

# Installation Procedures

The mainboard has several user-adjustable jumpers on the board that allow you to configure your system to suit your requirements. This chapter contains information on the various jumper settings on your mainboard.

To set up your computer, you must complete the following steps:

- Step 1 - Set system jumpers
- Step 2 - Install memory modules
- Step 3 - Install the Central Processing Unit (CPU)
- Step 4 - Install expansion cards
- Step 5 - Connect ribbon cables, cabinet wires, and power supply
- Step 6 - Set up BIOS software
- Step 7 - Install supporting software tools



**WARNING:** Excessive torque may damage the mainboard. When using an electric screwdriver on the mainboard, make sure that the torque is set to the allowable range of 5.0 ~ 8.0kg/cm.

Mainboard components contain very delicate Integrated Circuit (IC) chips. To prevent static electricity from harming any of the sensitive components, you should follow the following precautions whenever working on the computer:

1. Unplug the computer when working on the inside.
2. Hold components by the edges and try not to touch the IC chips, leads, or circuitry.
3. Wear an anti-static wrist strap which fits around the wrist.
4. Place components on a grounded anti-static pad or on the bag that came with the component whenever the components are separated from the system.



1). **Clear CMOS, FSB Speed Select, CPU/SDRAM/PCI/AGP Speed Select**

**J3**  
**(Clear CMOS)**



**Normal**  
**(Default)**



**Clear CMOS**

**FSB Speed Select**

Jumper \ FSB Speed	100MHz	133MHz
<b>J4</b>	1-2	2-3
<b>J5</b>	2-3	2-3

**CPU/SDRAM/PCI/AGP Freq. Select**

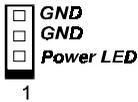
(Default)

J7	CPU	SDRAM	PCI	AGP
OFF	100.00	100.00	33.33	66.67
ON	133.33	133.33	33.33	66.67

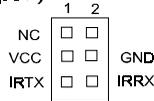
(unit: MHz)

## 2). Front Panel Block Cable Connection

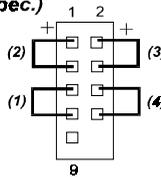
**LED (Single Color)**  
(Power LED, 2 or 3 Pins)



**IR**  
(Intel spec.)



**F\_PNL**  
(Intel spec.)



(4). Power Button      (1). Reset Button

(3). Dual Power LED      (2). HDD LED

*(If use dual power LED,  
green: Pin2, yellow: Pin4;  
otherwise, Pin2 is positive,  
Pin4 is negative.)*

## 3). CPU Fan Installation



**CAUTION:**

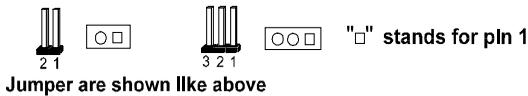
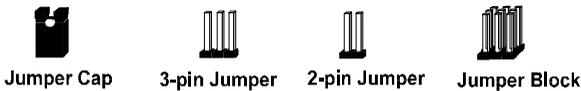
1. The heatsink and fan you installed must be approved by AMD.
2. The mainboard must be placed on a solid place to avoid shaking while install the heatsink and fan on the board.
3. The heatsink must be contact with the CPU top tightly.
4. Never run the processor without the heatsink properly and firmly attached. PERMANENT DAMAGE WILL RESULT!

Without sufficient air circulation, the CPU may overheat resulting in damage to both the CPU and the mainboard.

**Damage may occur to the mainboard and/or the CPU fan if these pins are used incorrectly. These are not jumpers, do not place jumper caps over these pins.**

## 1). Set System Jumpers/Switches

Jumpers are used to select the operation modes for your system. Some jumpers on the board have three metal pins with each pin representing a different function. A **1** is written besides pin 1 on jumpers with three pins. To **set** a jumper, a black cap containing metal contacts is placed over the jumper pin/s according to the required configuration. A jumper is said to be **shorted** when the black cap has been placed on one or two of its pins. The types of jumpers used in this manual are shown below:



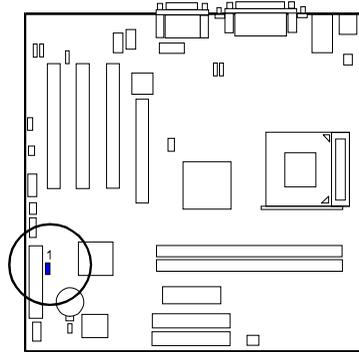
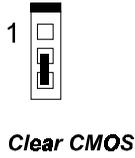
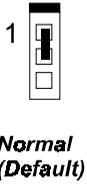
Jumpers in a Block



**NOTE:** Users are not encouraged to change the jumper settings not listed in this manual. Changing the jumper settings improperly may adversely affect system performance.

### Clear CMOS: J3

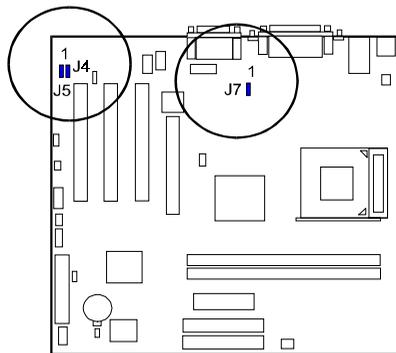
The CMOS RAM is powered by the onboard button cell battery. To clear the RTC data: (1) Turn off your computer (2) Place the jumper cap onto the pinpair 2-3 at least 6 seconds to clear CMOS (3) Place the jumper cap onto the pinpair 1-2 to Normal (4) Turn on your computer until CMOS checksum error appears (5) Hold down the **Delete** key when boots (6) Enter the BIOS Setup to re-enter user preferences.



***FSB and CPU/SDRAM/PCI/AGP Clock Select: J4, J5, and J7***

The jumper J4 and J5 allow users to set FSB frequency. The J7 sets the combination of CPU/SDRAM/PCI/AGP clock.

Jumper \ FSB Speed	100MHz	133MHz
J4	1-2	2-3
J5	2-3	2-3



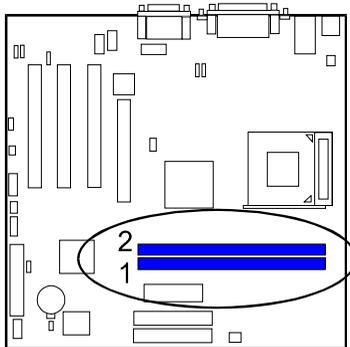
*(Default)*

<b>J7</b>	<b>CPU</b>	<b>SDRAM</b>	<b>PCI</b>	<b>AGP</b>
OFF	100.00	100.00	33.33	66.67
ON	133.33	133.33	33.33	66.67

*(unit: MHz)*

## 2). Install Memory Modules

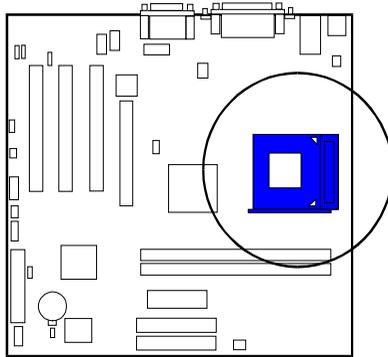
1. Locate the DIMM slots on the mainboard.
2. Install the DIMM straight down into the DIMM slot using both hands.
3. The clip on both ends of the DIMM slot will close up to hold the DIMM in place when the DIMM reaches the slot bottom.



Press the clips with both hands to remove the DIMM.

### 3). Install the CPU

The AMD CPU module resides in the socket on the board. Please follow the steps introduced below to complete the CPU installation.



**CAUTION:**

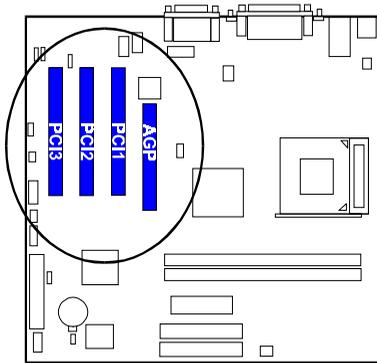
1. The heat sink and fan you installed must be approved by AMD.
2. The mainboard must be placed on a solid place to avoid shaking while install the heat sink and fan on the board.
3. The heat sink must be contact with the CPU top tightly.
4. Never run the processor without the heat sink properly and firmly attached. PERMANENT DAMAGE WILL RESULT!

**To install the CPU, do the following:**

1. Lift the lever on the side of the CPU socket.
2. Handle the chip by its edges and try not to touch any of the pins.
3. Place the CPU in the socket. The chip has two notches to correctly locate the chip. Align two notches of the processor with the two triangular marks on the socket. Do not force the chip. The CPU should slide easily into the socket.
4. Swing the lever to the down position to lock the CPU in place.
5. Install the cooling fan with heat sink on top of the installed CPU.
6. Place the mainboard (with the CPU, its cooling fan, and heat sink) into the system chassis and affix it with screws.

## 4). Install Expansion Cards

This section describes how to connect an expansion card to one of your system expansion slots. Expansion cards are printed circuit boards that, when connected to the mainboard, increase the capabilities of your system. For example, expansion cards can provide video and sound capabilities. The mainboard features one AGP and three PCI bus expansion slots.



**CAUTION:** Make sure to unplug the power supply when adding or removing expansion cards or other system components. Failure to do so may cause severe damage to both the mainboard and expansion cards.

Always observe static electricity precautions.

Please read **Handling Precautions** at the start of this manual.

To install an expansion card, follow the steps below:

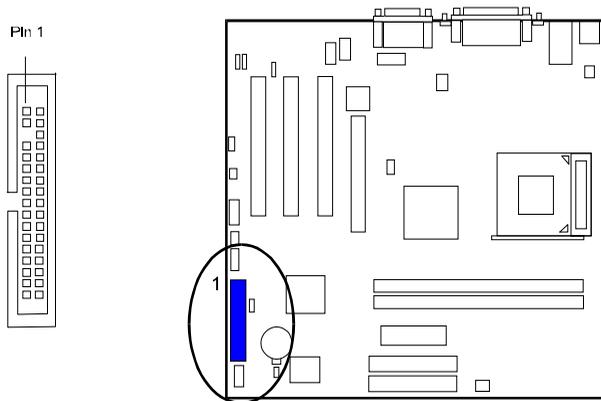
1. Remove the chassis cover and select an empty expansion slot.
2. Remove the corresponding slot cover from the computer chassis. Unscrew the mounting screw that secures the slot cover and pull the slot cover out from the computer chassis. Keep the slot cover mounting screw nearby.
3. Holding the edge of the peripheral card, carefully align the edge connector with the expansion slot.

4. Push the card firmly into the slot. Push down on one end of the expansion card, then the other. Use this rocking motion until the add-on card is firmly seated inside the expansion slot.
5. Secure the board with the mounting screw removed in Step 2. Make sure that the card has been placed evenly and completely into the expansion slot.
6. Replace the computer system cover.
7. Setup the BIOS if necessary.
8. Install the necessary software drivers for the expansion card.

## 5). Connect Devices

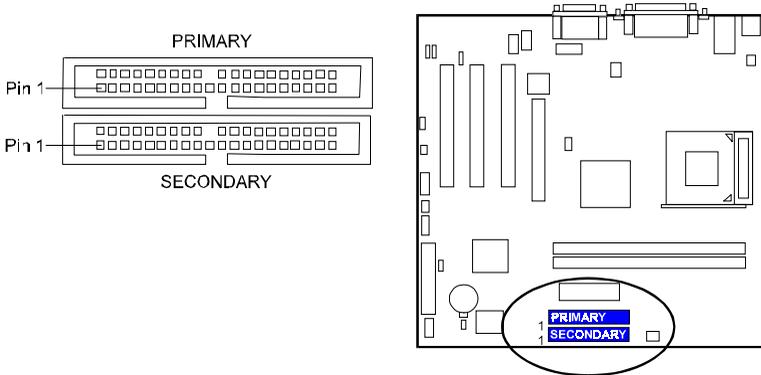
### *Floppy Diskette Drive Connector*

This connector provides the connection with your floppy disk drive. The red stripe of the ribbon cable must be the same side with the Pin 1.



### IDE Device Connectors

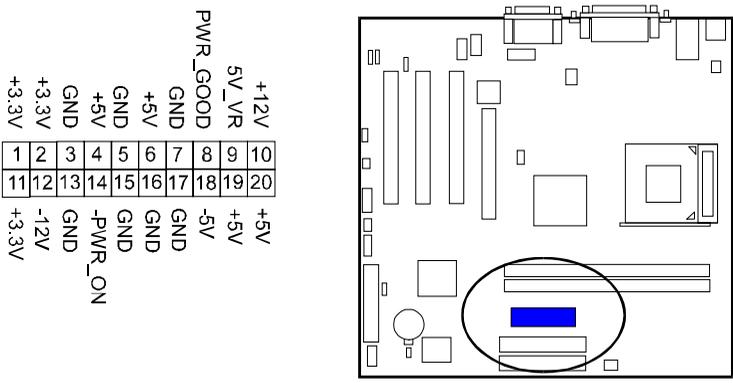
The two connectors, PRIMARY and SECONDARY, are used for your IDE hard disk drives, CD drives, LS-120 drives, or IDE ZIP drives. The red stripe of the ribbon cable must be the same side with the Pin 1.



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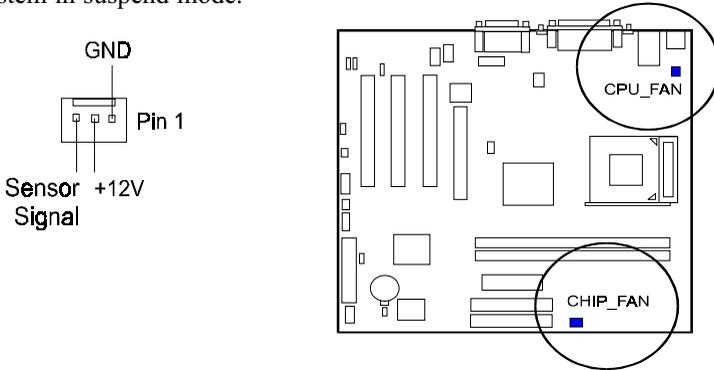
### ATX Power Connector

This 20-pin male block connector is connected to the ATX power supply. The plug from the power supply will only insert in one orientation because of the different hole sizes. Find the proper orientation and push down firmly making sure that the pins are aligned.



## Fan Connectors

The connector CPU\_FAN is linked to the CPU fan. CHIP\_FAN can be used either with the case fan or North Bridge chip fan. For preventing the system and chip from overheat damage, the fans on this board will keep running when the system in suspend mode.

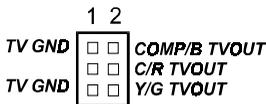


**CAUTION:**

Before installing the TV card on these two connectors, make sure your system power is off. Failure to do so may cause damage to the mainboard.

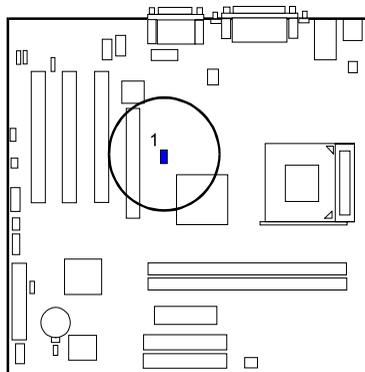
## TV Out Connector

The VGA\_TVOUT connector is provided for an optional TV-OUT cable with a bracket that being installed in the rear panel for connecting signals to TV set. It allows you use your TV as a monitor.



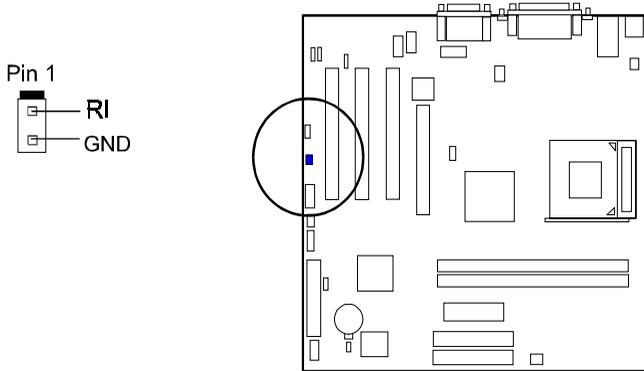
**CAUTION:**

The two jacks on the optional TV-OUT bracket can not be used at the same time.



### *Wake-On-Ring Connector*

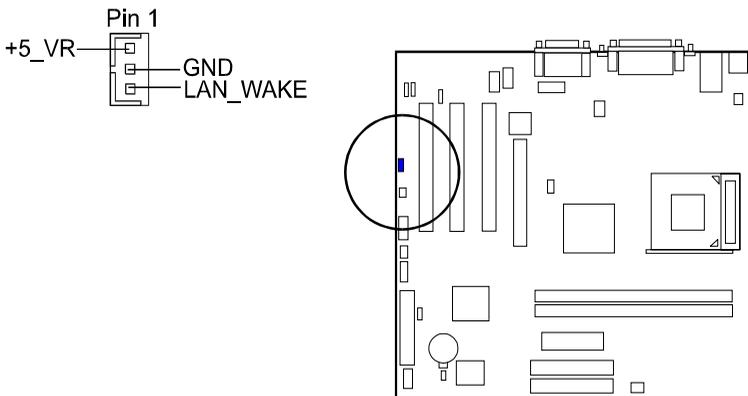
The 2-pin connector allows you to link with your modem card which outputs a WOR signal; the system can be turned on from the power-off status by a remote phone call via the modem card.



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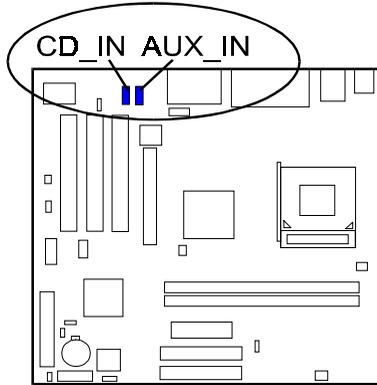
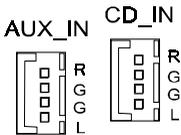
### *Wake-On-Lan Connector*

This 3-pin connector allows the remove servers to manage the system that installed this mainboard via your network adapter which also supports WOL.



### CD Audio-In Connectors

The CD\_IN connector is used as a port for audio input from CD drive. The AUX\_IN provided users with one extra audio input port from CD drive.



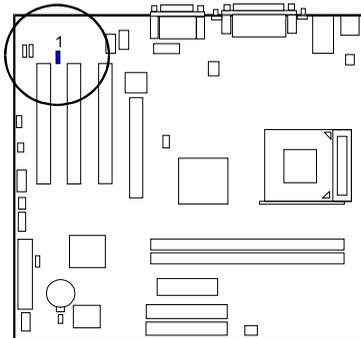
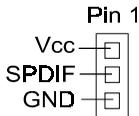
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**CAUTION:** Improper orientation of SPDIF connection may cause damage of your device.

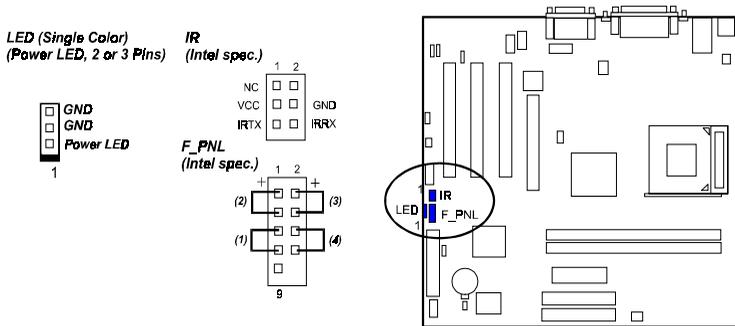
### SPDIF Out Connector (optional)

The mainboard equipped one 1x3 pinheader. It is used for SPDIF digital audio output.



### Front Panel Block and IR Connector

This block connector includes the connectors for linking with Power LED (2 pins and 3 pins), HDD LED, power button, power/sleep/message waiting button, reset button on the front panel of the system case. Please identify polarities of plug wires for the case speaker and LEDs. Please ask vendor about this information when you buy them and install the system by yourself. The plug wires polarities of these buttons will not affect the function.



**(1) Reset Switch** is connected to the reset button. Push this switch to reboot the system instead of turning the power button off and on.

**(2) HDD LED** is connected to the IDE device indicator. This LED will blink when the hard disk drives are activated.

#### (3) Power /Sleep LED (2-Pin/3-Pin)

Please refer to the tables below for the representations of LED states.

##### Single-Color (2, 3 Pins)

LED	Meaning	State
Off	Off	S4/S5
On	Full On	S0
Flash	Sleep	S1/S3

##### Dual-Color

LED	Meaning	State
Off	Off	S4/S5
Green	Full On	S0
Yellow	Sleep	S1/S3

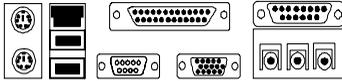
**(4) Power Button** is connected with power button. Push this switch allows the system to be turned on and off rather than using the power supply button.

**IR** is a pinheader that is used for linking with your ID device to allow transmission of data to another system that also supports the IR feature.

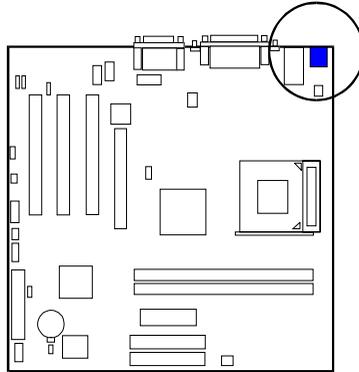
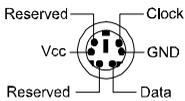
### *PS/2 Keyboard and Mouse Connector*

These two 6-pin female (PS/2 keyboard is purple color and PS/2 mouse is green color) connectors are used for your PS/2 keyboard and PS/2 mouse.

PS2 Mouse

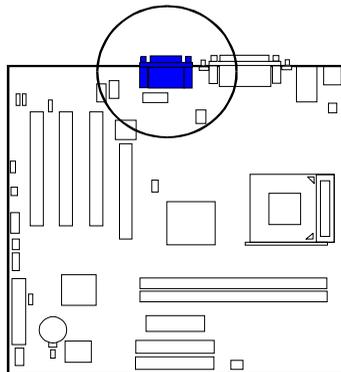
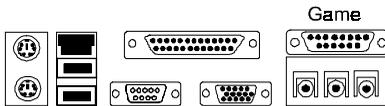


PS2 Keyboard



### *Game/MIDI Connector*

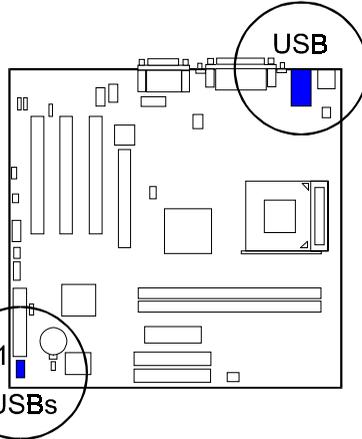
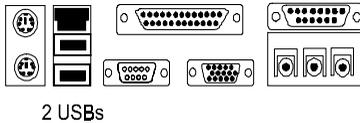
This 15-pin female gold-colored connector allows you to connect game joysticks or game pads. Connect MIDI devices for playing or editing audio.



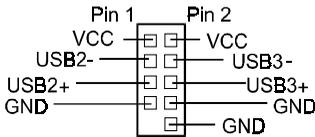
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### Universal Serial Bus Connectors

These two black jacks are integrated on the rear edge of the board for linking with USB devices. This board has a pinheader, USB2, for two extra USB ports that either on front or rear panel.



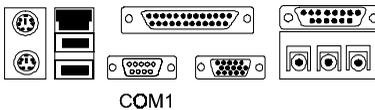
The figure below is the pin assignment of the USB2.



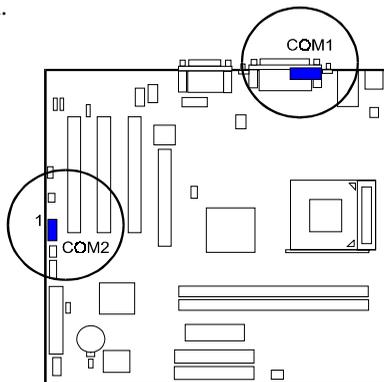
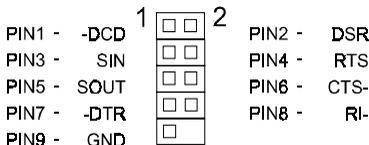
(Intel Spec.)

### Serial Port Connectors

COM1 (9-pin D-sub male connector with teal color) and COM2 (9-pin male connector) allow you to connect with your devices that use serial ports, such as a serial mouse or an external modem.

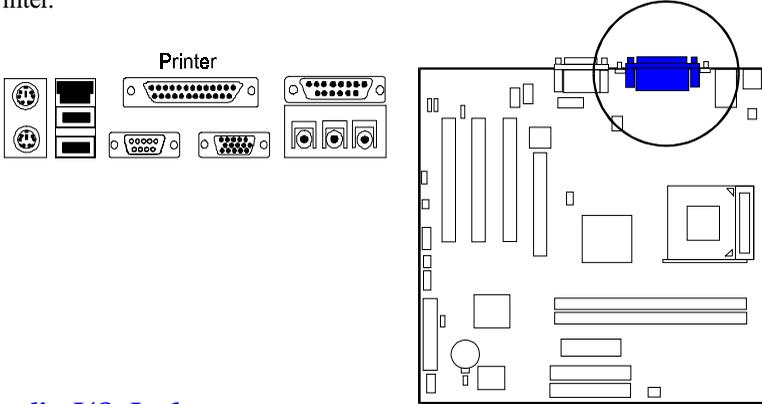


#### COM2 Port



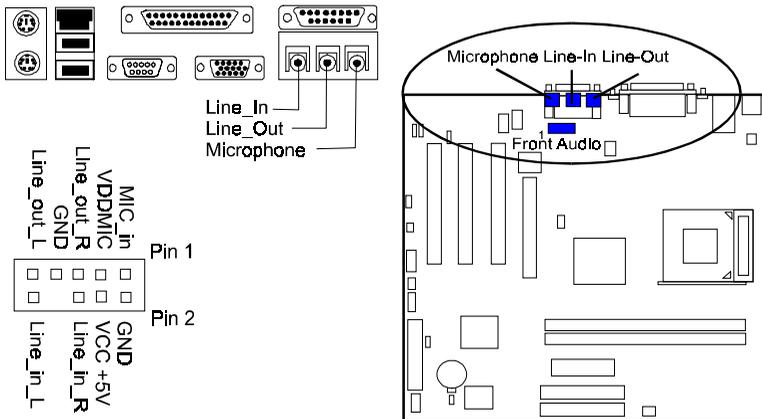
## Printer Connector

This 25-pin D-Sub female burgundy-colored connector is attached to your printer.



## Audio I/O Jacks

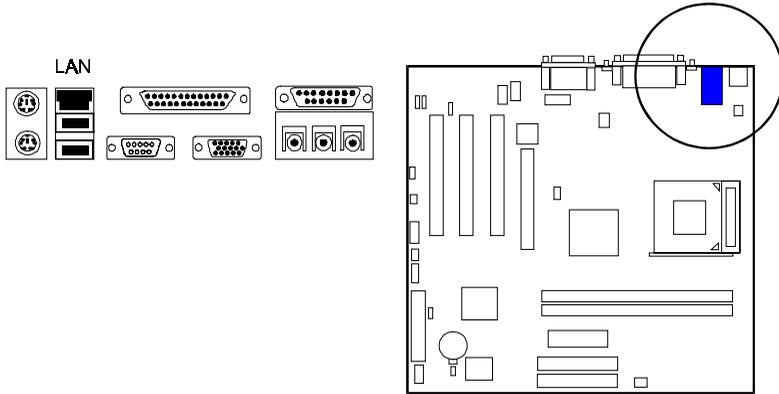
LINE\_OUT (lime) can be connected to headphones or preferably powered speakers. LINE\_IN (light blue) allows tape players or other audio sources to be recorded by your computer or played through the LINE\_OUT. MIC\_IN (pink) allows microphones to be connected for voice input. The mainboard also provides you with a front panel audio port connector, FNT\_AUDIO, when needed. Its pin definitions were presented below.



(Intel Spec.)

***LAN Connector (optional)***

The optional LAN jack is connected to the LAN cable.



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