin 2-3 to disable to buzzer and speaker from making out voices respectively.

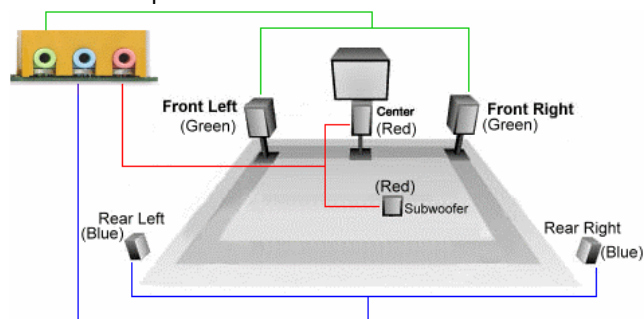




**NEW!**

## 10. Super 5.1 Channel Audio Effects

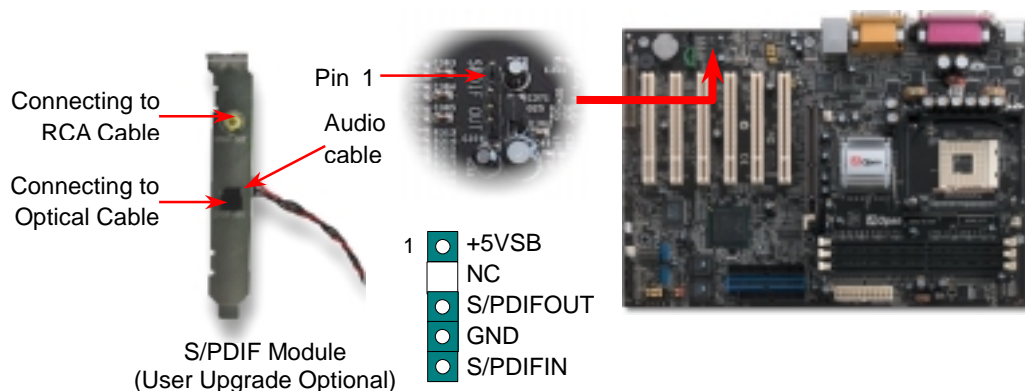
This motherboard comes with an ALC650 CODEC, which supports high quality of 5.1 Channel audio effects, bringing you a brand new audio experience. On the strength of the innovative design of ALC650, you're able to use standard line-jacks for surround audio output without connecting any external module. To apply this function, you have to install the audio driver in the Bonus Pack CD as well as an audio application supporting 5.1 Channel. Picture below represents the standard location of all speakers in 5.1 Channel sound track. Please connect the plug of your front speakers to the green "Speaker out" port, rear speakers' plug to the blue "Line in" port and both of the center and subwoofer speakers to the red "MIC in" port.



**NEW!**

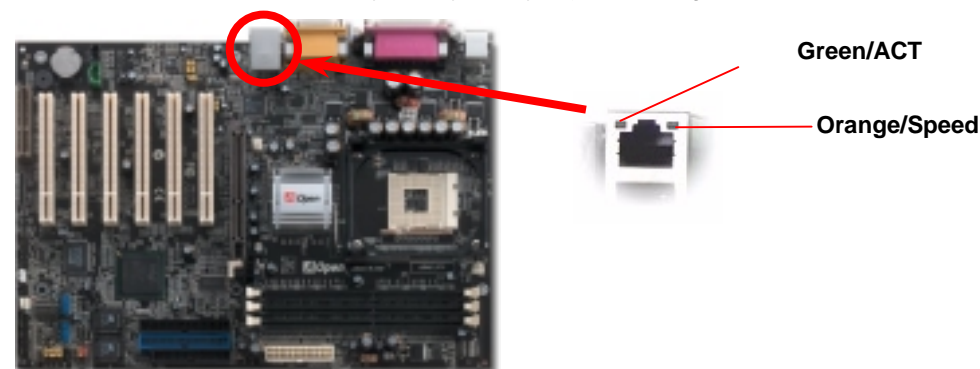
## S/PDIF (Sony/Philips Digital Interface) Connector

S/PDIF (Sony/Philips Digital Interface) is a newest audio transfer file format, which provides impressive audio quality through optical fiber and allows you to enjoy digital audio instead of analog audio. Normally there are two S/PDIF outputs as shown, one for RCA connector, the most common one used for consumer audio products, and the other for optical connector with better audio quality. Through a specific audio cable, you can connect the S/PDIF connector to other end of the S/PDIF audio module, which bears S/PDIF digital output. However, you must have a S/PDIF supported speaker/amplifier/decoder with S/PDIF digital input to connect to the S/PDIF digital output to make the most out of this function.



## 12. Support 10/100 Mbps LAN onboard

The South Bridge ICH4 includes a fast Ethernet controller on chip. On the strength of RealTek 8100BL LAN controller on board, which is a highly-integrated Platform LAN Connect device, it provides 10/100M bps Ethernet for office and home use, the Ethernet RJ45 connector is located on top of USB connectors. The green LED indicates the link mode, it lights when linking to network and blinking when transferring data. The orange LED indicates the transfer mode, and it lights when data is transferring in 100Mbps mode. To enable or disable this function, you may simply adjust it through BIOS.



## 13. Installing LAN Driver

You can install LAN Driver under Windows95/98, Windows NT and Windows 2000 for RealTek 8100BL PCI Fast Ethernet adapter by following steps.

Installing driver procedure on Microsoft Windows 95 :

1. Select "Driver from disk provided by hardware manufacturer" when being asked which driver you would like to install.
2. Specify the setup file pathname  
[CD-ROM]:Driver\LAN\RTL8100\Windows\Win95\WIN95A (for Windows 95 and Win95A) or  
[CD-ROM]:Driver\LAN\RTL8100\Windows\Win95 (for Windows 95 OSR2).
3. Follow the procedure and insert Windows 95 system disk to complete setup step.
4. Windows 95 will finish the other installation procedures automatically, and then restart your system.

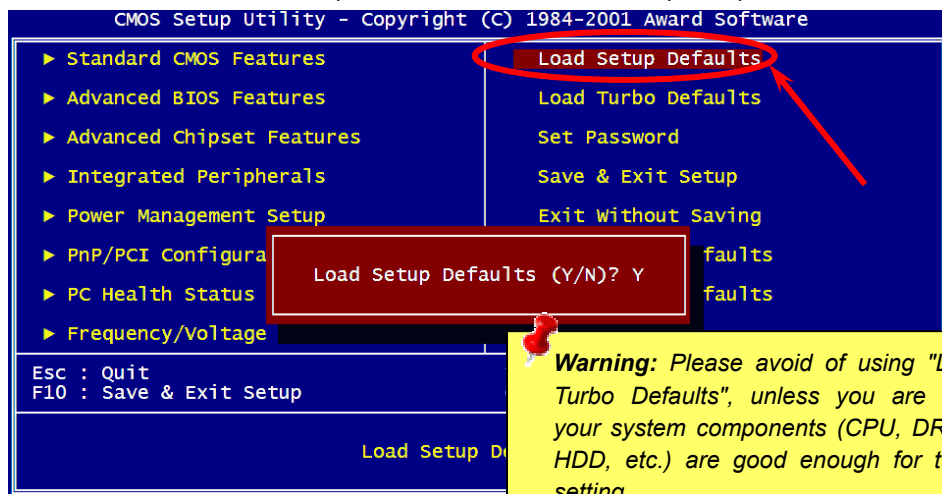
Installing driver for Win98/Win98 SE/Windows2000/Windows ME :

1. Select "Driver from disk provided by hardware manufacturer" when being asked which driver you would like to install.
2. Specify the setup file pathname  
[CD-ROM]:Driver\LAN\RTL8100\Windows\WIN98 (for Windows 98/98 SE) or  
[CD-ROM]:Driver\LAN\RTL8100\Windows\WIN2000 (for Windows 2000) or  
[CD-ROM]:Driver\LAN\RTL8100\Windows\Windows ME (for Windows ME)
3. Follow the procedure and insert your system disk (Win98/Win98 SE/Windows2000/Windows ME) to complete setup step.
4. Win98/Win98 SE/Windows2000/Windows ME will finish the other installation procedures automatically, and then restart your system.

## 14. Power-on and Load BIOS Setup

Del

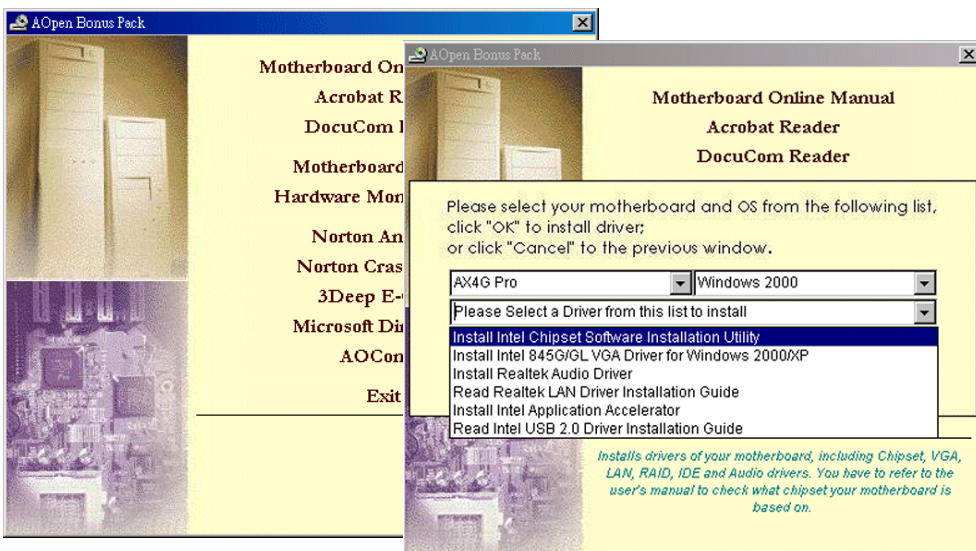
After you finish the setting of jumpers and connect correct cables. Power on and enter the BIOS Setup, press <Del> during POST (Power On Self Test). Choose "Load Setup Defaults" for recommended optimal performance.



**Warning:** Please avoid of using "Load Turbo Defaults", unless you are sure your system components (CPU, DRAM, HDD, etc.) are good enough for turbo setting.

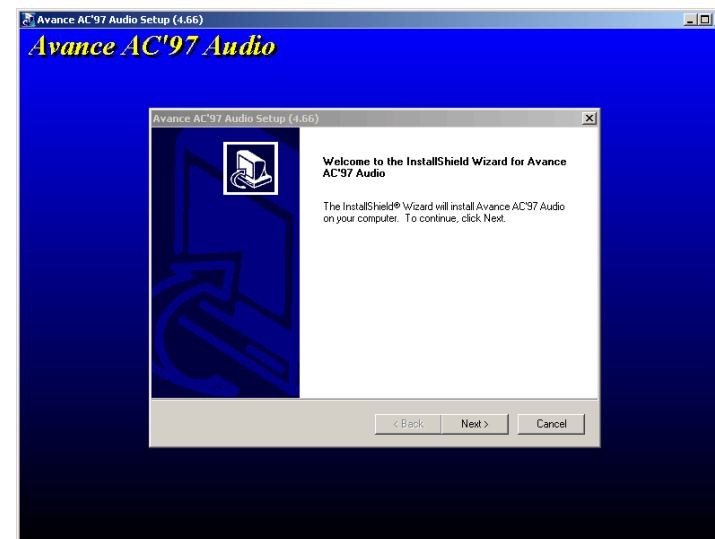
## 15. AOpen Bonus Pack CD

You can use the autorun menu of Bonus CD disc. Choose the utility and driver and select model name.



## 16. Installing Onboard Sound Driver

This motherboard comes with AC97 CODEC, you can find the audio driver from the Bonus Pack CD disc auto-run menu.



**NEW!**

## 17. BIOS Upgrade under Windows environment

You may accomplish BIOS upgrade procedure with EZWinFlash by the following steps, and it's STRONGLY RECOMMENDED to close all the applications before you start the upgrading.

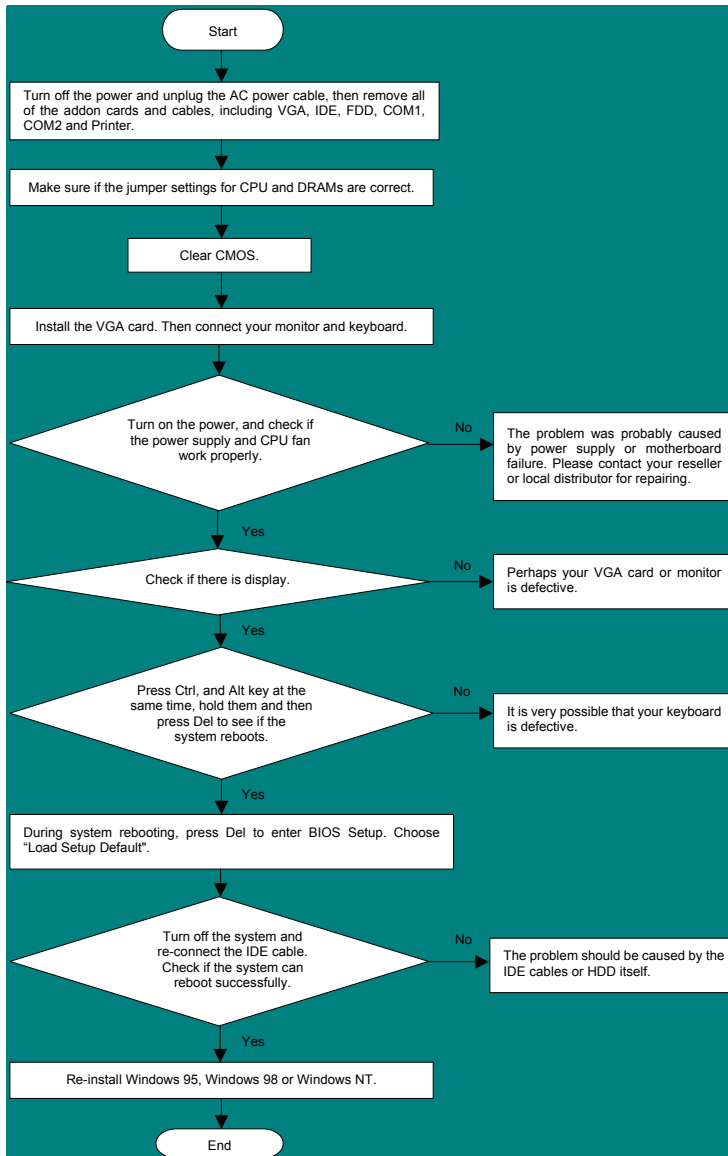
1. Download the new version of BIOS package zip file from AOpen official web site. (ex: <http://www.aopen.com>)
2. Unzip the download BIOS package (ex: WAX4GP102.ZIP) with WinZip (<http://www.winzip.com>) in Windows environment.
3. Save the unzipped files into a folder, for example, WAX4GP102.EXE & WAX4GP102.BIN.
4. Double click on the WAX4GP102.EXE, EZWinFlash will detect the model name and BIOS version of your motherboard. If you had got the wrong BIOS, you will not be allowed to proceed with the flash steps.
5. You may select preferred language in the main menu, then click [Start Flash] to start the BIOS upgrade procedure.
6. EZWinFlash will complete all the process automatically, and a dialogue box will pop up to ask you to restart Windows. You may click [YES] to reboot Windows.
7. Press <Del> at POST to enter BIOS setup, choose "Load Setup Defaults", then "Save & Exit Setup". Done!

**Warning:** The upgrade of new BIOS will permanently replace your original BIOS content after flashing. The original BIOS setting and Win95/Win98 PnP information will be refreshed and you probably need to re-configure your system.



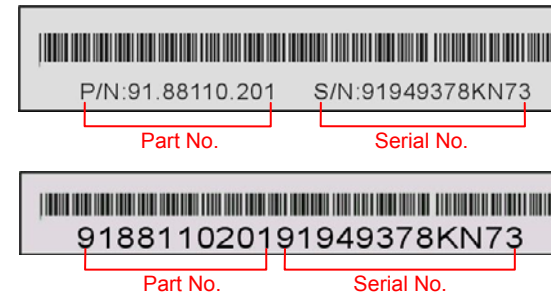
## Troubleshooting

If you encounter any trouble to boot your system, follow the procedures accordingly to resolve the problem.



## Part Number and Serial Number

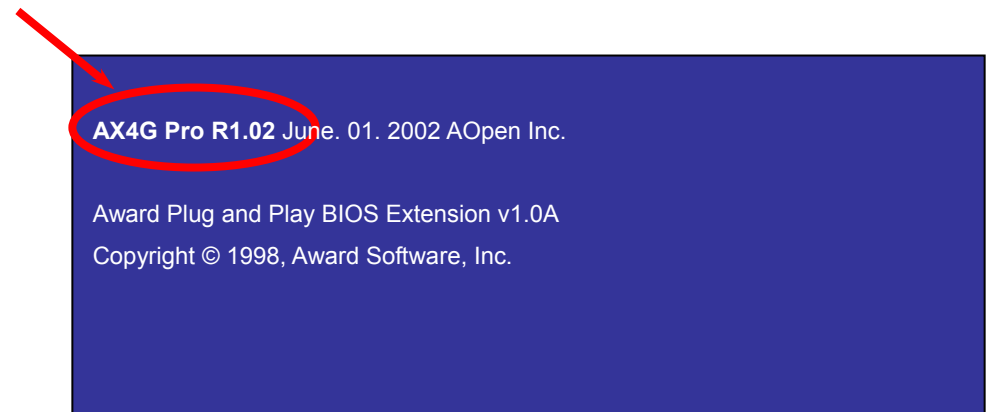
The Part Number and Serial number are printed on bar code label. You can find this bar code label on the outside packing, on ISA/CPU slot or on component side of PCB. For example:



P/N: 91.88110.201 is part number, S/N: 91949378KN73 is serial number.

## Model name and BIOS version

Model name and BIOS version can be found on upper left corner of first boot screen (POST screen). For example:



AX4G Pro is model name of motherboard; R1.02 is BIOS version



## Technical Support

Dear Customer,

Thanks for choosing AOpen products. To provide the best and fastest service to our customer is our first priority. However, we receive numerous emails and phone-calls worldwide everyday, it is very hard for us to serve everyone on time. We recommend you follow the procedures below and seek help before contact us. With your help, we can then continue to provide the best quality service to more customers.

Thanks very much for your understanding!

AOpen Technical Supporting Team

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AOpen Inc.  
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Fax: 886-2-3789-5899

Europe  
AOpen Computer b.v.  
Tel: 31-73-645-9516  
Fax: 31-73-645-9604

China  
艾爾鵬國際貿易(上海)有限公司  
Tel: 86-21-6225-8622  
Fax: 86-21-6225-7926

Germany  
AOpen Computer GmbH.  
Tel: 49-2102-157700  
Fax: 49-2102-157799

America  
AOpen America Inc.  
Tel: 1-408-922-2100  
Fax: 1-408-922-2935

Japan  
AOpen Japan Inc.  
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Fax: 81-048-290-1820

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German <http://www.aopencom.de/tech/contact/techde.htm>

French <http://france.aopen.com/tech/contact/techfr.htm>

Simplified Chinese <http://www.aopen.com.cn/tech/contact/techcn.htm>

1

**Online Manual:** Please check the manual carefully and make sure the jumper settings and installation procedure are correct.

<http://www.aopen.com/tech/download/manual/default.htm>

2

**Test Report:** We recommend to choose board/card/device from the compatibility test reports for assembling your PC.

<http://www.aopen.com/tech/report/default.htm>

3

**FAQ:** The latest FAQ (Frequently Asked Questions) may contain a solution to your problem.

<http://www.aopen.com/tech/faq/default.htm>

4

**Download Software:** Check out this table to get the latest updated BIOS/utility and drivers.

<http://www.aopen.com/tech/download/default.htm>

5

**News Group:** News posted by computer experts, you are welcome to join any discussion and learning from it.

<http://www.aopen.com/tech/newsgrp/default.htm>

6

**Contact Distributors/Resellers:** We sell our products through resellers and integrators. They should know your system configuration very well and should be able to solve your problem efficiently and provide important reference for you if next time you want to buy something else from them.

7

**Contact Us:** Please prepare detail system configuration and error symptom before contacting us. The **part number**, **serial number** and **BIOS version** are also very helpful.