686LX4

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 100~300 mA 5V Stand-By current (dependent on the specification of keyboard), you can power on your system by entering password from the Keyboard after setting the "Keyboard power on" jumper (JP1) and password in CMOS Setup.**

3. **Support 3 steps ACPI LED selectable.**

4. **Support Modem Ring-On on COM A , COM B.**

5. **Support Wake-up on LAN. (Your ATX power supply must support larger than 720 mA 5V Stand-By current)**

- **J16(ATX PWR Ctrl)/J19(Ring Pow On)/JP8(Clear CMOS) Power FAN/System FAN Jumpers for PCB Rev: 2.0/2.2 use, please reference P15 ¡ P16 ¡ P17**
- **PCI 2.1 For PCB Rev 2.0**
- **PCI 2.2 For PCB Rev 2.2**

For Intel Pentium â II / Celeron™ Processor MAINBOARD

R-22-01-081103

REV. 2.2 First Edition

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.

Dec 03, 1998 Taipei, Taiwan

I. Quick Installation Guide :

CPU SPEED SETUP

The default system bus speed is 66.6MHz. The user can change the DIP SWITCH **(SW)** selection to set up the CPU speed for 233 - 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.

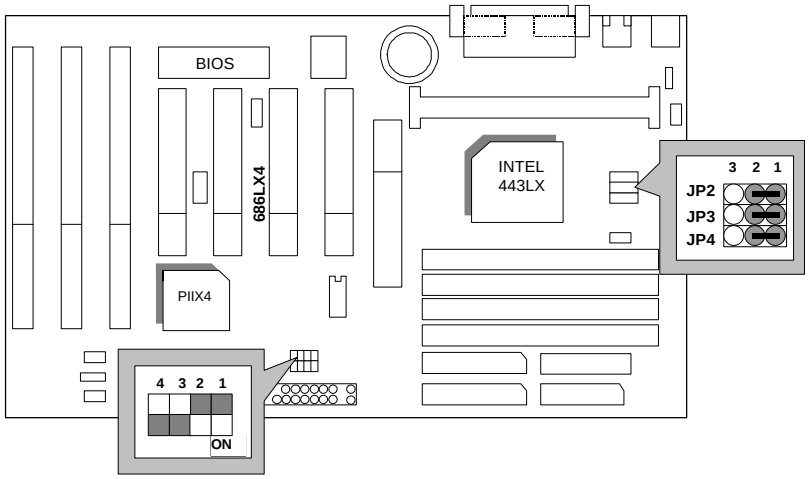
DIP SWITCH (SW)				REQ. RATIO	EXT.CLK. MHz	INT.CLK. MHz	CPU Type
1	2	3	4				
OFF	OFF	ON	ON	3.5	66	233	Pentium® II 233 MHz (Celeron 233MHz)
ON	ON	OFF	ON	4	66	266	Pentium® II 266 MHz (Celeron 266MHz)
OFF	ON	OFF	ON	4.5	66	300	Pentium® II 300 MHz (Celeron 300MHz)
ON	OFF	OFF	ON	5	66	333	Pentium® II 333 MHz (Celeron 333MHz)
OFF	OFF	OFF	ON	5.5	66	366	Pentium® II 366 MHz (Celeron 366MHz)

JP2, JP3, JP4 (Select the system speed ¡ 66 / 75 / 83 / 100MHz)

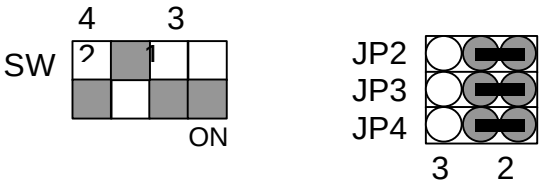
Main Clock	JP4	JP3	JP2
66 MHz	**1-2**	**1-2**	**1-2**
75 MHz	**1-2**	**2-3**	**1-2**
83 MHz	**2-3**	**1-2**	**2-3**
100 MHz	**1-2**	**2-3**	**2-3**

★ **Note: We don't recommend you to setup your system speed to 75, 83 or 100MHz because these frequencies are not the standard specifications for CPU, Chipset and most of the peripherals. Whether your system can run under 75, 83 or 100MHz properly will depend on your hardware configurations: CPU, SDRAM, Cards, etc.**

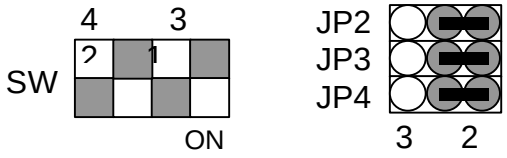
1. Pentium® II / Celeron 233 MHz / 66MHz FSB



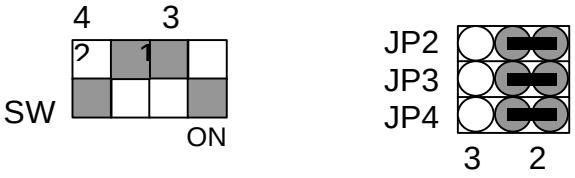
2. Pentium® II / Celeron 266MHz / 66MHz FSB



3. Pentium® II / Celeron 300MHz / Celeron 300A MHz / 66MHz FSB



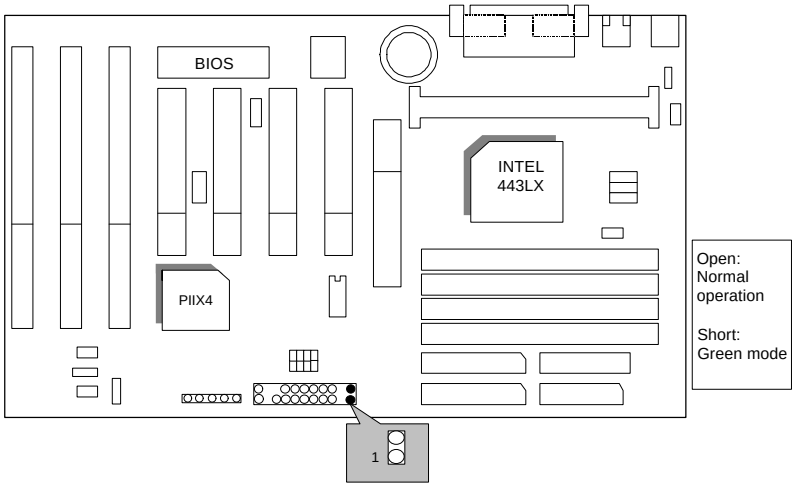
4. Pentium® II / Celeron 333MHz / 66MHz FSB



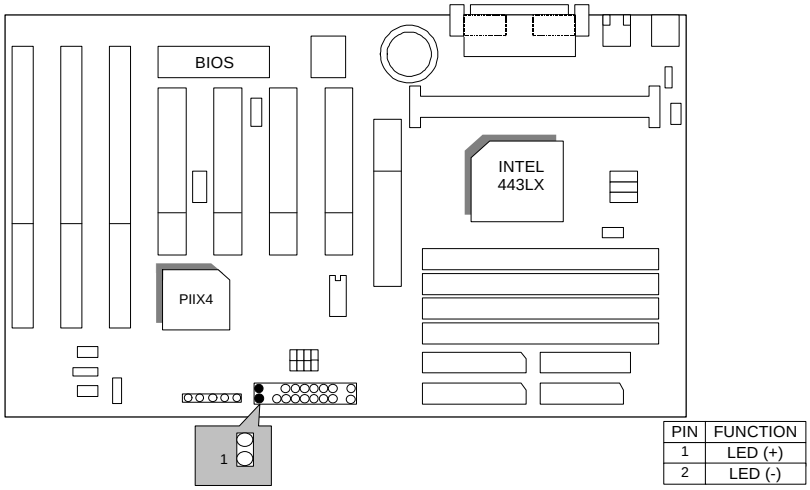
5. Pentium® II / Celeron 366 MHz / 66MHz FSB

II. Jumper setting :

GN : Green Function Switch

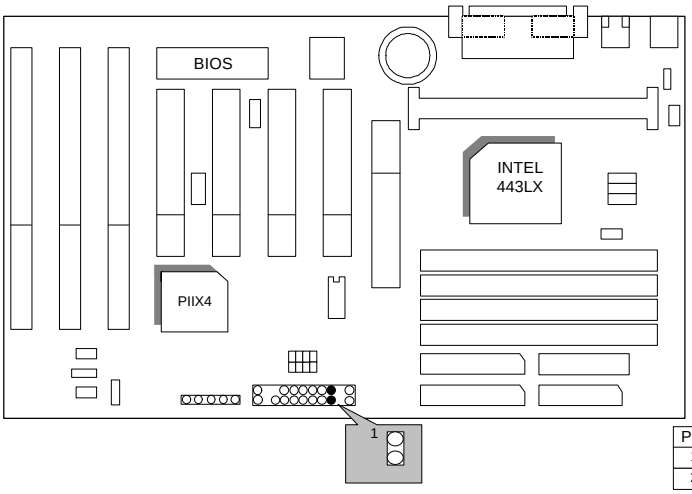


GD : Green Function LED



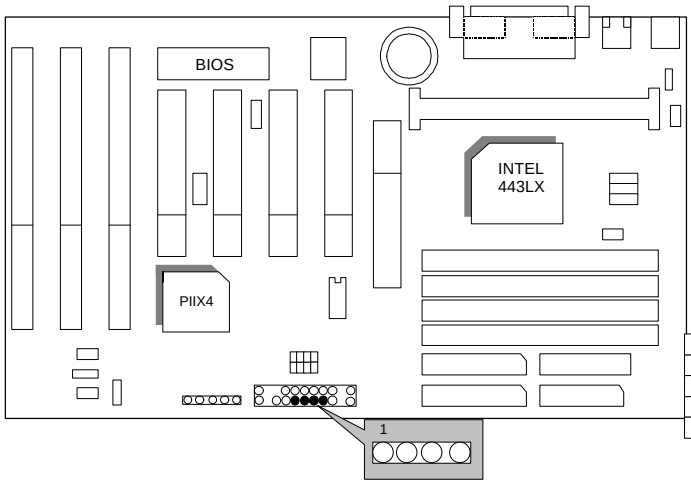
PIN	FUNCTION
1	LED (+)
2	LED (-)

HD : IDE Hard Disk Active LED



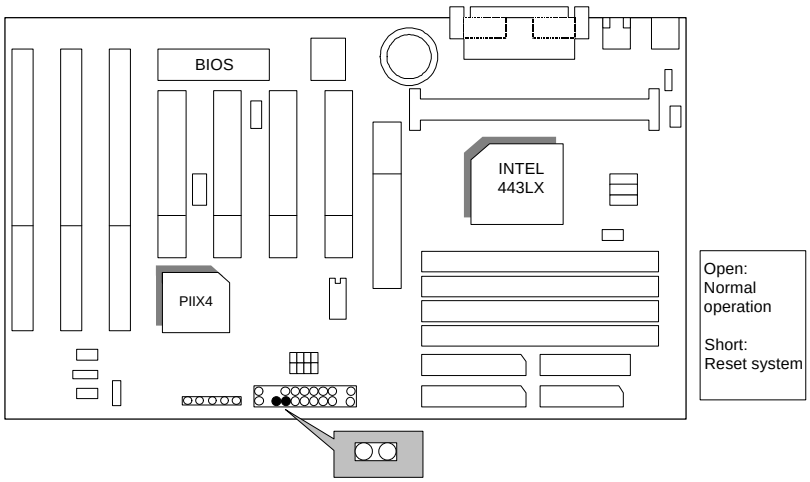
PIN	FUNCTION
1	LED (+)
2	LED (-)

SPKR : Speaker Connector

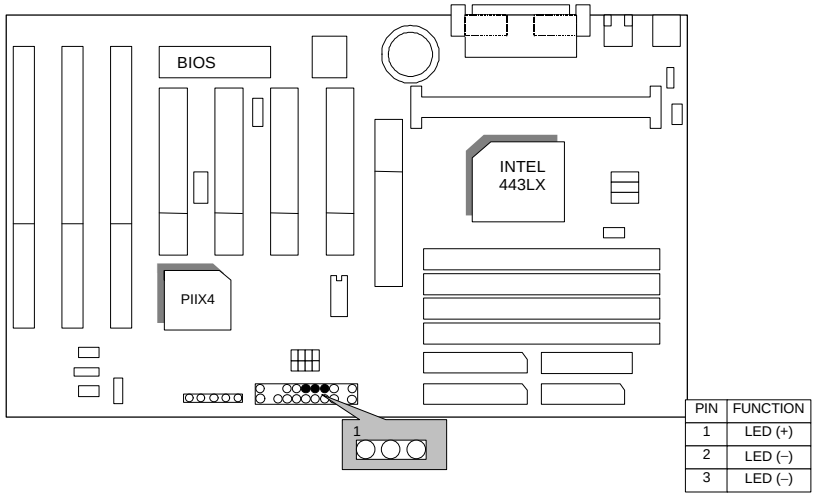


PIN	FUNCTION
1	VCC
2	NC
3	NC
4	Data

RES : Reset Switch

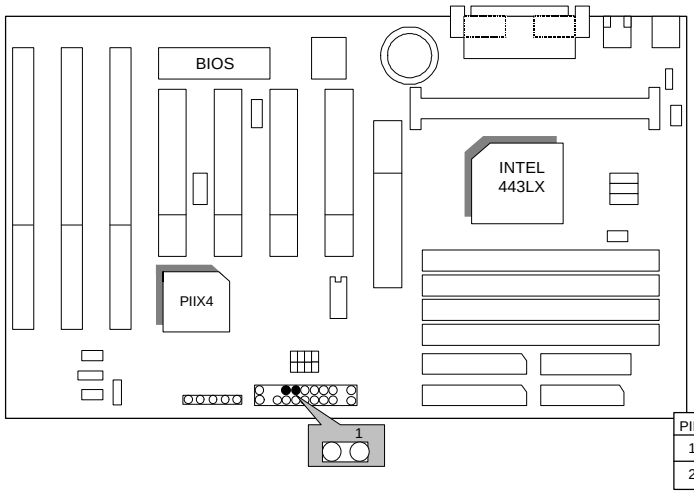


PWR : Power LED Connector



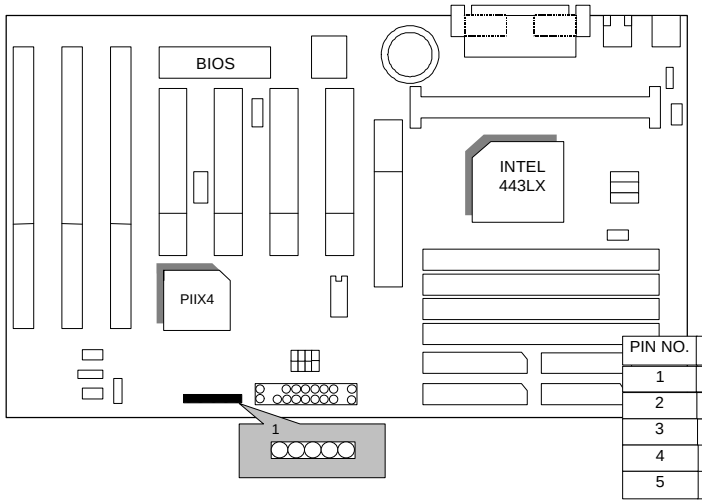
PIN	FUNCTION
1	LED (+)
2	LED (–)
3	LED (–)

PWR SW : Soft Power Connector



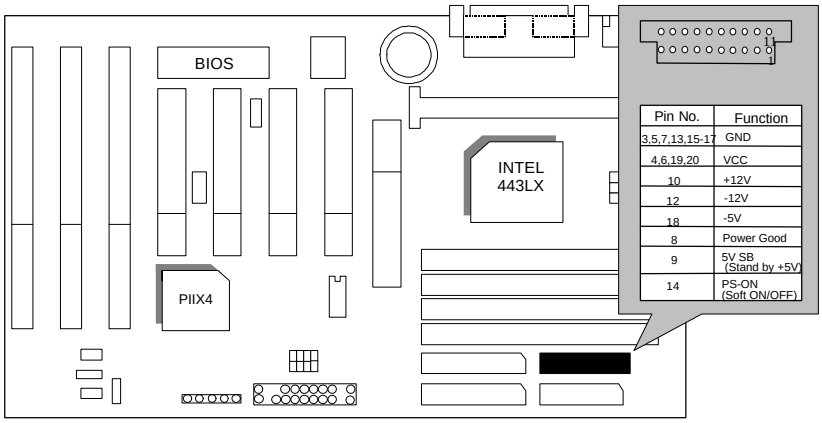
PIN	FUNCTION
1	CTRL-Signal
2	GND

IR : Infrared Connector (Optional)



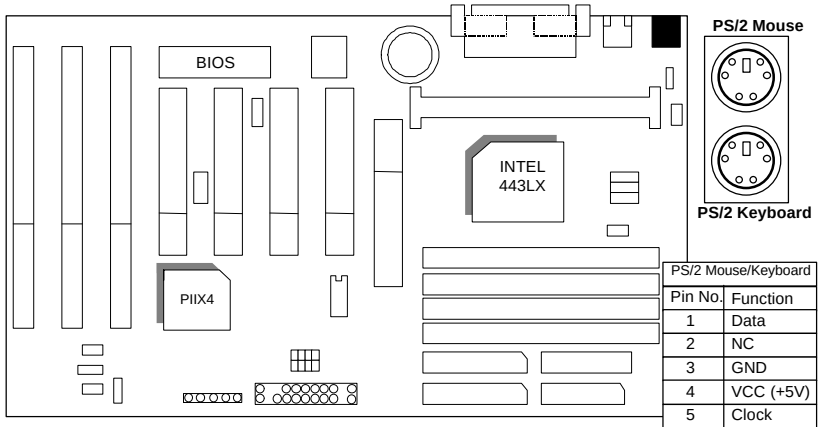
PIN NO.	Function
1	IR Data Output
2	GND
3	IR Data Input
4	Signal
5	POWER (+)

ATX PWR : ATX Power Connector



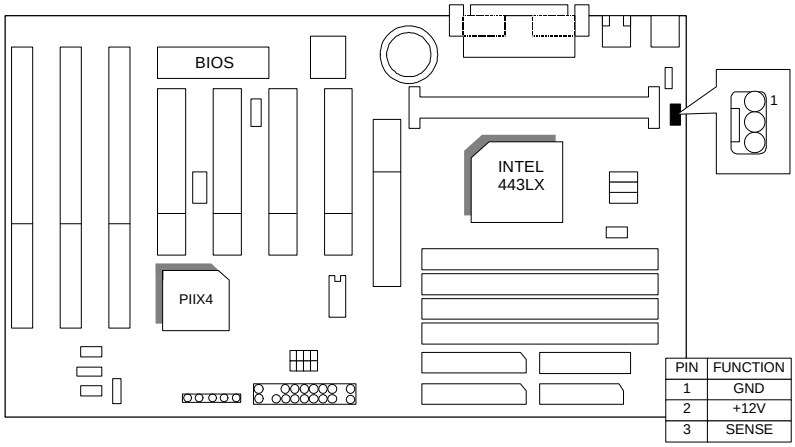
Pin No.	Function
3,5,7,13,15-17	GND
4,6,19,20	VCC
10	+12V
12	-12V
18	-5V
8	Power Good
9	5V SB (Stand by +5V)
14	PS-ON (Soft ON/OFF)

PS/2 Mouse / Keyboard Connector



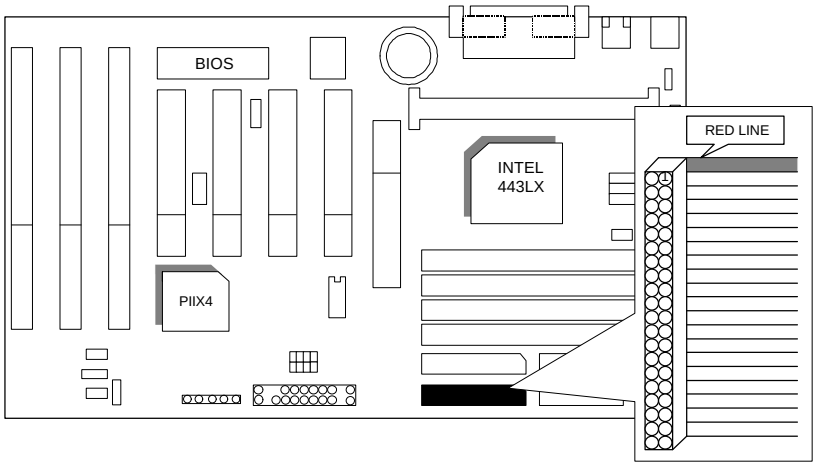
PS/2 Mouse/Keyboard	
Pin No.	Function
1	Data
2	NC
3	GND
4	VCC (+5V)
5	Clock
6	NC

CPU FAN : CPU Cooling Fan Power Connector

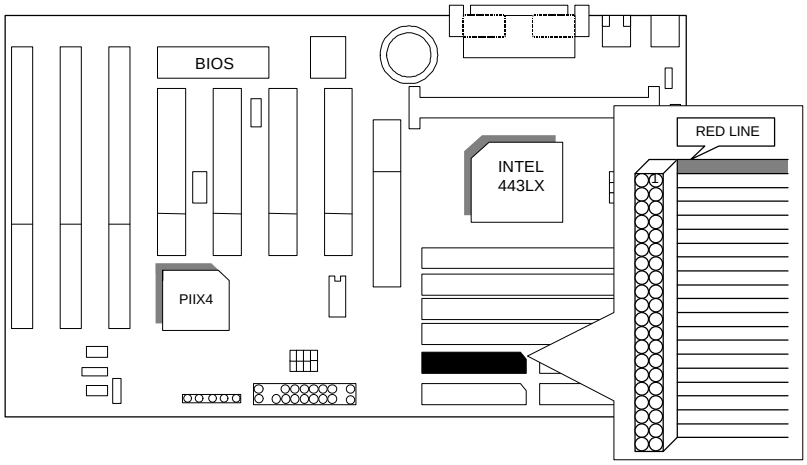


PIN	FUNCTION
1	GND
2	+12V
3	SENSE

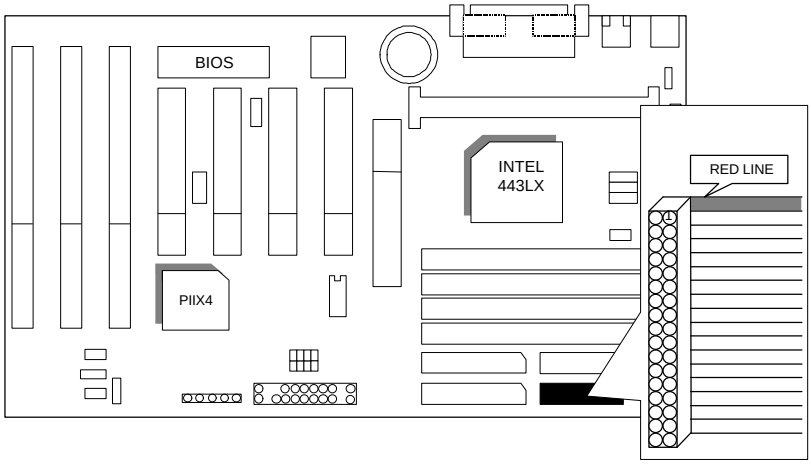
IDE1: For Primary IDE port



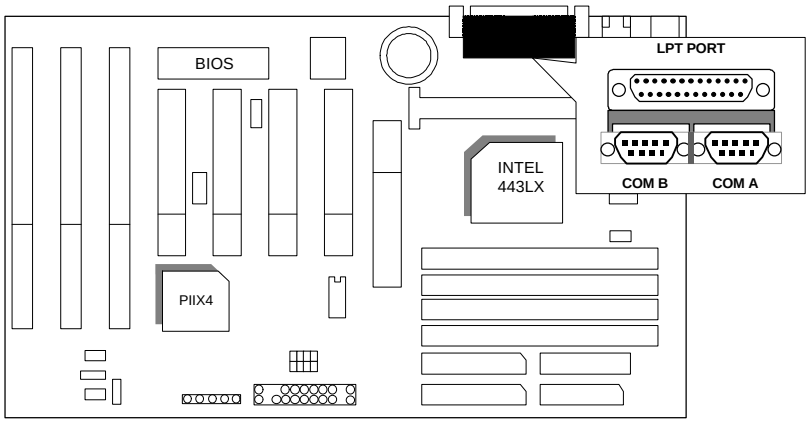
IDE2: For Secondary IDE port



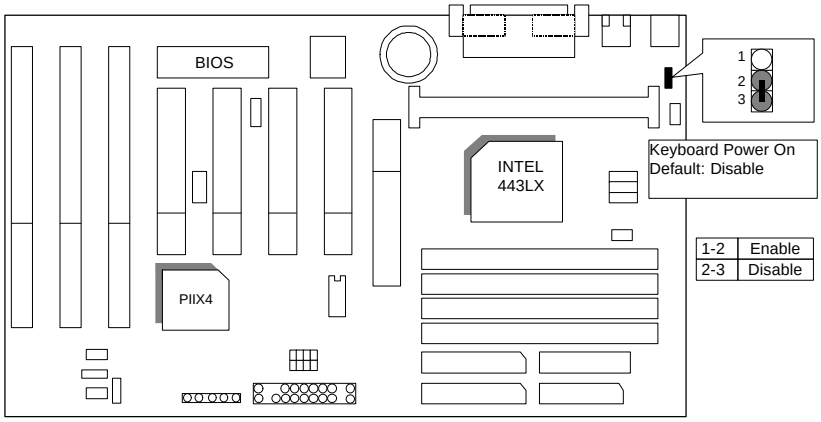
FLOPPY: FLOPPY PORT



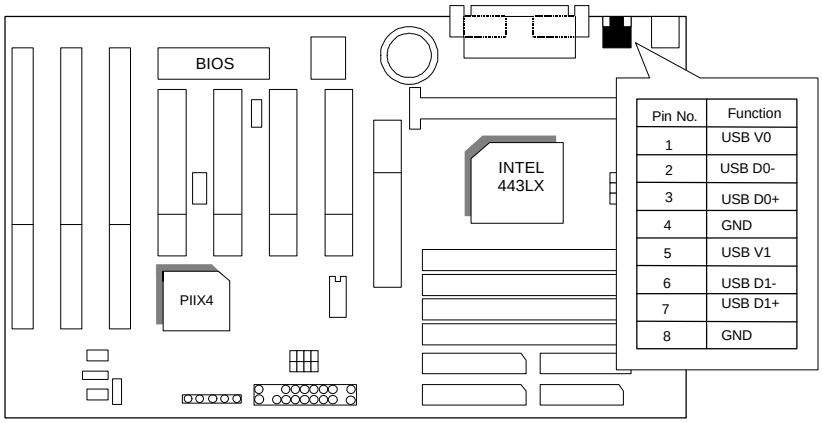
LPT PORT / COM A / COM B



JP1: Keyboard Power On

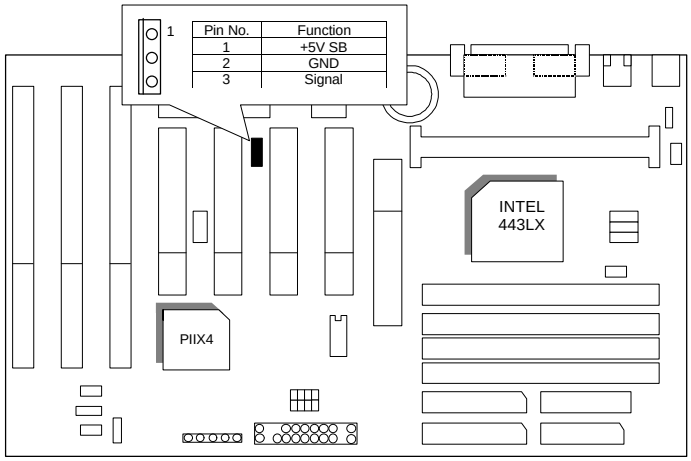


CN1: USB Port



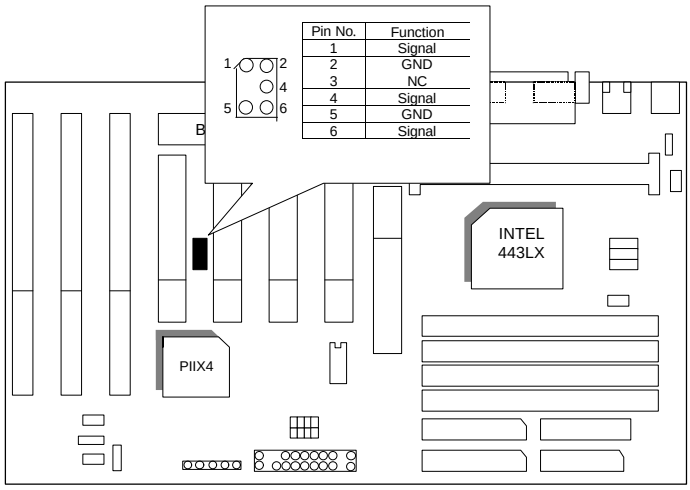
Pin No.	Function
1	USB V0
2	USB D0-
3	USB D0+
4	GND
5	USB V1
6	USB D1-
7	USB D1+
8	GND

J13:Wake On LAN



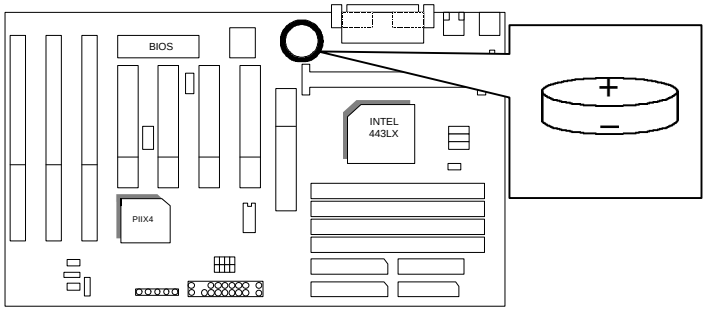
Pin No.	Function
1	+5V SB
2	GND
3	Signal

SB-LINK : For PCI Audio / Sound Card use only
(Creative PCI Sound Card Support)



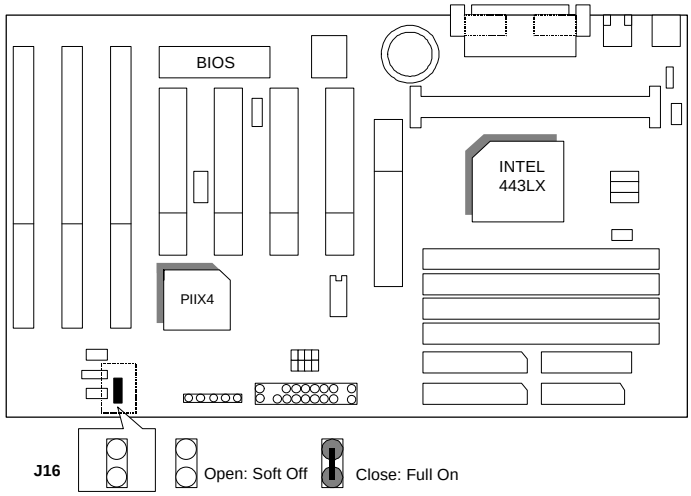
Pin No.	Function
1	Signal
2	GND
3	NC
4	Signal
5	GND
6	Signal

BAT1 : For Battery

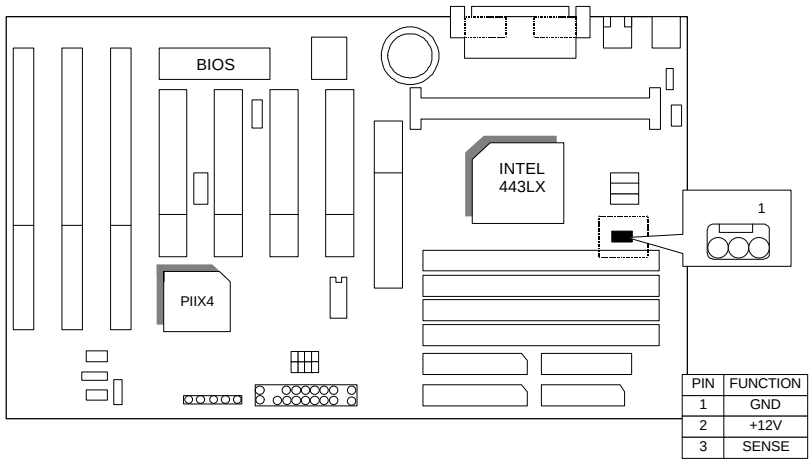


- Danger of explosion if battery is incorrectly replaced.
- Replace only with the same or equivalent type recommended by the manufacturer.
- Dispose of used batteries according to the manufacturer's instructions.

J16: ATX Power Control Selection (Only for PCB Rev:2.0 use)



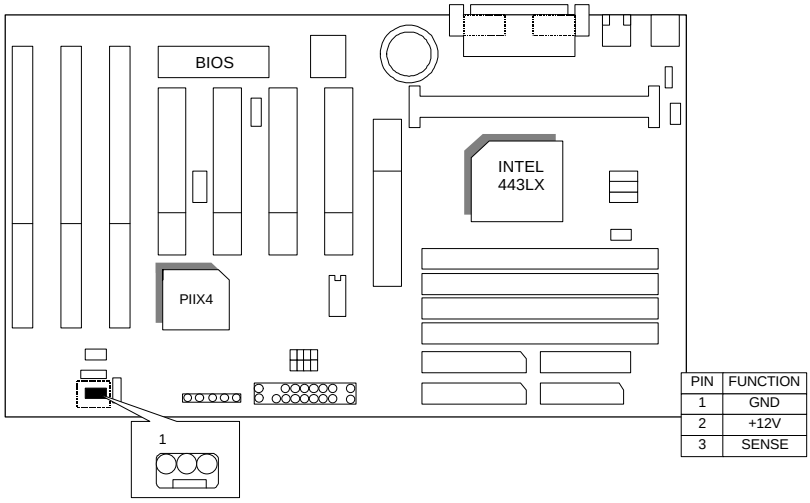
POWER FAN: Power Fan power connector (Only for PCB Rev:2.2 use)



PIN	FUNCTION
1	GND
2	+12V
3	SENSE

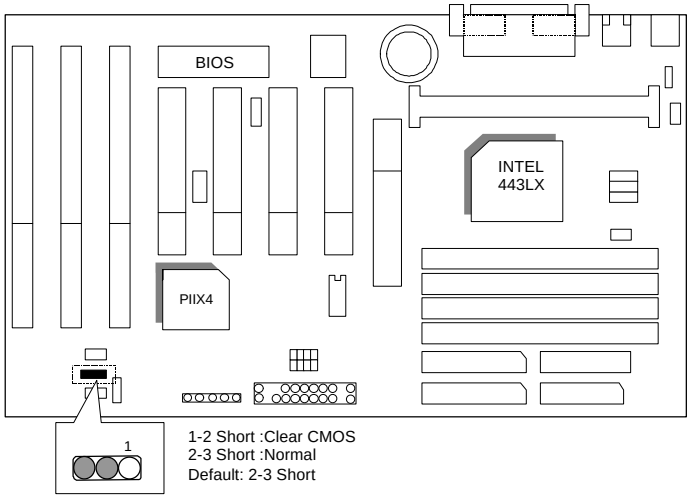
SYSTEM FAN: System Fan power connector

(Only for PCB Rev:2.2 use)

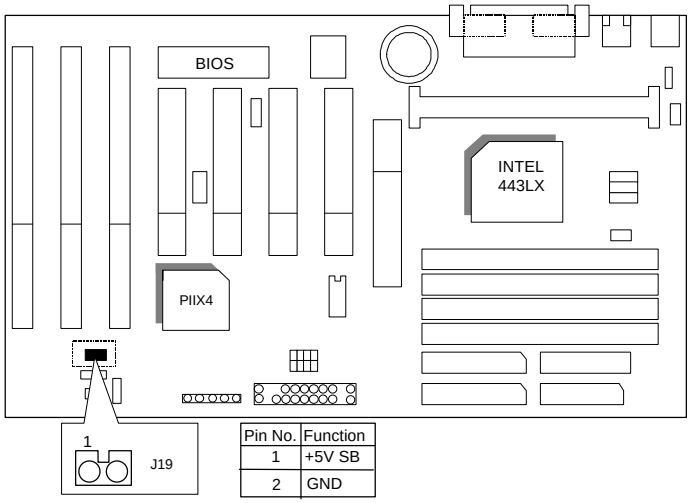


PIN	FUNCTION
1	GND
2	+12V
3	SENSE

JP8: CLEAR CMOS (Only for PCB Rev:2.2 use)



J19: Ring PWR ON(Only for PCB Rev:2.2 use)

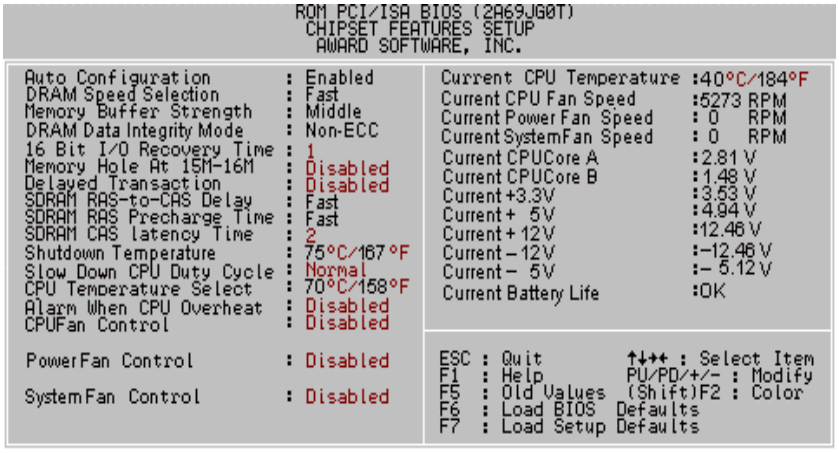


Pin No.	Function
1	+5V SB
2	GND

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.



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® II processor
- DRAM (32 x 2) MB SDRAM (LGS GM72V16821GT10K)
- CACHE SIZE 512 KB included in CPU
- DISPLAY 600 AGP Display Card (4MB SGRAM)
- STORAGE Onboard IDE (IBM DHEA-34330)
- O.S. Windows® 95 OSR2.1
- DRIVER Display Driver at 1024 x 768 x 64k colors x 75Hz.
  Triones Bus Master IDE Driver 3.70

Processor	Intel Pentium® II	
	266MHz	300MHz
Winbench97		
CPU mark32	692	759
Business Disk	1940	2070
Hi-End Disk	5900	6210
Business Graphics	116	126
Hi-End Graphics	50.8	55.4
Winstone97		
Business	62.1	64.8
Hi-End	30.7	32.1