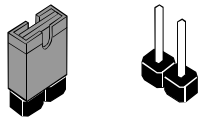
- *Key to Jumpers*

Jumper	Description
JP1	Clear BIOS jumper
JP2	BIOS flash protect jumper
JP3	Keyboard power on jumper
JP4	CPU frequency select jumper (66 ~ 100 MHz)
JP6	CPU frequency select jumper (100 ~ 133 MHz)
JP8 ~ JP12	CPU core voltage jumpers

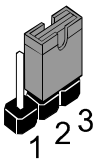
How to Set Jumpers

A jumper consists of two or more pins mounted on the main-board. Some jumpers might be arranged in a series with each pair of pins numbered differently. Jumpers are used to change the electronic circuits on the mainboard. When a jumper cap (or shunt) is placed on two jumper pins, the pins are SHORT. If the jumper cap is removed (or placed on just a single pin), the pins are OPEN.

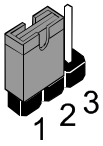


Short **Open**

This illustration shows a 2-pin jumper. When the jumper cap is placed on both pins, the jumper is SHORT. If you remove the jumper cap, or place the jumper cap on just one pin, the jumper is OPEN.



This illustration shows a 3-pin jumper. The jumper cap is placed on pins 2 and 3, so this jumper setting is SHORT PINS 2-3.



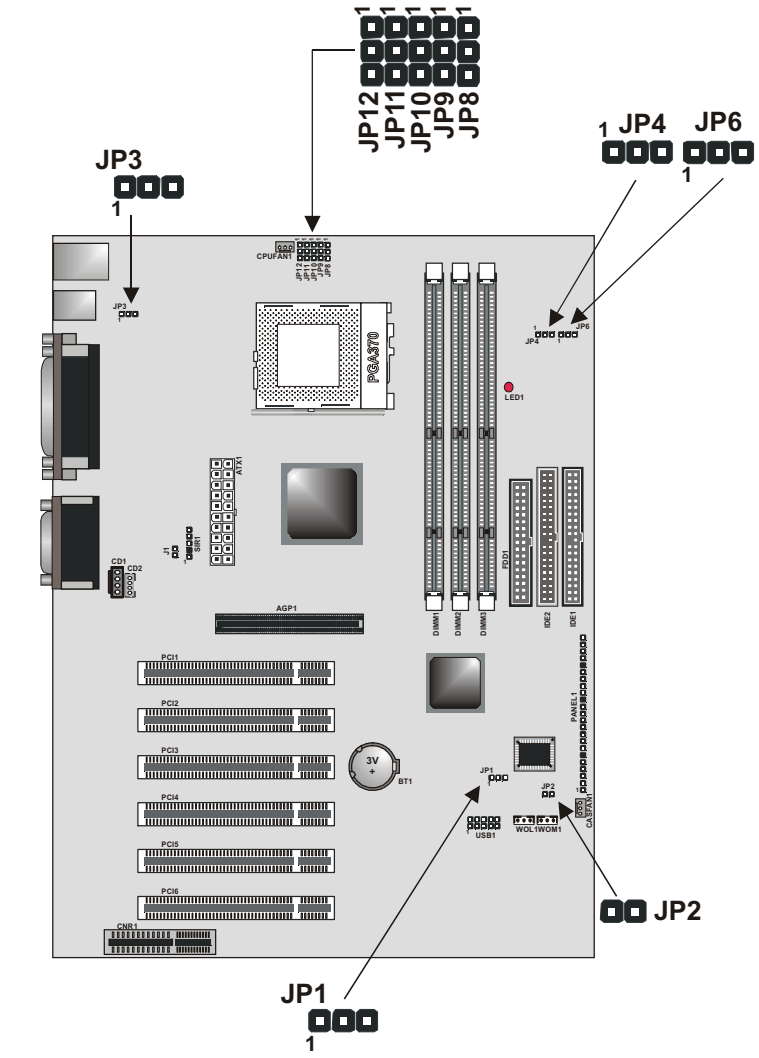
This illustration shows the same 3-pin jumper. The jumper cap is placed on pins 1 and 2, so this jumper setting is SHORT PINS 1-2.

In this manual, all the jumper illustrations clearly show the pin numbers. When you are setting the jumpers, make sure that the jumper caps are placed on the correct pins to select the function or feature that you want to enable or disable.

Check the Jumper Settings

Check all the mainboard jumpers to ensure that the mainboard is configured correctly.

Note: *Pin 1 is indicated by a "1."*

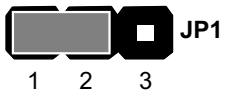


JP1: Clear BIOS jumper

This jumper lets you erase the BIOS Setup Utility settings that are stored in CMOS memory. You might need to erase this data if incorrect settings are preventing your system from operating. You must first set JP2 to open before you can flash the CMOS.

To clear the CMOS memory, turn off the system, disconnect the power cable from the mainboard, and short the appropriate pins for a few seconds. Then return the jumper to the Normal operation setting and power on the computer.

Function	Jumper Setting
Normal operation	Short pins 1-2
Clear BIOS	Short pins 2-3



JP2: BIOS flash protect jumper

Use this jumper to protect the system BIOS from being accidentally flashed (updated).

Function	Jumper Setting
Protect	Short
Unprotect	Open

JP3: Keyboard power on jumper

When set to enabled, pressing any key on the keyboard will power on the computer.

Function	Jumper Setting
Enable	Short pins 1-2
Disable	Short pins 2-3

JP4: CPU frequency select jumper

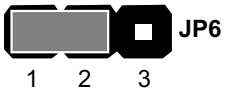
This jumper enables you to force the CPU to clock at a higher frequency than it is rated. Short pins 2 and 3 to force the CPU to run at a 100 MHz FSB instead of a 66 MHz FSB. We recommend that you leave the jumper on the normal operation setting.

Function	Jumper Setting
Auto	Short pins 1-2
Force 66 MHz FSB to run at 100 MHz FSB.	Short pins 2-3

JP6: CPU frequency select jumper

This jumper enables you to force the CPU to clock at a higher frequency than it is rated. Short pins 2 and 3 to force the CPU to run at a 133 MHz FSB instead of a 100 MHz FSB. We recommend that you leave the jumper on the normal operation setting.

Function	Jumper Setting
Auto	Short pins 1-2
Force 100 MHz FSB to run at 133 MHz FSB	Short pins 2-3



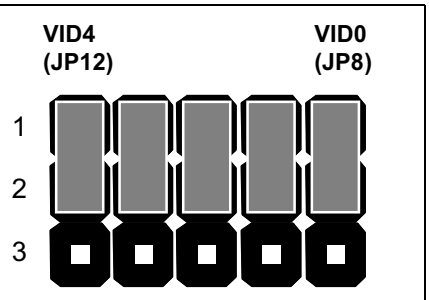
Note: *The CPU speed is determined by the CPU Host/PCI Clock speed multiplied by the CPU Clock Ratio. Refer to the Frequency Control Option in Chapter 3 for more information.*

Forcing the CPU to run at a higher clock speed then it was rated for is called overclocking and is not recommended.

JP8~JP12: CPU core voltage jumpers

Use these 3 x 5 pin jumpers set to manually set the CPU core voltage. See later in this chapter for information on the core voltage setting required for the processor that you have installed.

Refer to the following table for pin information.



Jumper 8 – 12 pin settings

Volt.	Pin Settings				
	VID0	**VID1**	**VID2**	**VID3**	**VID4**
Auto*	1-2	1-2	1-2	1-2	1-2
1.30V	Open	Open	Open	Open	2-3
1.35V	2-3	Open	Open	Open	2-3
1.40V	Open	2-3	Open	Open	2-3
1.45V	2-3	2-3	Open	Open	2-3
1.50V	Open	Open	2-3	Open	2-3
1.55V	2-3	Open	2-3	Open	2-3
1.60V	Open	2-3	2-3	Open	2-3
1.65V	2-3	2-3	2-3	Open	2-3
1.70V	Open	Open	Open	2-3	2-3
1.75V	2-3	Open	Open	2-3	2-3
1.80V	Open	2-3	Open	2-3	2-3
1.85V	2-3	2-3	Open	2-3	2-3
1.90V	Open	Open	2-3	2-3	2-3
1.95V	2-3	Open	2-3	2-3	2-3
2.00V	Open	2-3	2-3	2-3	2-3
2.05V	2-3	2-3	2-3	2-3	2-3
2.1V	2-3	Open	Open	Open	Open
2.2V	Open	2-3	Open	Open	Open
2.3V	2-3	2-3	Open	Open	Open
2.4V	Open	Open	2-3	Open	Open
2.5V	2-3	Open	2-3	Open	Open
2.6V	Open	2-3	2-3	Open	Open
2.7V	2-3	2-3	2-3	Open	Open
2.8V	Open	Open	Open	2-3	Open
2.9V	2-3	Open	Open	2-3	Open
3.0V	Open	2-3	Open	2-3	Open
3.1V	2-3	2-3	Open	2-3	Open
3.2V	Open	Open	2-3	2-3	Open
3.3V	2-3	Open	2-3	2-3	Open
3.4V	Open	2-3	2-3	2-3	Open
3.5V	2-3	2-3	2-3	2-3	Open

***Auto:** When all 1-2 pins are shorted, the core voltage will automatically be determined.

***Note:** These values are for reference only. It is not recommended to change the settings for jumper 8 ~ 12. Please notice that the CPU will burn out if the core voltage is higher than 2.1V.*