

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:

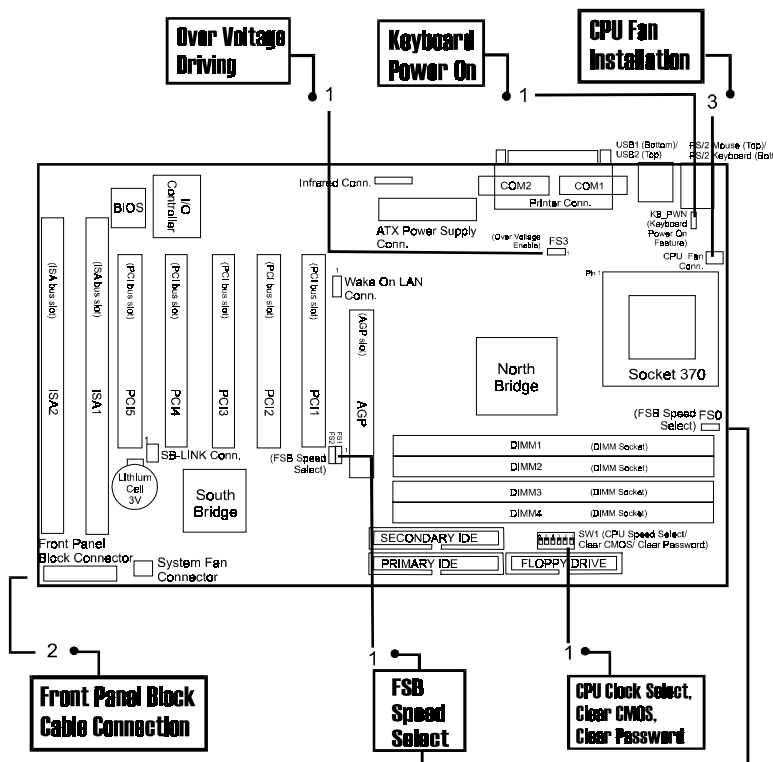
- Step 1 - Set system jumpers/switches
- Step 2 - Install memory modules
- Step 3 - Install the Central Processing Unit (CPU)
- Step 4 - Install expansion cards
- Step 5 - Connect ribbon cables, cabinet wires, and power supply
- Step 6 - Set up BIOS software (see Chapter Three)
- Step 7 - Set up supporting 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 mainboard's sensitive components, you should follow some 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.



NOTE:

1. The PCI5 slot is shared with the (optional) ISA1 Slot.
2. The PCI5 slot only allows a slave card on it.

1). CPU/BUS Speed Ratio Select, Clear CMOS, Clear Password, FSB Speed Select, Over Voltage Driving, Keyboard Power On

CPU Speed (Hz)			SW1-1	SW1-2	SW1-3	SW1-4
133M	100M	66M				
333M	250M	166M	ON	ON	ON	OFF
400M	300M	200M	ON	OFF	ON	ON
466M	350M	233M	ON	OFF	ON	OFF
533M	400M	266M	ON	ON	OFF	ON
600M	450M	300M	ON	ON	OFF	OFF
667M	500M	333M	ON	OFF	OFF	ON
733M	550M	366M	ON	OFF	OFF	OFF
800M	600M	400M	OFF	ON	ON	ON
866M	650M	433M	OFF	ON	ON	OFF
933M	700M	466M	OFF	OFF	ON	ON
1G	750M	500M	OFF	OFF	ON	OFF
1066M	800M	533M	OFF	ON	OFF	ON

Note: For the ratio that higher than 8.0x, please use a ratio-locked CPU and also select Auto Detect on FSB Selection if you use an Intel CPU.

SW1-5 (Clear CMOS)



Enable
(Clear CMOS)

Disable
(Default)

SW1-6 (Clear Password)

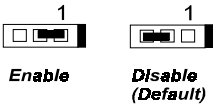


Enable
(Clear Password)

Disable
(Default)

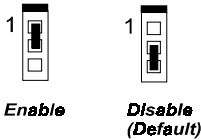
CPU	Front Side Bus	FS0	FS1	FS2
Cyrix	66	1-2	2-3	2-3
	100		2-3	1-2
	133		1-2	1-2
Intel	66	2-3	2-3	2-3
	100		2-3	open
	133		open	open
	Auto Detect		1-2	1-2

FS3
(Over Voltage Driving)

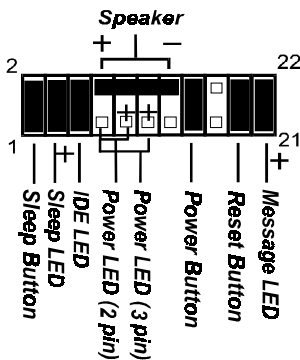


Caution:
Voltage and Frequency above CPU's original specifications are NOT guaranteed to be stable.

KB_PWN
(Keyboard Power On)



2). Front Panel Block Cable Connection



3). CPU Fan Installation

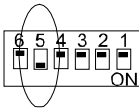
This connector is linked to the CPU fan. When the system is in suspend mode, the CPU fan will turn off; when it reverts back to full on mode, the fan will turn back on. Without sufficient air circulation, the CPU may overheat resulting in damage to both the CPU and the mainboard.

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.

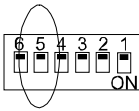
1). Set System Switches/Jumpers

Clear CMOS: SW1-5

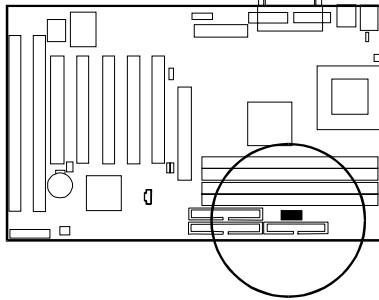
The CMOS RAM is powered by the onboard button cell battery. To clear the RTC data: (1). Turn off your computer, (2). Enable this feature by setting the SW1-5 to On position, (3). Turn on your computer to boot the system, (4). Turn off the computer, (5). Disable the Clear CMOS feature, (6). Turn on the computer. (7). Hold down the Delete key when boots and enter BIOS Setup to re-enter user preferences.



Enable (Clear CMOS)

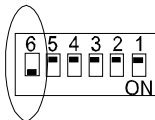


Disable (Default)

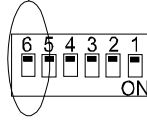


Clear Password: SW1-6

This switch allows you to enable or to disable both the keyboard and system password settings. You may need to adjust it if you forget your password. To clear the password setting: (1). Turn off your computer, (2). Enable this feature by setting the SW1-6 to On position, (3). Turn on your computer to boot screen, (4). Turn off your computer, (5). Disable the Clear Password feature by setting the SW1-6 to Off position, (6). Turn on your computer.



Enable (Clear Password)



Disable (Default)



NOTE: When SW1-6 set at Enabled, the keyboard password (K/B Wake-up function, BIOS Setup) will be cleared too. Users can power on the system by pushing power button.

Keyboard and Mouse Power-On Feature: KB_PWN

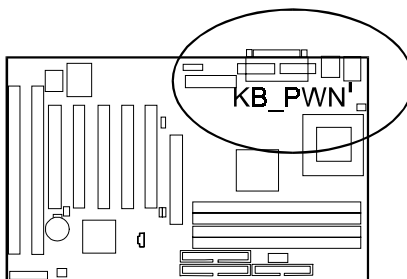
The 3-pin jumper provides you with the capability to power on the system by simply touching your keyboard or mouse. To enable this feature, you have to set this jumper and the related BIOS feature that introduced in **Integrated Peripherals** section.



Enable



**Disable
(Default)**



NOTE: To use this function and WOL connector together, your power supply should have a current of above 1A at 5 V Stand-by.

Enabling Over Voltage Driving: JS3 (Magic Tuner)

When you play video game, this 3-pin jumper allows you to start the over voltage driving capability of this mainboard to approach the best performance.



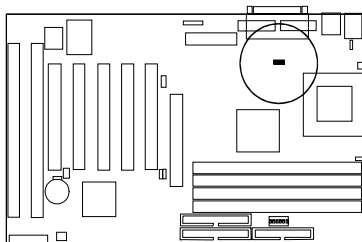
WARNING: Voltage and frequency above CPU's specifications are not guaranteed to be stable.



Enable



**Disable
(Default)**



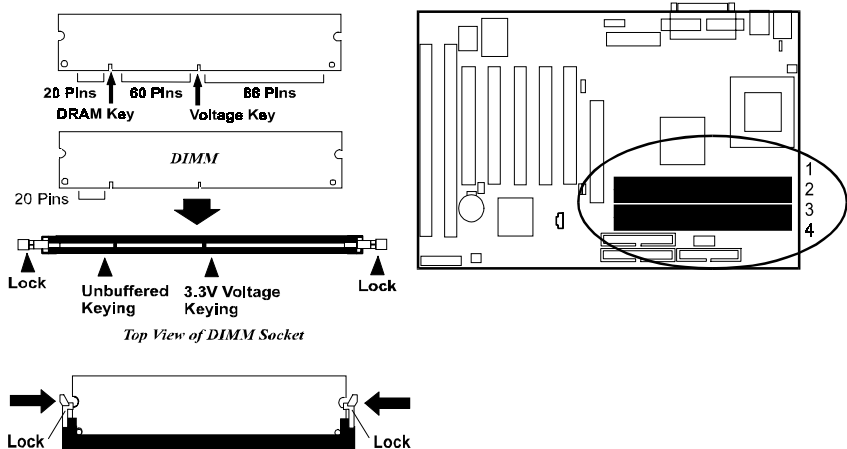
2). Install RAM Modules

RAM Module Configuration

This mainboard provides four onboard DIMM sockets for allowing 3.3V (unbuffered) SDRAM DIMM modules. Either 32, 64, 128, 256MB DIMM can be installed on these four sockets. The maximum total memory supported is up to 1GB.

Install and Remove DIMMs

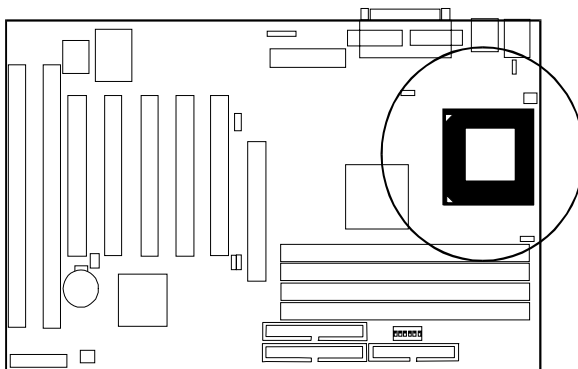
1. Locate the DIMM slots on the mainboard.
2. Install the DIMM straight down into the DIMM slot using both hands.
3. The clip on both ends of the DIMM slot will close up to hold the DIMM in place when the DIMM reaches the slot's bottom.



Press the clips with both hands to remove the DIMM.

3). Install the CPU

The CPU module resides in the ZIF PGA370 socket on the motherboard.



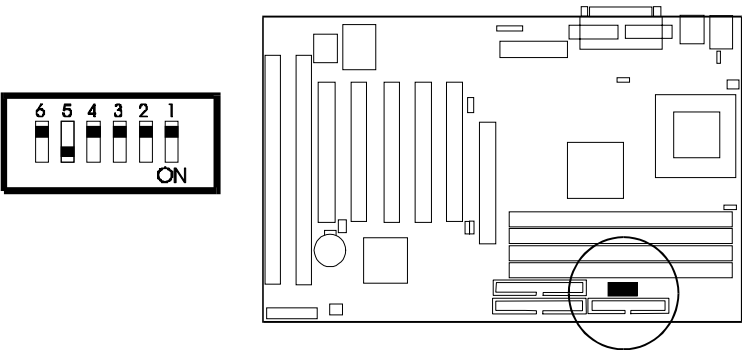
CAUTION:

1. Always turn the system power off before installing or removing any device.
2. Always observe static electricity precautions. See “Handling Precautions” at the start of this manual.
3. Inserting the chip incorrectly may damage the chip.

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. Place the cooling fan with heatsink on top of the installed CPU.

CPU/FSB Speed Ratio Select



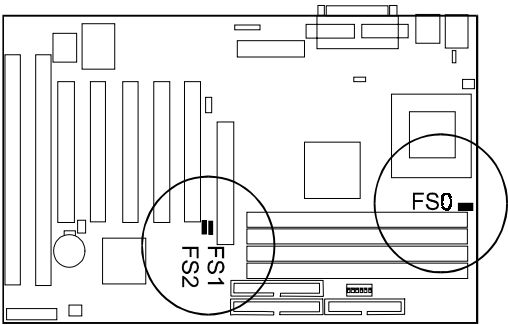
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CPU Speed (Hz)			SW1-1	SW1-2	SW1-3	SW1-4
133M	100M	66M				
333M	250M	166M	ON	ON	ON	OFF
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600M	450M	300M	ON	ON	OFF	OFF
667M	500M	333M	ON	OFF	OFF	ON
733M	550M	366M	ON	OFF	OFF	OFF
800M	600M	400M	OFF	ON	ON	ON
866M	650M	433M	OFF	ON	ON	OFF
933M	700M	466M	OFF	OFF	ON	ON
1G	750M	500M	OFF	OFF	ON	OFF
1066M	800M	533M	OFF	ON	OFF	ON

Note: For the ratio that higher than 8.0x, please use a ratio-locked CPU and also select Auto Detect on FSB Selection if you use an Intel CPU.

FSB Speed Select

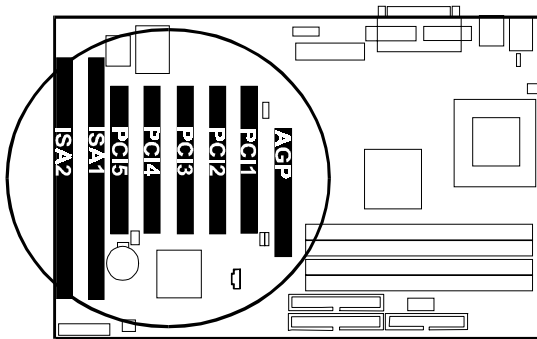
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<i>CPU</i>	<i>Front Side Bus</i>	<i>FS0</i>	<i>FS1</i>	<i>FS2</i>
<i>Cyrix</i>	66	1-2	2-3	2-3
	100		2-3	1-2
	133		1-2	1-2
<i>Intel</i>	66	2-3	2-3	2-3
	100		2-3	open
	133		open	open
	Auto Detect		1-2	1-2

4). Install Expansion Cards

This section describes how to connect an expansion card to one of your system's 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 32-bit AGP bus](#), [two optional 16-bit ISA bus](#), and [five 32-bit PCI bus](#) expansion slots.

**NOTE:**

1. The PCI5 slot is shared with the (optional) ISA1 Slot.
2. The PCI5 slot only allows a slave card on it.



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.

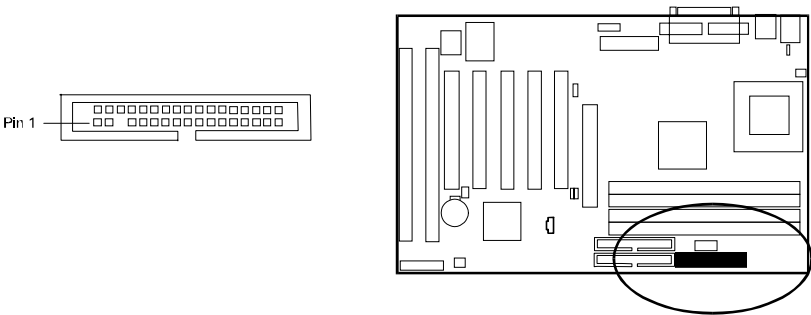
To install an expansion card, follow the steps below:

1. Remove the computer 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’s cover.
7. Setup the BIOS if necessary.
8. Install the necessary software drivers for the expansion card.

5). Connect Devices

Floppy Diskette Drive Connector: FLOPPY

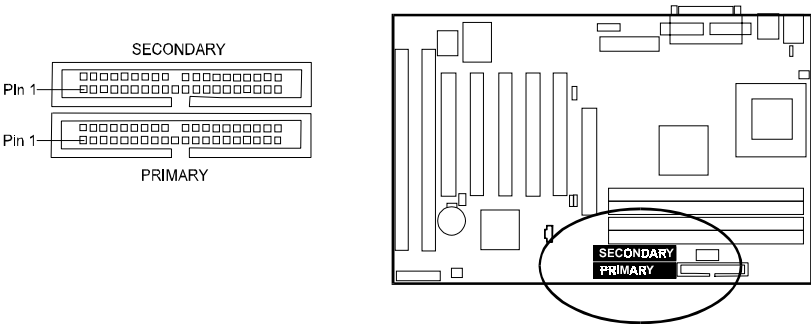
This connector provides the connection with your floppy disk drive. The red stripe of the ribbon cable must be the same side with the Pin 1.



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IDE HDD Device Connectors: PRIMARY, SECONDARY

These two connectors 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.

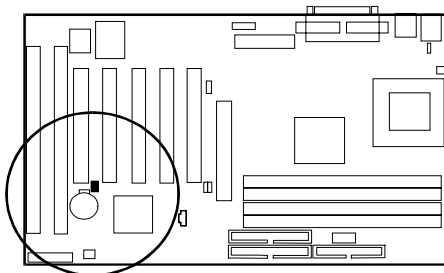


This 20-pin male block connector is connected to the ATX power supply. The plug from the power supply will only insert in one orientation because of the different hole sizes. Find the proper orientation and push down firmly making sure that the pins are aligned.



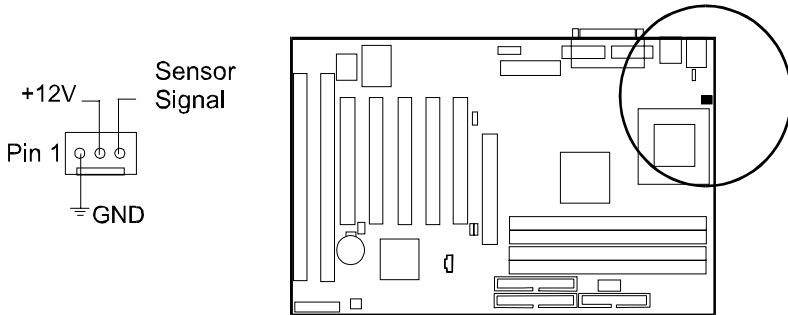
NOTE: The power supply must provide +3.3V voltage.

This 5-pin male connector allows you to connect to your Creative®'s sound card or compatible.



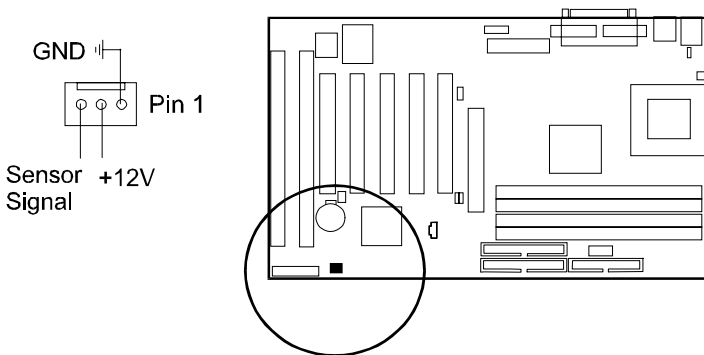
CPU Fan Connector: CPU_FAN

This connector is linked to the CPU fan. When the system is in suspend mode, the CPU fan will turn off; when it reverts back to full-on mode, the fan will turn back on. Please refer to the CPU fan installation manual for more information.



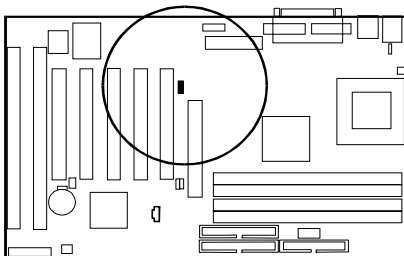
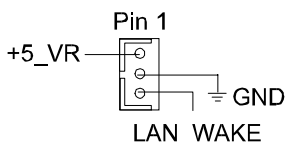
System Case Fan Connector: CHS_FAN

This 3-pin connector links to your cooling fan on the system case to lower the system temperature.



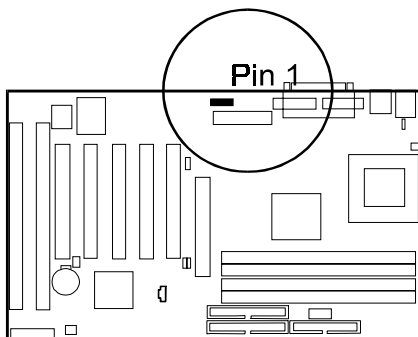
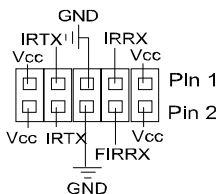
Wake-On-LAN Connector: WOL

This 3-pin connector allows the remote LAN server to wake up the system with a LAN card installed. Please also refer to the LAN card installation guide for related information.



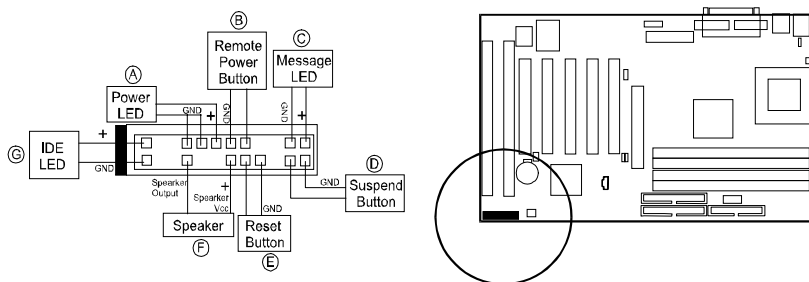
Infrared Connector: IR

This connector is linked with your IR device via a cable with one 9-pin D-Sub female connector on it.



Front Panel Block Connector

This block connector concludes the connectors for linking with IDE LED, power LED, remote power button, message LED, suspend button, reset button and speaker 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 this buttons will not affect the function.



Power LED (A) is connected with the system power indicator to indicate whether the system is on/off. When the system enter the suspend mode, it blinks.

Remote Power Button (B) is connected with remote power (soft power) switch. Push this switch will turn off and on the system instead of turning the power switch on the power supply.

Message LED (C) is connected with the message LED. When the system is running normally, the indicator is off. It is controlled by the operating system or application software.

Suspend Button (D) is connected with suspend mode switch.

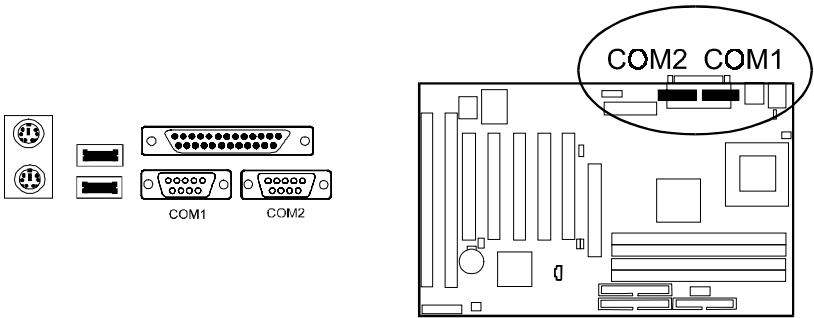
Reset Button (E) is connected to the reset switch. Push this switch to reboot the system instead of turning power switch off and on.

Speaker (F) is connected with the case speaker.

IDE LED (G) is connected IDE device indicator. This LED will blink when the hard disk drives are activated.

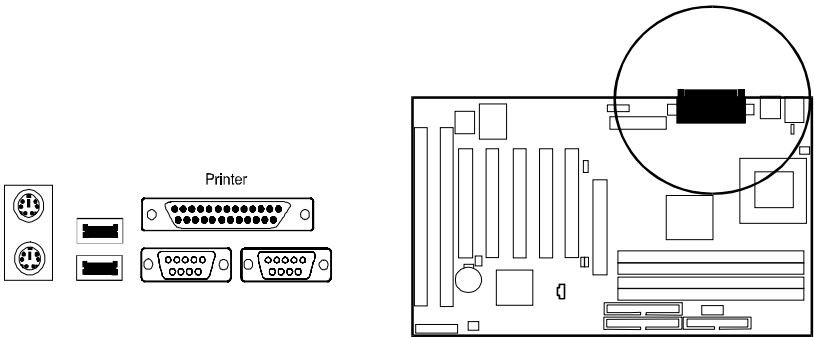
Serial Port Connectors: COM1, COM2

These two 9-pin D-Sub male teal-colored connectors allow you to connect devices that use serial ports, such as a serial mouse or a modem.



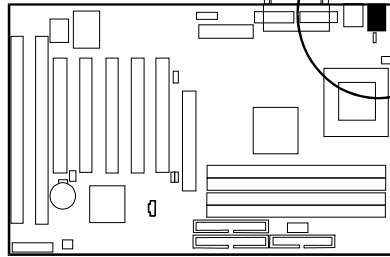
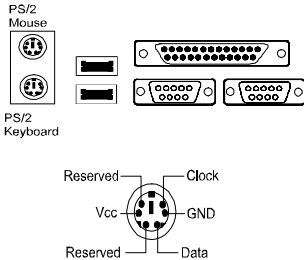
Printer Connector: LPT

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



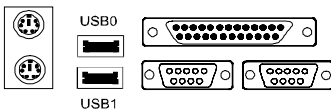
PS/2 Keyboard and Mouse Connector: KB, MS

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.

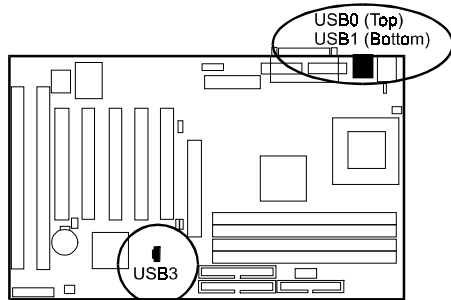
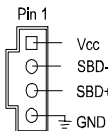


Universal Serial Bus Connectors: USB0, USB1, USB3

These two black connectors that integrated on the edge of the board are used for linking with USB peripheral devices. Also, this board provides an connector USB3 for linking with the USB socket on the front panel of some system cases. If this connector is onboard and when it is used, the USB3 connector is disabled. Your operating system must support USB features, such as MS Windows 98, MS Windows 95 OSR2.5 with USB Supplement.



The figure below is the pin assignments of the USB3 connector.



NOTE: USB3 connector is manufacturing optional.

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