

# 5AX

## USER'S MANUAL

- \* Support Intel Pentium, MMX, Cyrix/IBM 6x86MX, M2, AMD K5, K6, K6-2 & IDT C6 CPUs.
- \* Support auto detect CPU Voltage.
- \* Support Parity check or Ecc Function.
- \* Support Fully AGP 1.0 Specification.
- \* Support switching mode Voltage regulator on Board.
- \* Support 66/75/83 MHz and 100MHz are optional.
- \* Support Modem Ring On (COM B).
- \* Support Wake on Lan(The ATX power supply supports larger than 600 mA).
- \* Thermal Protection

Pentium<sup>®</sup> Processor PCI - ISA BUS MAINBOARD  
REV. 1.0 Second Edition  
Release Date 98.07.21

R-10-02-080721



The author assumes no responsibility for any errors or omissions which may appear in this document nor does it make a commitment to update the information contained herein.

\* THIRD-PARTY BRANDS AND NAMES ARE THE PROPERTY OF THEIR RESPECTIVE OWNERS.

JULY 21, 1998 Taipei, Taiwan

**I. CPU Jumper Setting Table:**

◆ SW: CPU INT./ EXT. FREQ. RATIO

O	ON
X	OFF

SW	2	3	8
x 1.5	X	X	X
x 2	O	X	X
x 2.5	O	O	X
x 3	X	O	X
x 3.5	X	X	X
x 4	O	X	O
x 4.5	O	O	O
x 5	X	O	O
x 5.5	X	X	O

SW	4	5	6	7
AUTO	X	X	X	O
2.0 V	X	X	X	X
2.1 V	X	X	O	X
2.2 V	X	O	X	X
2.3 V	X	O	O	X
2.4 V	O	X	X	X
2.5 V	O	X	O	X
2.6 V	O	O	X	X
2.7 V	O	O	O	X
2.8 V	X	X	X	O
2.9 V	X	X	O	O
3.0 V	X	O	X	O
3.1 V	X	O	O	O
3.2 V	O	X	X	O
3.3 V	O	X	O	O
3.4 V	O	O	X	O
3.5 V	O	O	O	O

MHz	SW1	SW4
66	X	2-3
75	X	1-2
83	O	2-3
100	O	1-2

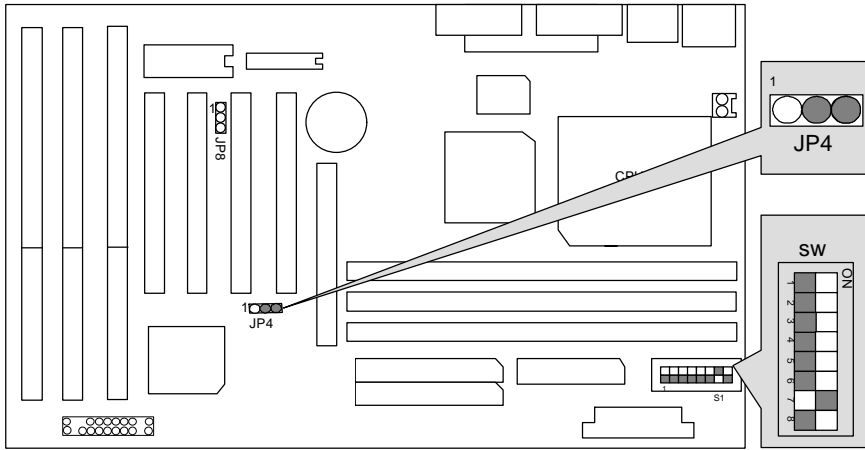
**II. Quick Installation Guide:**

CPU	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	JP4
1. Pentium <sup>®</sup> Processor 100 MHz	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	2-3
2. Pentium <sup>®</sup> Processor 133 MHz	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF	2-3
3. Pentium <sup>®</sup> Processor 166 MHz	OFF	ON	ON	OFF	OFF	OFF	ON	OFF	2-3
4. Pentium <sup>®</sup> Processor 200 MHz	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	2-3
5. Intel MMX-166MHz	OFF	ON	ON	OFF	OFF	OFF	ON	OFF	2-3
6. Intel MMX-200MHz	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	2-3
7. Intel MMX-233MHz	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	2-3
8. P54CT-166 MHz	OFF	ON	ON	OFF	OFF	OFF	ON	OFF	2-3
9. P54CTB-166 MHz	OFF	ON	ON	OFF	OFF	OFF	ON	OFF	2-3
10. P54CTB-200 MHz	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	2-3
11. AMDK5-PR133	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF	2-3
12. AMDK5-PR166	OFF	ON	ON	OFF	OFF	OFF	ON	OFF	2-3
13. AMD-K6/166 (2.9V)	OFF	ON	ON	OFF	OFF	ON	ON	OFF	2-3
14. AMD-K6/200 (2.9V)	OFF	OFF	ON	OFF	OFF	ON	ON	OFF	2-3
15. AMD-K6/233 (3.2V)	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF	2-3
16. AMD-K6/266 (66*4 2.2V) AMD-K6-2/266 (66*4 2.2V)	OFF	ON	OFF	OFF	ON	OFF	OFF	ON	2-3
17. AMD-K6/266 (100*2.5 2.2V)	ON	ON	ON	OFF	ON	OFF	OFF	OFF	1-2
18. AMD-K6/300 (66*4.5 2.2V)	OFF	ON	ON	OFF	ON	OFF	OFF	ON	2-3

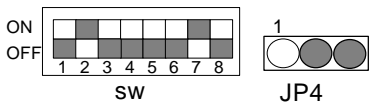
19. AMD-K6/300 (100*3 2.2V) AMD-K6-2/300 (100*3 2.2V)	ON	OFF	ON	OFF	ON	OFF	OFF	OFF	1-2
CPU	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	JP4
20. Cyrix/IBM 6x86-150MHz-PR200+ (75*2)	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF	1-2
21. Cyrix/IBM 6x86L-PR166+ (2.8V)	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF	2-3
22. Cyrix/IBM 6x86MX-PR200+ (75*2 2.9V)	OFF	ON	OFF	OFF	OFF	ON	ON	OFF	1-2
23. Cyrix/IBM 6x86MX-PR166 (66*2 2.9V)	OFF	ON	OFF	OFF	OFF	ON	ON	OFF	2-3
24. Cyrix/IBM 6x86MX-PR200 (66*2.5 2.9V)	OFF	ON	ON	OFF	OFF	ON	ON	OFF	2-3
25. Cyrix/IBM 6x86MX-PR200 (75*2 2.9V)	OFF	ON	OFF	OFF	OFF	ON	ON	OFF	1-2
26. Cyrix/IBM 6x86MX-PR233 (66*3 2.9V)	OFF	OFF	ON	OFF	OFF	ON	ON	OFF	2-3
27. Cyrix/IBM 6x86MX-PR233 (75*2.5 2.9V)	OFF	ON	ON	OFF	OFF	ON	ON	OFF	1-2
28. Cyrix/IBM 6x86MX-PR233 (83*2 2.9V)	ON	ON	OFF	OFF	OFF	ON	ON	OFF	2-3
29. Cyrix/IBM 6x86MX-PR266 (66*3.5 2.9V)	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF	2-3
30. Cyrix/IBM 6x86MX-PR266 (75*3 2.9V)	OFF	OFF	ON	OFF	OFF	ON	ON	OFF	1-2
31. Cyrix/IBM 6x86MX-PR266 (83*2.5 2.9V)	ON	ON	ON	OFF	OFF	ON	ON	OFF	2-3
32. Cyrix M2-PR300 (66*3.5 2.9V)	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF	1-2
33. IDT C6-200 (66*3 3.52V)	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	2-3
34. IDT C6-225 (75*3 3.52V)	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	1-2
35. IDT C6-266 (66*4 3.52V)	OFF	ON	OFF	OFF	OFF	OFF	ON	ON	2-3

★ Note: If Cyrix 6x86 is being used, please check the CPU Date Code after 605.

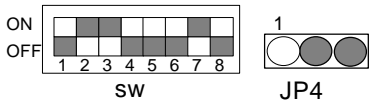
1. Pentium<sup>®</sup> Processor 100 MHz



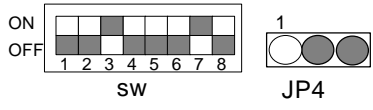
2. Pentium<sup>®</sup> Processor 133 MHz



3. Pentium<sup>®</sup> Processor 166 MHz

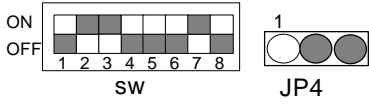


4. Pentium<sup>®</sup> Processor 200 MHz

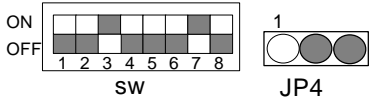




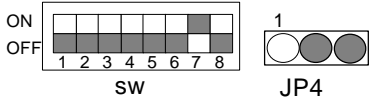
5. Intel MMX-166 MHz



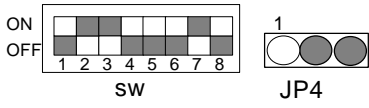
6. Intel MMX-200 MHz



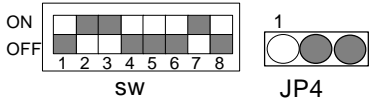
7. Intel MMX-233 MHz



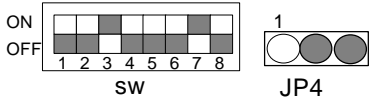
8. P54CT-166 MHz



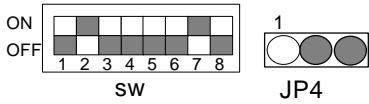
9. P54CTB-166 MHz



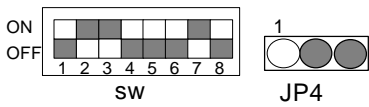
10. P54CTB-200 MHz



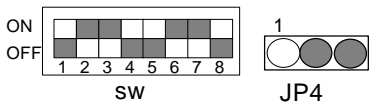
11. AMDK5-PR133



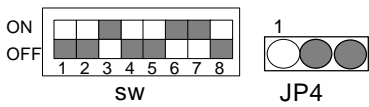
12. AMDK5-PR166



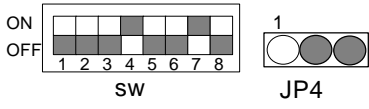
13. AMD-K6/166 (2.9V)



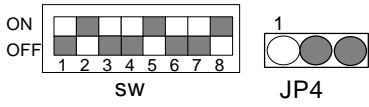
14. AMD-K6/200 (2.9V)



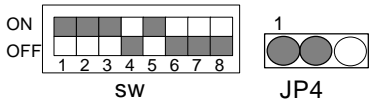
15. AMD-K6/233 (3.2V)



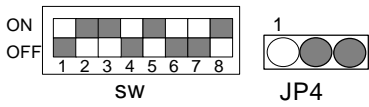
16. AMD-K6/266 (2.2V 66\*4); AMD-K6-2 266 (2.2V 66\*4)



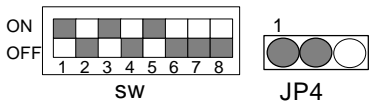
17. AMD-K6/266 (2.2V 100\*2.5)



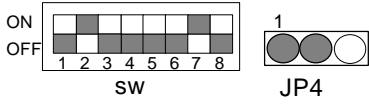
18. AMD-K6/300 (2.2V 66\*4.5)



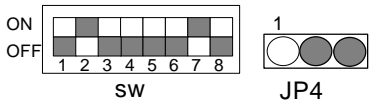
19. AMD-K6/300 (2.2V 100\*3); AMD-K6-2 300 (2.2V 100\*3)



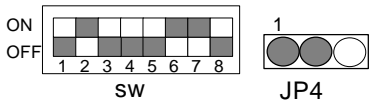
20. Cyrix / IBM 6x86-150 MHz-PR200+ (75\*2)



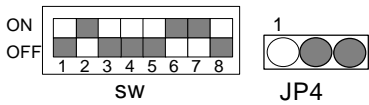
21. Cyrix / IBM 6x86L-PR166+ (2.8V)



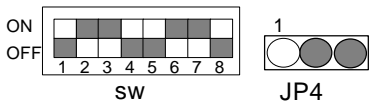
22. Cyrix / IBM 6x86L-PR200+ (75\*2 2.9V)



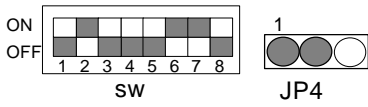
23. Cyrix / IBM 6x86MX-PR166 (66x2 2.9V)



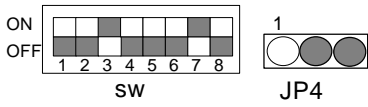
24. Cyrix / IBM 6x86MX-PR200 (66x2.5 2.9V)



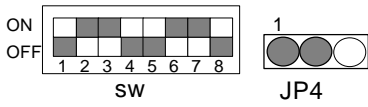
25. Cyrix / IBM 6x86MX-PR200 (75x2 2.9V)



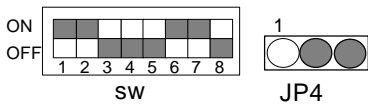
26. Cyrix / IBM 6x86MX-PR200 (66x3 2.9V)



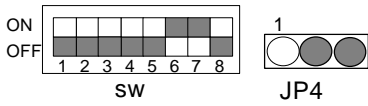
27. Cyrix / IBM 6x86MX-PR233 (75x2.5 2.9V)



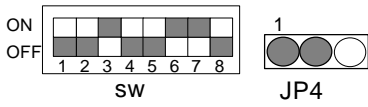
28. Cyrix / IBM 6x86MX-PR233 (83x2 2.9V)



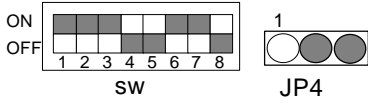
29. Cyrix / IBM 6x86MX-PR266 (66x3.5 2.9V)



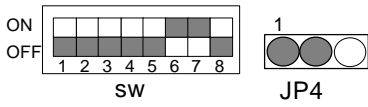
30. Cyrix / IBM 6x86MX-PR266 (75x3 2.9V)



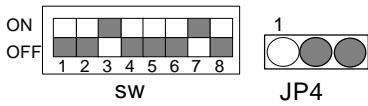
31. Cyrix / IBM 6x86MX-PR266 (83x2.5 2.9V)



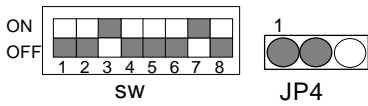
32. Cyrix M2-PR300 (66x3.5 2.9V)



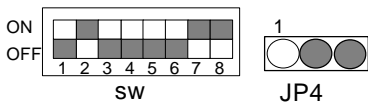
33. IDT C6-200 (66x3 3.52V)



34. IDT C6-225 (75x3 3.52V)

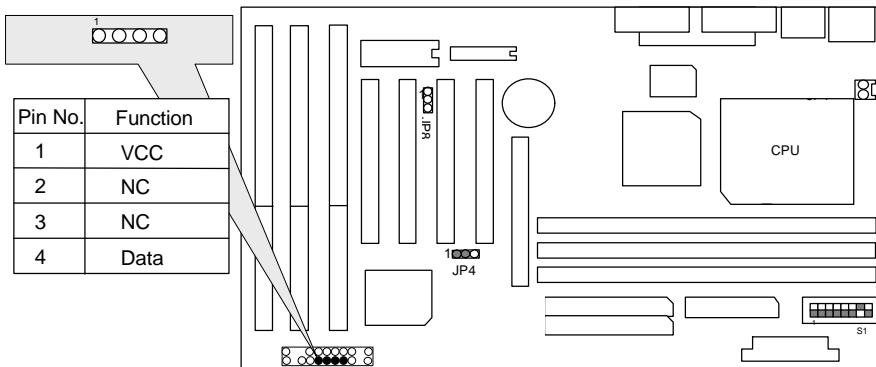


35. IDT C6-266 (66x4 3.52V)

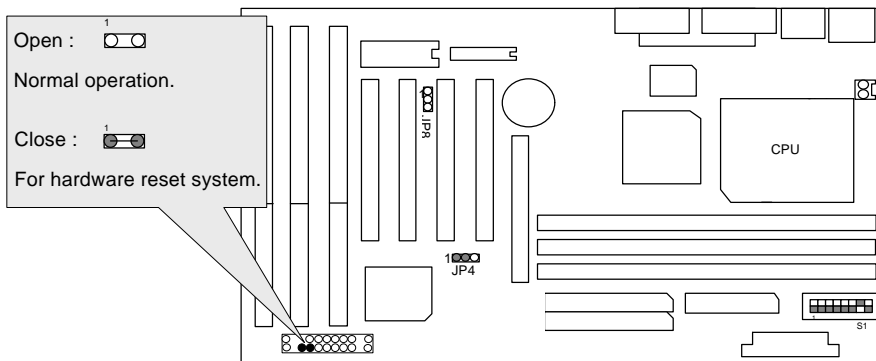


**III. Quick Installation Guide of Jumper setting:**

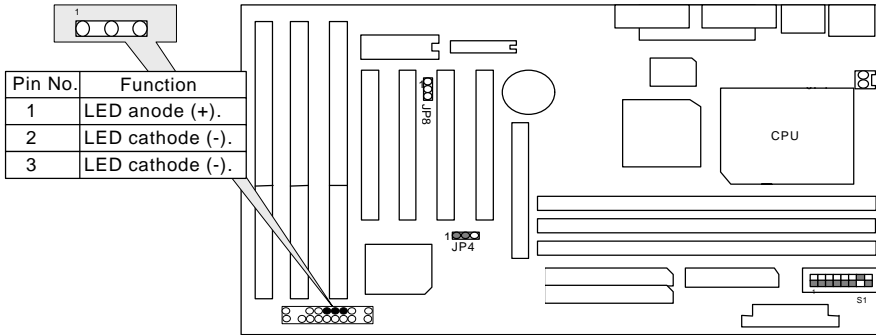
SPK : Speaker Connector



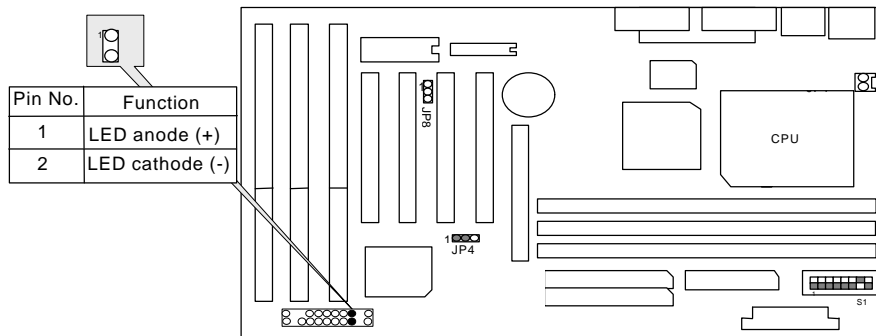
RST : Reset Switch



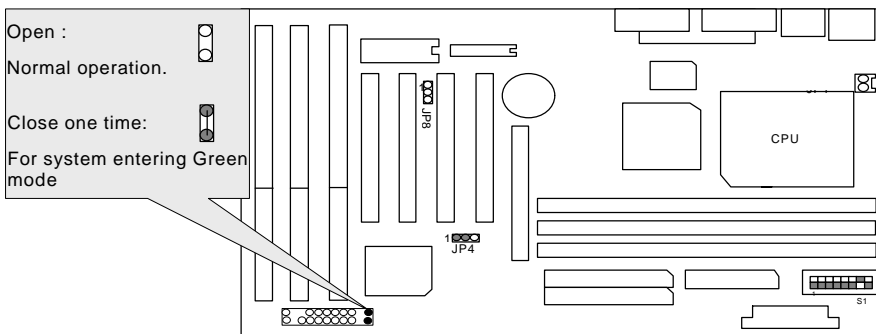
**PWR LED : Power LED (As a 3 steps ACPI LED)**



**HD : IDE Hard Disk Active LED**

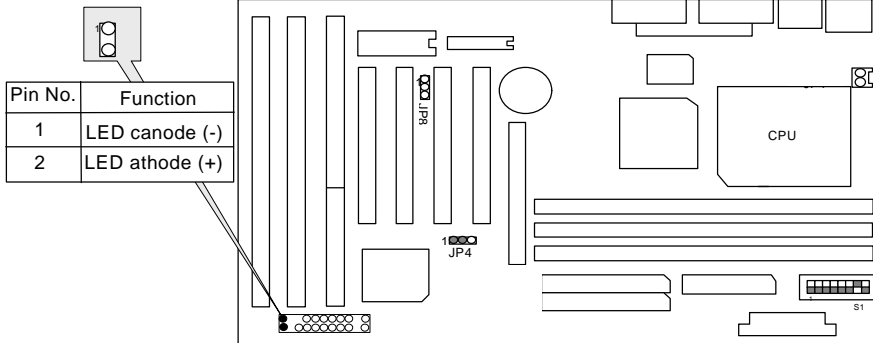


**GN : Green Function Switch**

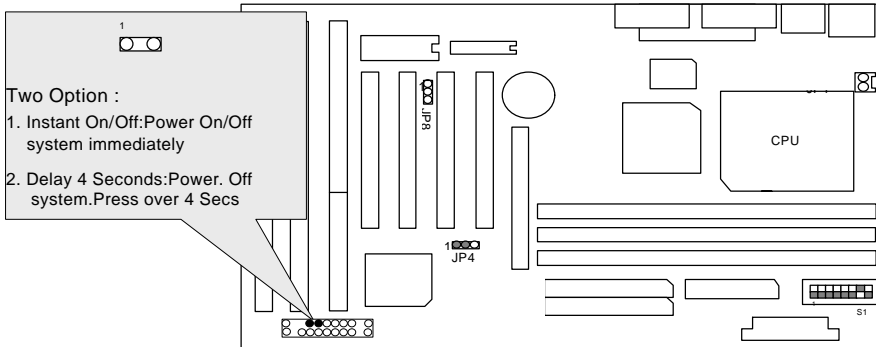




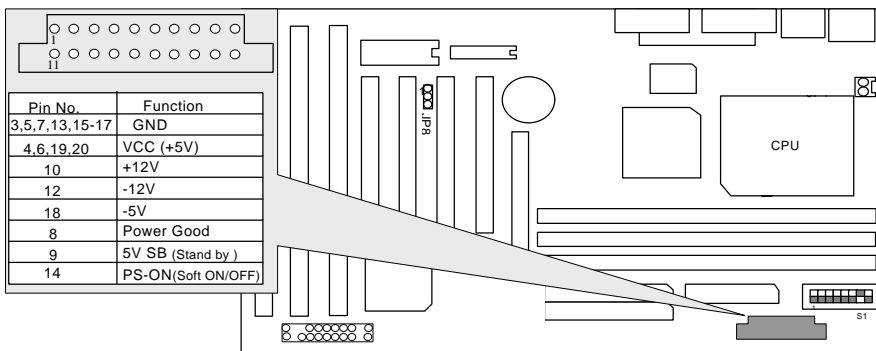
**GD : Green LED**



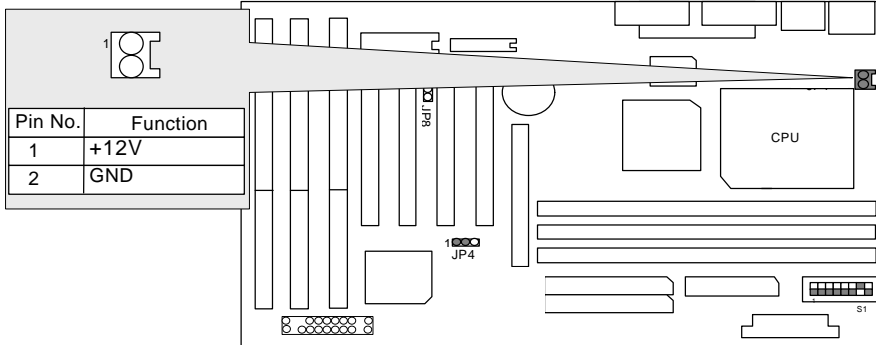
**SOFT PWR : Power On/Off Switch**



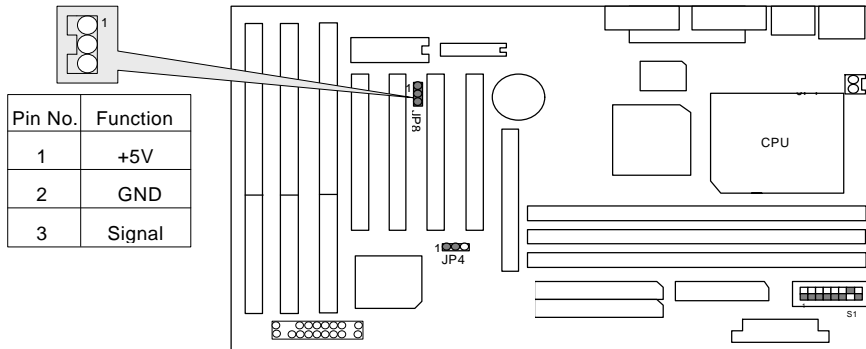
**ATX Power Connector**



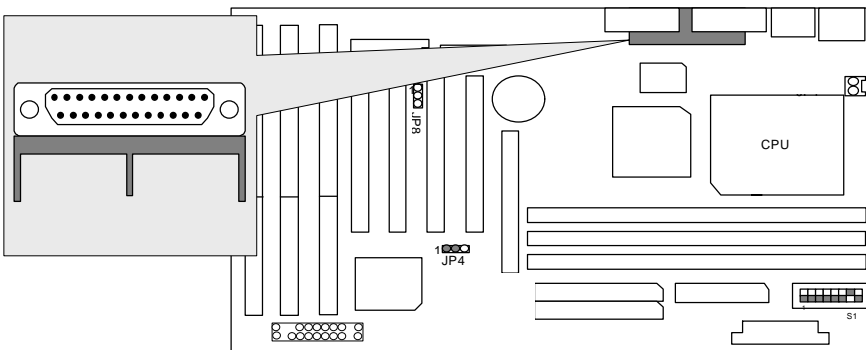
**JP9 : CPU Cooling Fan Power Connector**



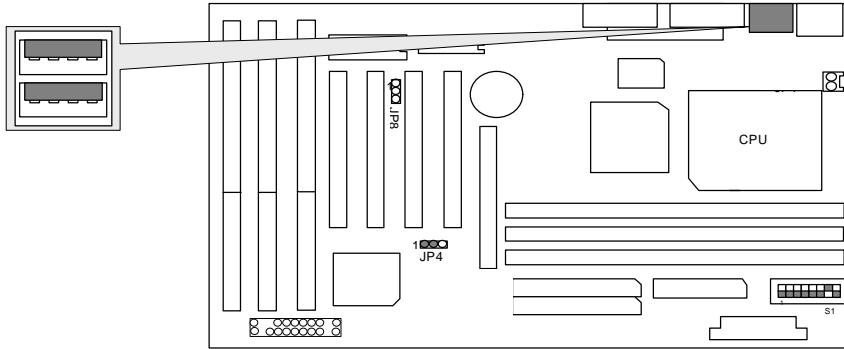
**JP8: Wake On Lan**



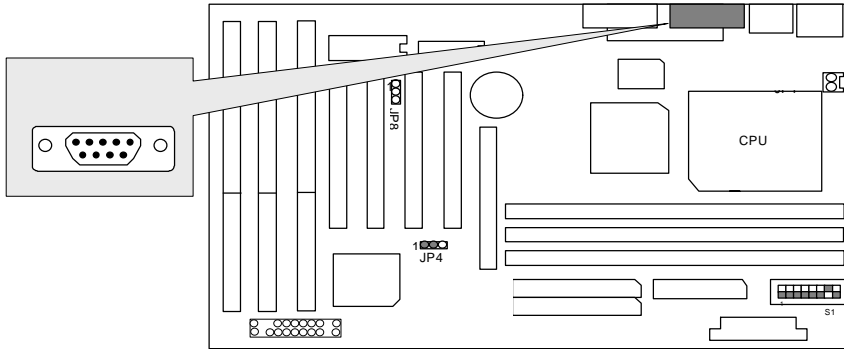
**LPT : LPT PORT**



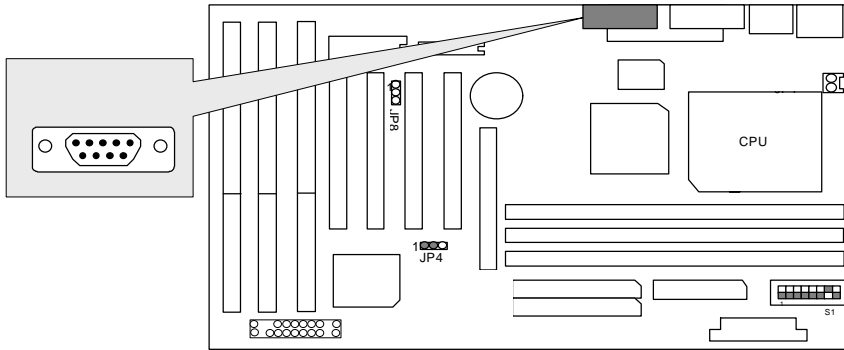
CN4 : USB Port



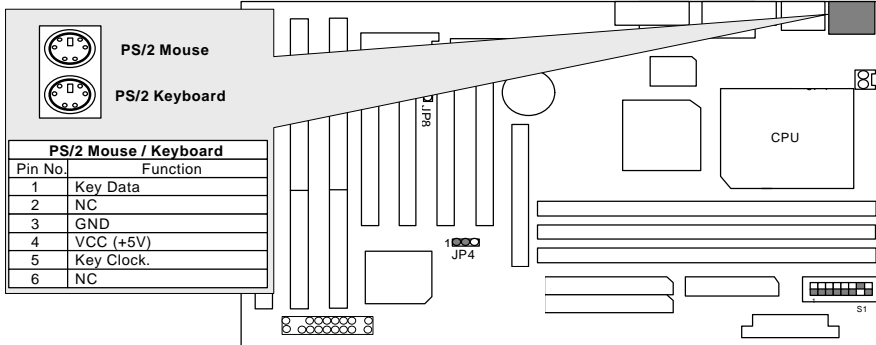
CN5 : COM B



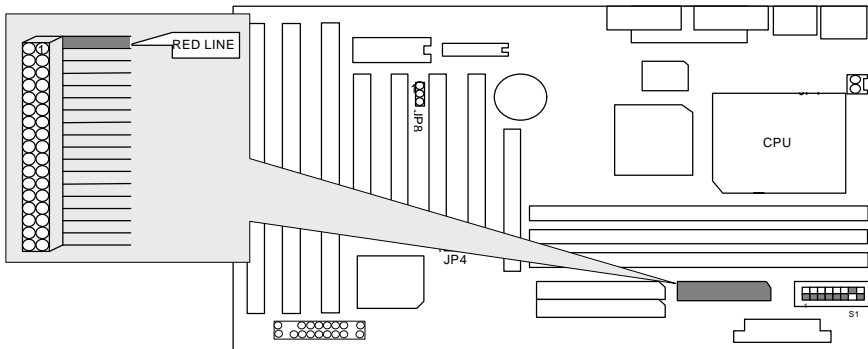
CN6 : COM A



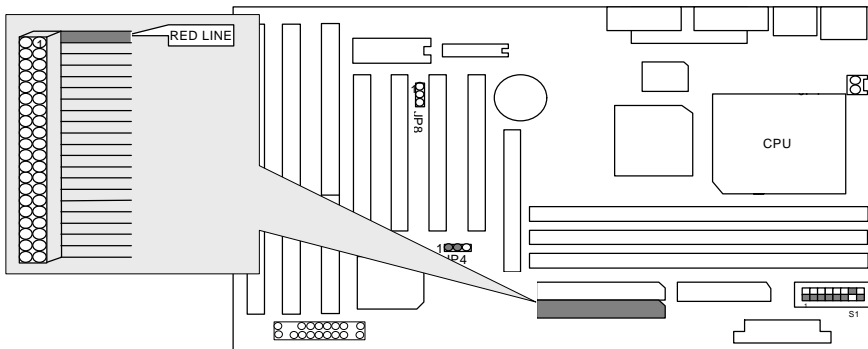
JP11 : PS/2 Mouse / Keyboard Connector



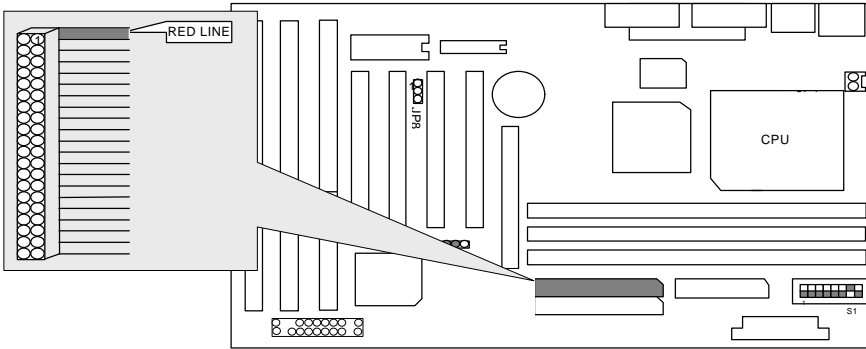
CN2 : FLOPPY PORT



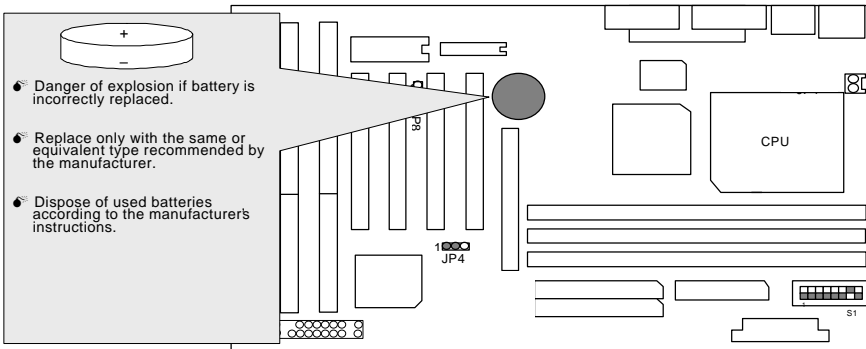
CN1 : For Primary IDE port



CN3 : For Secondary IDE port



BT1 : For Battery



### III. Top Performance Test Setting:

Users have to modify the value for each item in chipset features as follow

```
ROM PCI/ISA BIOS (295KKG09)
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.

Auto Configuration      : Enabled
Host Read DRAM Command Mode : Bypass
AT Bus Clock           : CLK2/3
DRAM Timing            : Fast
SDRAM CAS Latency      : 2
Pipelined Function     : Enabled
Graphics Aperture Size : 64 MB
SDRAM Burst X-1-1-1-1-1 : Enabled
DRAM Data Integrity Mode : Disabled
Memory Hole At 15-16M  : Disabled
ISA Line Buffer         : Enabled
Passive Release        : Enabled
Delay Transaction      : Disabled
Primary Frame Buffer    : 2 MB
UGA Frame Buffer        : Enabled
Data Merge             : Enabled

Auto Detect DIMM/PCI Clk : Enabled
Spread Spectrum         : 0.6%(CNTR)

ESC : Quit          ↑↓↓ : Select Item
F1  : Help         PU/PD/+/- : Modify
F5  : Old Values  (Shift)F2 : Color
F6  : Load BIOS Defaults
F7  : Load Setup Defaults
```

for top performance setting.

- \*\* Each value of items as above depends on your hardware configuration : CPU , SDRAM , Cards , etc.  
Please modify each value of items If your system does not work properly.

**PERFORMANCE LIST**

The following list of performance data is the testing results of some popular benchmark testing programs.

These data are just referred by users, and there is no responsibility for different testing data values gotten by users. (The different Hardware & Software configuration will result in different benchmark testing results.)

- CPU Pentium® Processor MMX-233 MHz , Cyrix 6x86M2-PR300 , AMD K6-2 300
- DRAM (128 x 1) MB SDRAM (LGS GM72N66841CT7J)
- CACHE SIZE 512 KB
- DISPLAY GA-600 (4MB SGRAM)
- STORAGE Onboard IDE (IBM DHEA-36451)
- O.S. Windows® NT 4.0
- DRIVER Display Driver at 1024 x 768 x 256 colors x 75Hz.  
ALi Bus Master IDE Driver

Processor	Intel-MMX 233MHz (66x3.5)	AMD K6-2 300 (100x3)	Cyrix M-2 PR300 (66x3.5 )
Winbench98 CPU mark32	467	756	478
FPU Winmark	912	979	534
Business Disk	1760	1840	1820
Hi-End Disk	4160	4550	4450
Business Graphics	105	153	139
Hi-End Graphics	109	156	150
Winstone98 Business	22.5	29.1	25.9
Hi-End	23.8	29.6	26.7

