686BX

USER'S MANUAL

1. **System power on by PS/2 Mouse: First, enable this function in CMOS Setup, then you can power on the system by double clicking the right or left button of your PS/2 Mouse.**

2. **System power on by Keyboard: If your ATX power supply supports larger than 720 mA 5V Stand-By current, you can power on your system by entering password from the keyboard after setting the "Keyboard power on" password in CMOS Setup.**

3. **Supports 3 steps ACPI LED.**

4. **Modem Ring-On. (COM B)**

5. **Wake-Up on LAN. (on J13)**

6. **Supports LDCM®**

Pentium â II Processor MAINBOARD

REV. 1.0 First Edition

Release Date 98.03.19

R-01-01-080319

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

March 19, 1998 Taipei, Taiwan

I. Quick Installation Guide :

CPU SPEED SETUP

The system bus speed is selectable between 66.6MHz and 100 MHz. The user can select the system bus speed **(JP6)** and change the DIP SWITCH **(SW)** selection to set up the CPU speed for 200 - 633MHz processor.

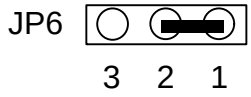
The CPU speed MUST match with the frequency RATIO. It will cause system hanging up if the frequency RATIO is higher than that of CPU.

CLK RATIO	SW 1	SW 2	SW 3	SW 4
X3	ON	OFF	ON	ON
X3.5	OFF	OFF	ON	ON
X4	ON	ON	OFF	ON
X4.5	OFF	ON	OFF	ON
X5	ON	OFF	OFF	ON
X5.5	OFF	OFF	OFF	ON

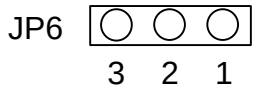
JP6

1-2 CLOSE :	**System Speed is set to 66 MHz**
2-3 CLOSE :	**Reserved (For Future use only!)**
1-2-3 OPEN :	**System Speed is set to 100MHz**

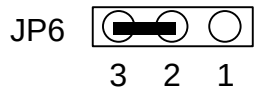
I. **Set system speed to 66MHz:** JP6 pin 1-2 short will cause system always run at 66 MHz FSB (Front Side Bus).



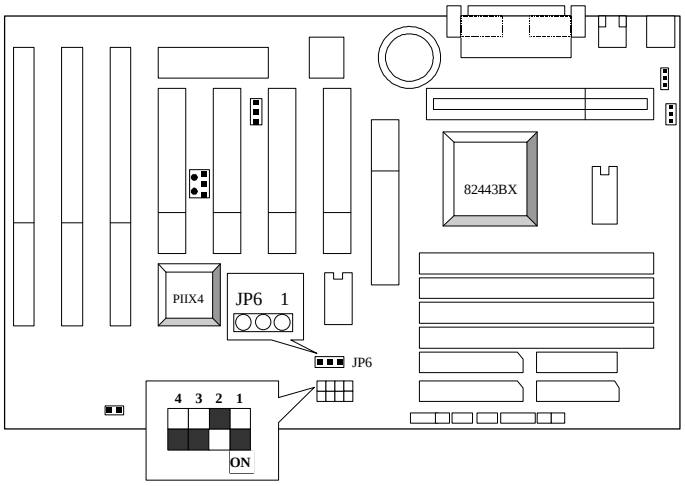
II. **Set system speed to 100MHz:** JP6 pin 1-2-3 open will cause system always run at 100MHz FSB.



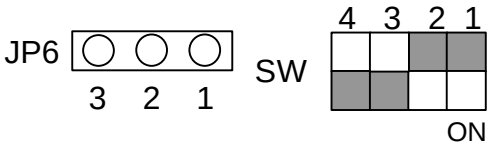
III. **Function for future use:** Please don't short this pins right now!



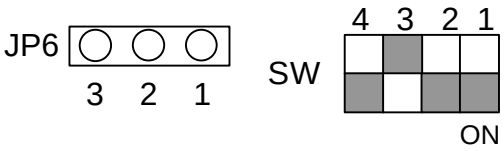
1. Pentium® II 300 / 100MHz FSB



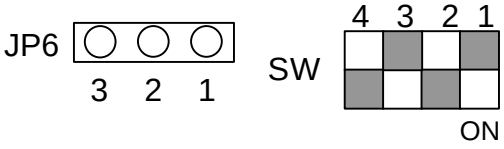
2. Pentium® II 350 / 100MHz FSB



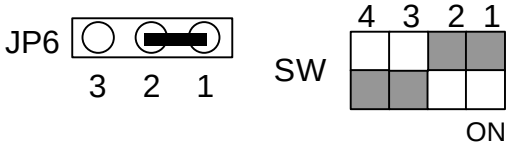
3. Pentium® II 400 / 100MHz FSB



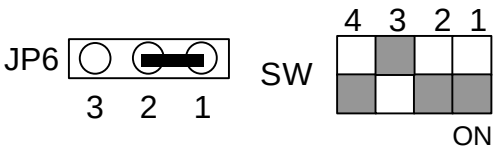
4. Pentium® II 450 / 100MHz FSB



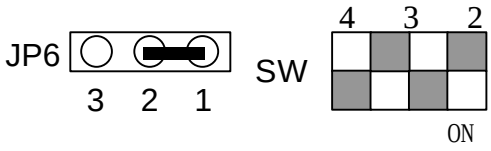
5. Pentium® II 233 MHz / 66MHz FSB



6. Pentium® II 266 / 66MHz FSB

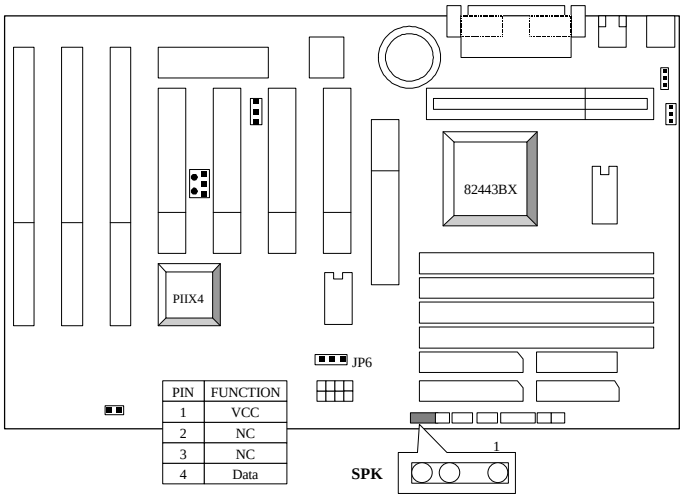


7. Pentium® II 300 MHz / 66MHz FSB

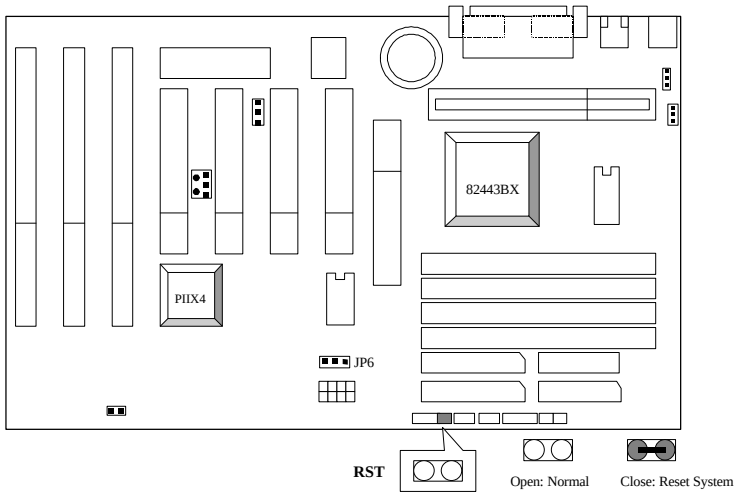


II. Jumper setting :

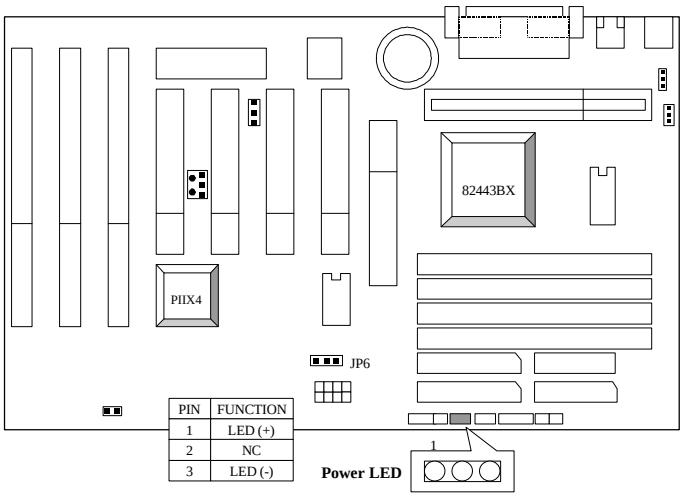
SPK : Speaker Connector



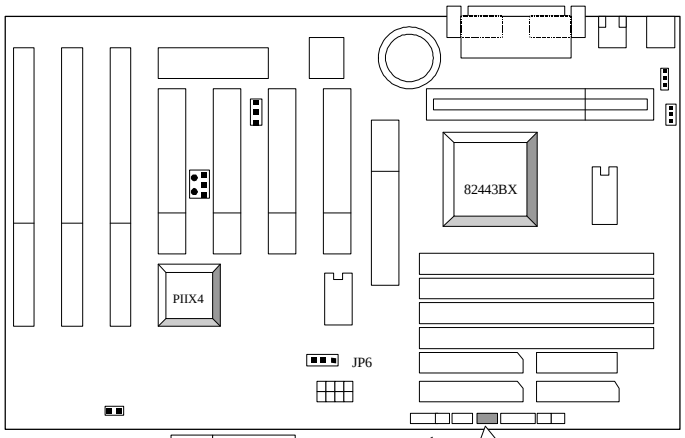
RST : Reset Switch



PW LED : Power LED Connector



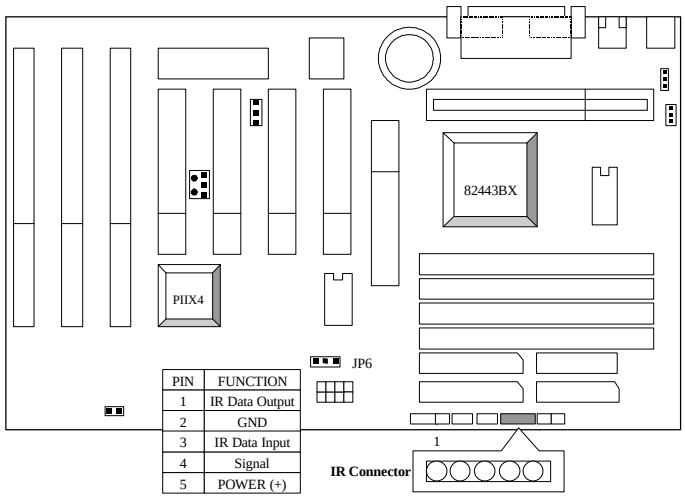
HD : IDE Hard Disk Active LED



PIN	FUNCTION
1	LED (+)
2	LED (-)

HD LED

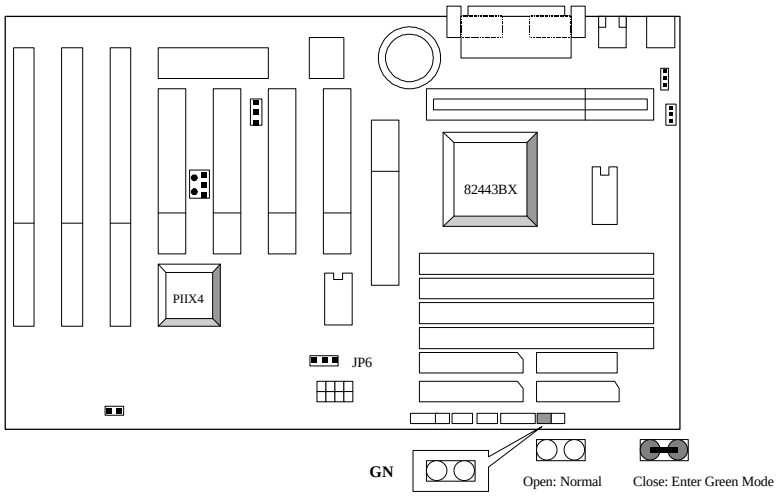
IR : Infrared Connector (Optional)



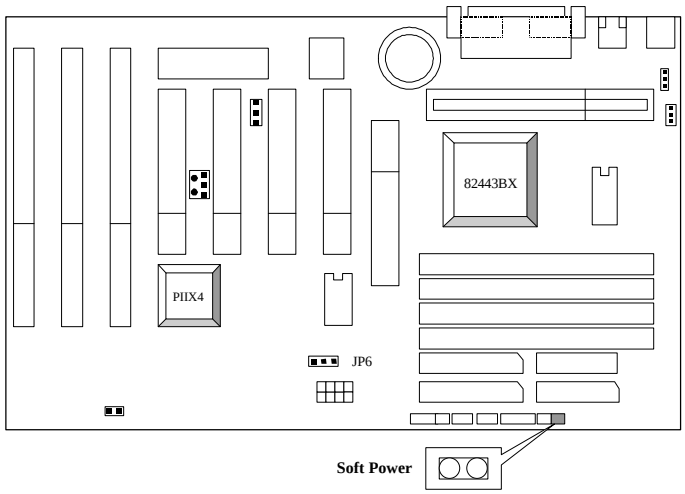
PIN	FUNCTION
1	IR Data Output
2	GND
3	IR Data Input
4	Signal
5	POWER (+)

IR Connector

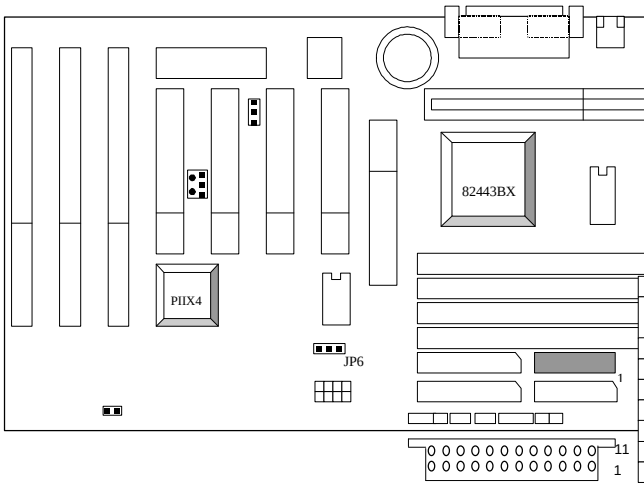
GN : Green Function Switch



Soft POWER : Soft Power Connector

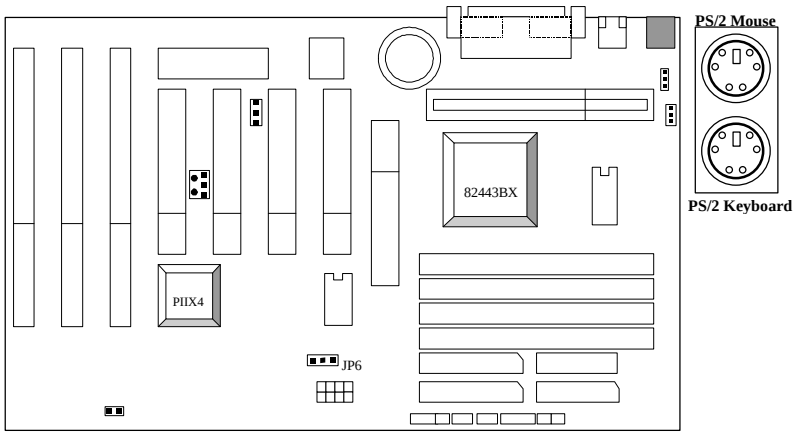


POWER1 : Power Connector

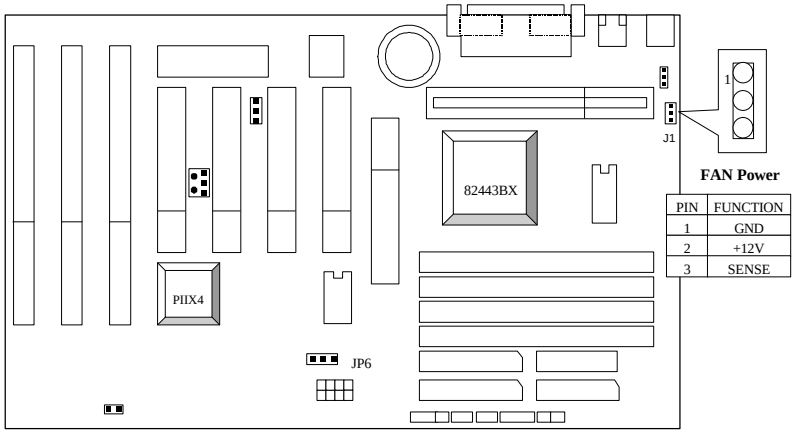


Pin No.	Function
3,5,7,13, 15-17	GND
4,6,19,20	VCC(+5V)
10	+12V
12	-12V
18	-5V
8	Power Good
9	5V SB
14	PS-ON

PS/2 Mouse / Keyboard Connector



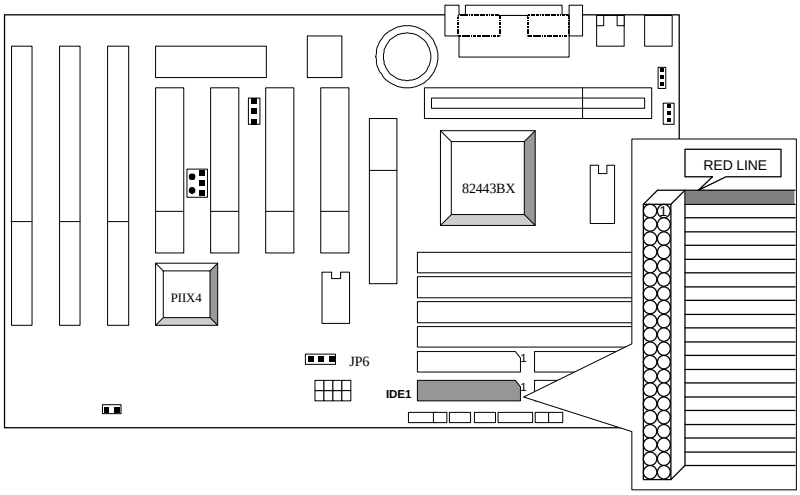
J1 : CPU Cooling Fan Power Connector



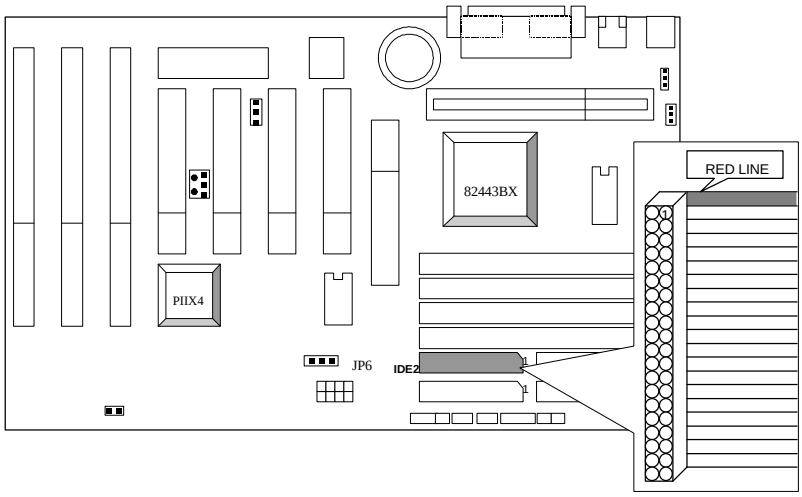
FAN Power

PIN	FUNCTION
1	GND
2	+12V
3	SENSE

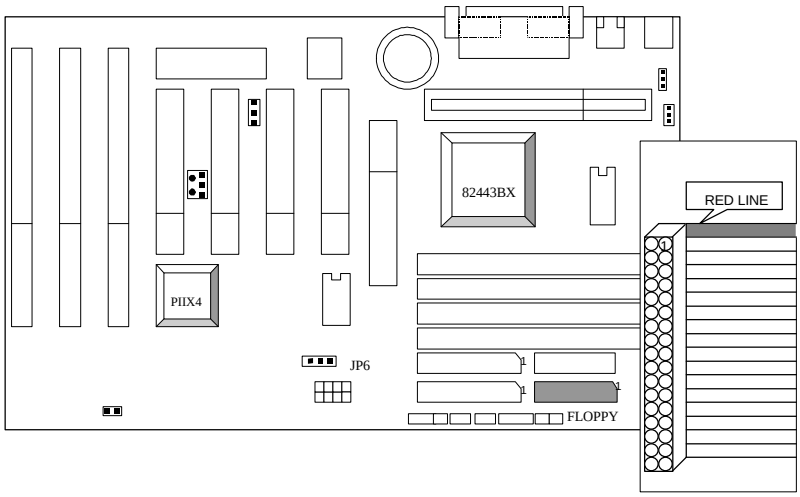
IDE1: For Primary IDE port



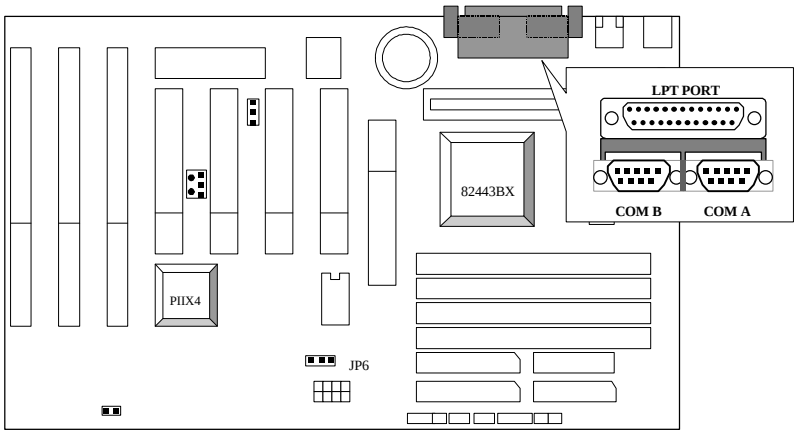
IDE2: For Secondary IDE port



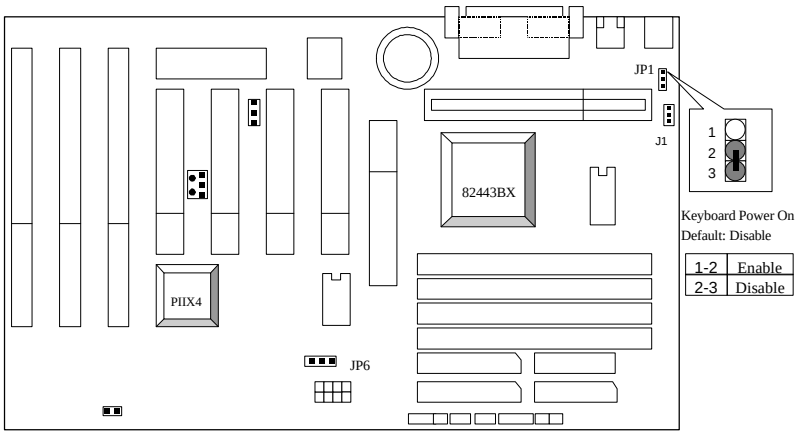
J3 : FLOPPY PORT



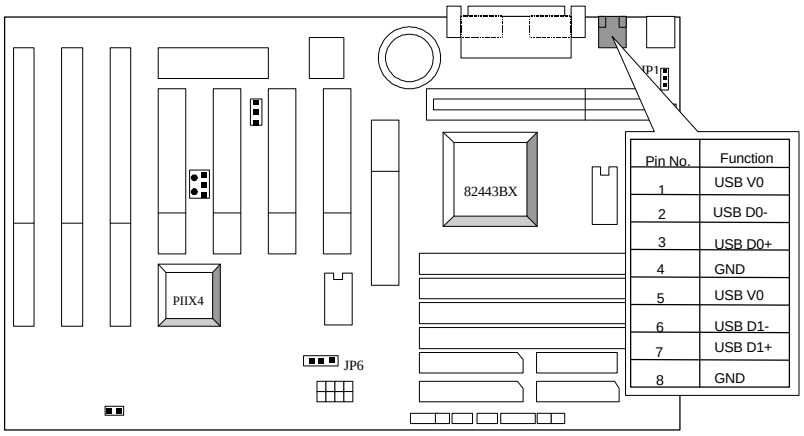
LPT PORT / COM A / COM B



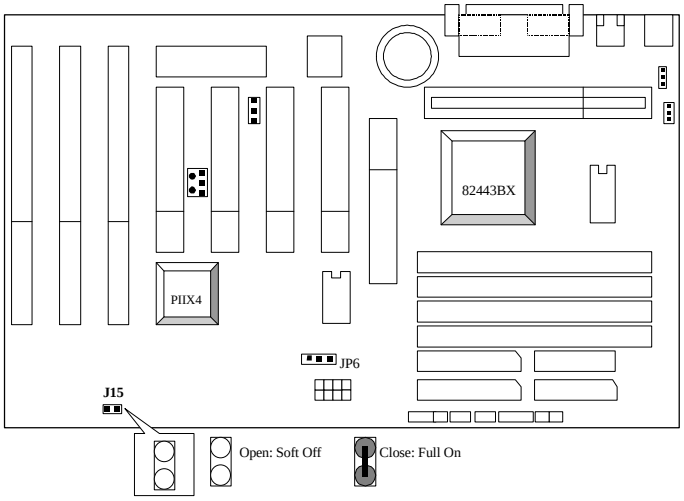
JP1 : Keyboard Power On Selection



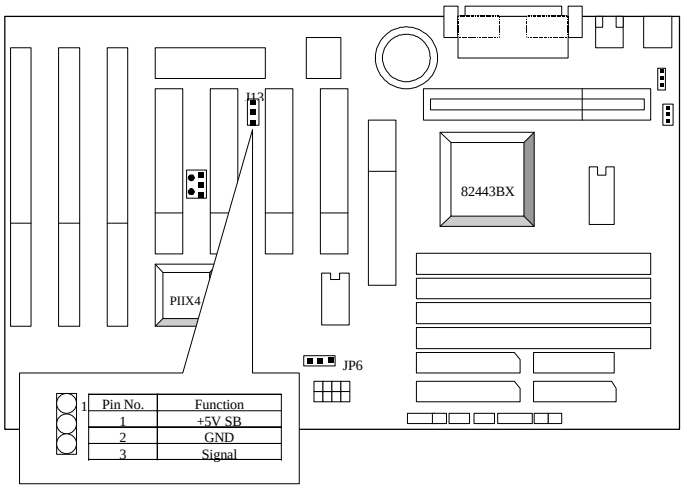
CN1: USB Port



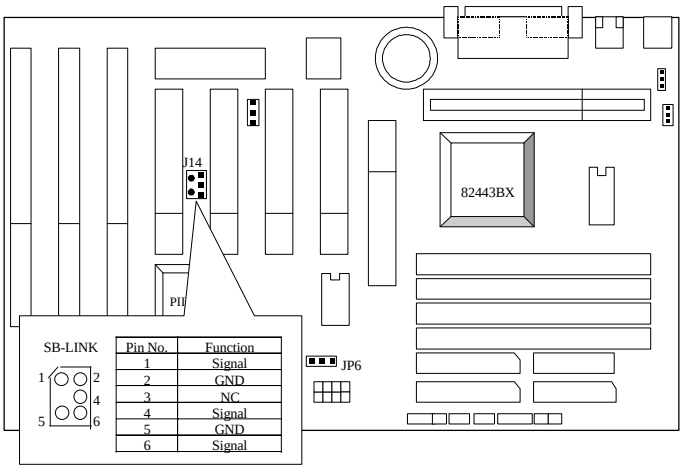
J15: ATX Power Control Selection



J13:Wake On LAN



J14:Creative PCI Sound Card Support



III. Top Performance Test Setting:

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

Users have to modify the value for each item in chipset features as follow for top performance setting.

ROM PCI / ISA BIOS
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.

EDO CASx# MA Wait State	: 1	Current CPU Temperature	: 56 ¢J/132 ¢K
EDO RASx# Wait State	: 1	Current CPU FAN Speed	: 5152 RPM
SDRAM CAS latency Time	: 2	Current CPUVC$_{ore}$ A	: 2.83 V
DRAM Data Integrity Mode	: Non-ECC	Current CPUVC$_{ore}$ B	: 1.50 V
System BIOS Cacheable	: Enabled	Current +3.3 V	: 3.53 V
Video BIOS Cacheable	: Enabled	Current +5 V	: 4.99 V
Video RAM Cacheable	: Disabled	Current +12 V	: 12.28 V
16 Bit I/O Recovery Time	: 1	Current - 12 V	:-11.81 V
Memory Hole At 15M-16M	: Disabled	Current - 5 V	:-5.04 V
Delayed Transaction	: Disabled	Current Battery Life	: OK
Clock Spread Spectrum	: Disable		
Slow Down CPU Duty Cycle	: Disable		
Alarm When CPU Overheat	: Disabled		
CPU Temperature Select	: 75 ¢J/167 ¢K		
CPUFan Control	: Disabled		
*CPUFan Fail Alarm	: Disabled		

ESC	: Quit	¡ Ô Õ † Ö	: Select Item
F1	: Help	PU/PD/+/-	: Modify
F5	: Old Values	(Shift)F2	: Color
F6	: Load BIOS Defaults		
F7	: Load PERFORMANCE Defaults		

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

- CPU Pentium® II processor
- DRAM (32 x 2) MB SDRAM (MICRON MT 48LC2M8A1 -8)
- CACHE SIZE 512 KB included in CPU
- DISPLAY GA-600 AGP Display Card (4MB SGRAM)
- STORAGE Onboard IDE (IBM DHEA-36480)
- O.S. Windows NT™ 4.0
- DRIVER Display Driver at 1024 x 768 x 64k colors x 75Hz.
  TRIONES Bus Master IDE Driver 3.70

Processor	Intel Pentium® II	
	300MHz(100x3)	
Winbench98		
	795	952
FPU Winmark	1560	1850
Business Disk	1670	1780
Hi-End Disk	3300	3620
Business Graphics	165	188
Hi-End Graphics	183	214
Winstone98		
Business	29.8	33.8
Hi-End	31.2	35.3