# MSI

# MS 5129 (PCI P54c TR 5)

# Motherboard Manual

**Made by Pim 2001**

## 1.2 System Board Layout

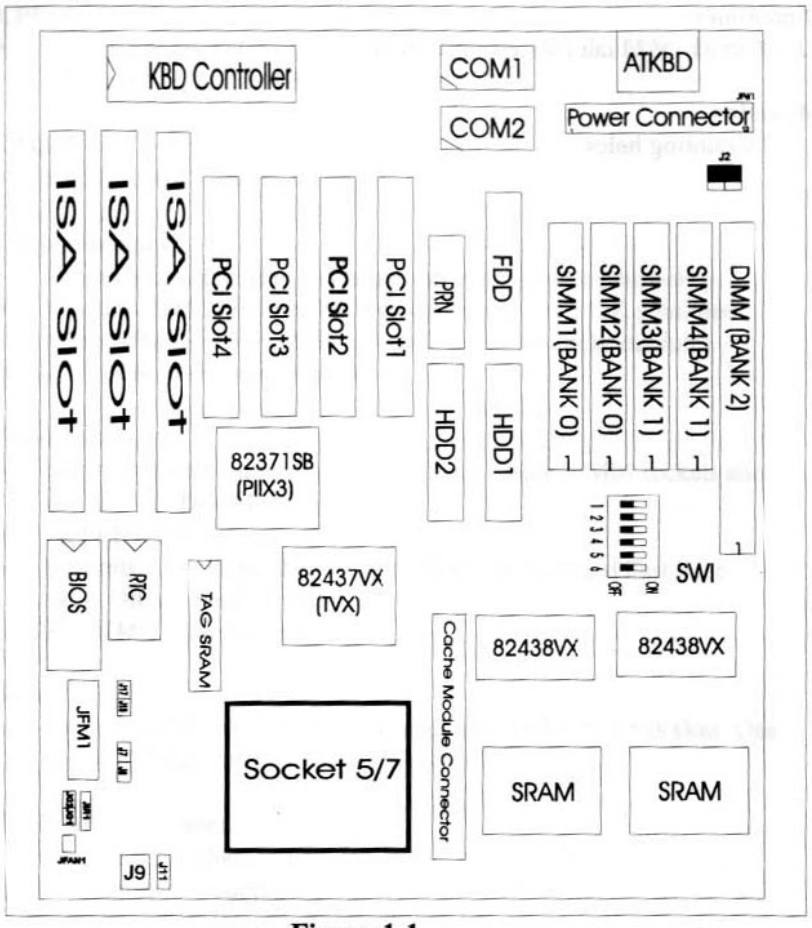



**Figure 1-1**



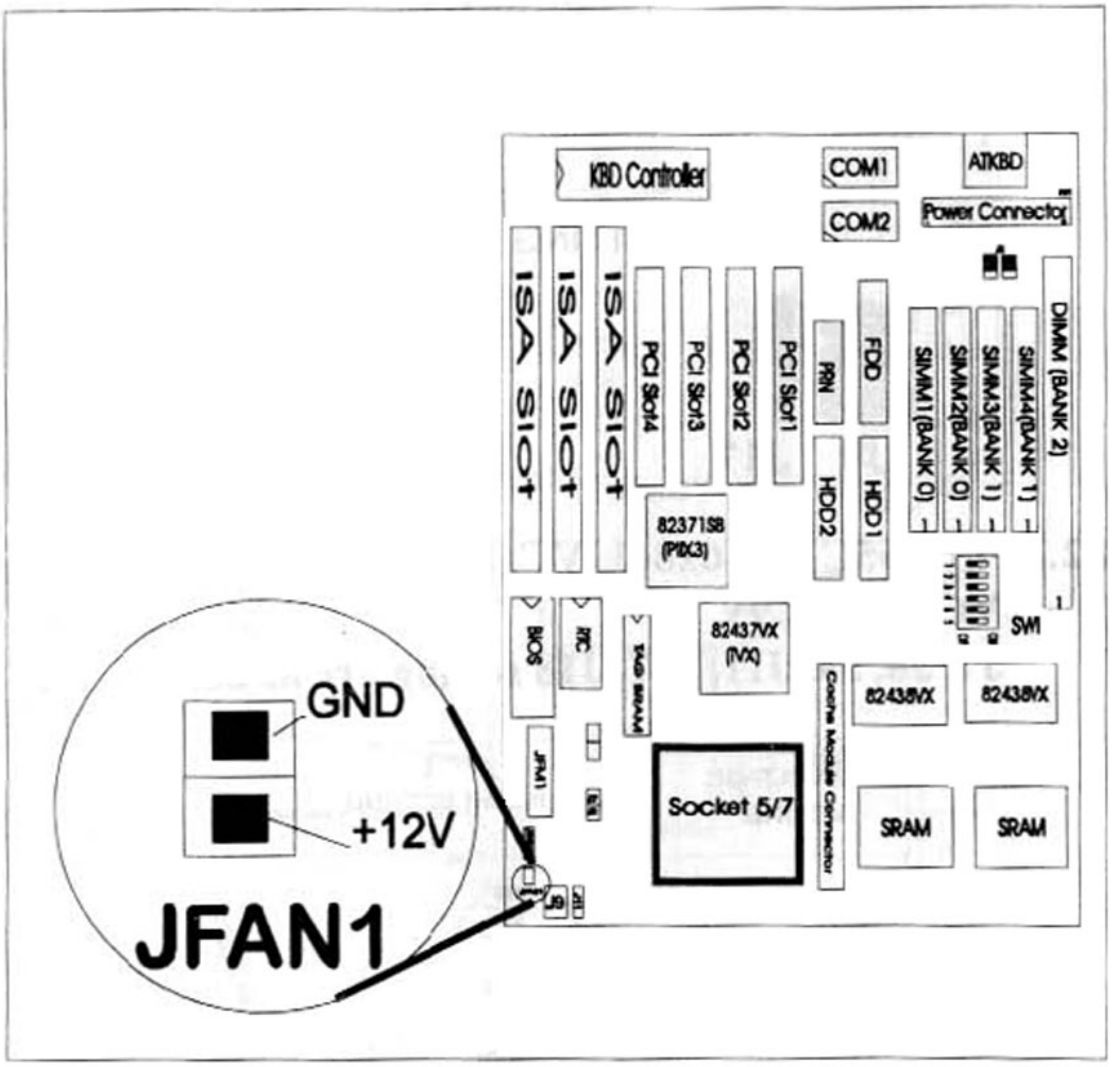
# Chapter 2 HARDWARE INSTALLATION

## 2.1 CPU INSTALLATION

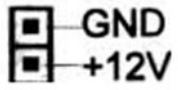
After install CPU, adjust SW1 to set CPU SPEED,J7 ,J8,J9 ,J11,J17and J18 to set CPU voltage, and insert CPU fan power cable to JFAN1 to complete CPU installation. (See section 2.1.1,2.1.2,and 2.1.3)

## 2.1.3 CPU FAN POWER CONNECTOR (JFAN1)

JFAN1 connector support +12V voltage for CPU fan use.



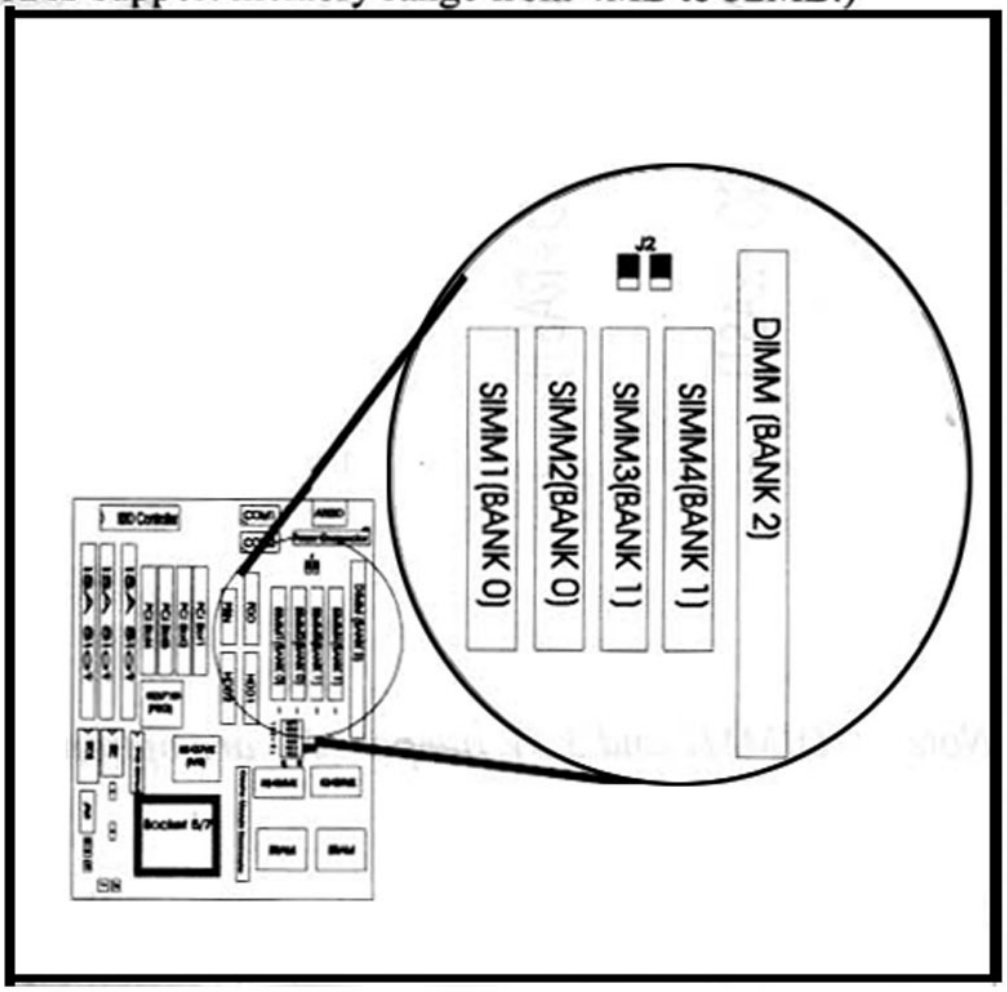

JFAN1

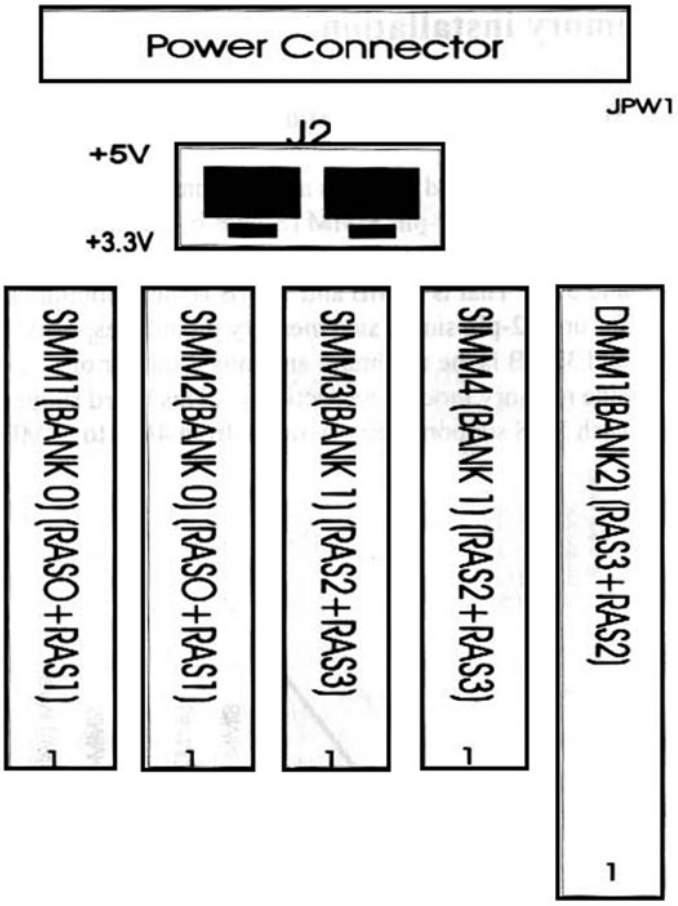


# 2.2 Memory installation

### Memory Bank Configuration

The system board supports a maximum of 128M of memory, and provides four 72-pin SIMM (Single In-line Memory Module) and one 168-pin DIMM sockets. Each bank supports 4M, 8M, 16M, and 32M. That is , 2MB and 16MB is the minimum and maximum for one 72-pin single side memory module respectively, and 4MB and 32MB is the minimum and maximum for one 72-pin double side memory module respectively. (This board support 4 RAS, each RAS support memory range from 4MB to 32MB.)






*Note : 1 DIMM1 and 3.3V jumper (J2) are optional.Default setting is 5V.*

*Note 2: Make sure the SIMM banks are using the same type and equal size and density memory. Both3.3V and 5V SIMM memory can be used ,but only3.3V SIMM memory should be used if DIMM memory is installed in the system.*

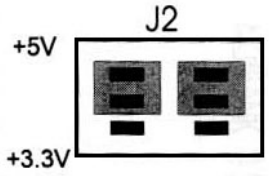
*Note3:To operate properly at least two 72-pin SIMM module must be installed in the same bank or the one 168-pin*



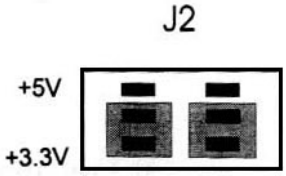
*DIMM module must be installed. The system cannot operate with only one 72-pin SIMM module installed.*

*Note4:Only 3.3V SIMM memory should be installed at the same time as DIMM memory. Otherwise don't install SIMM memory and DIMM memory at the same time. Doing so could damage your system.*

*Note 5: The DIMM bank supports 3.3V EDO, 3.3V FP, and, unbuffered 3.3V SDRAM. Be sure to adust the J2, jumpers to the 3.3V position before installing DIMM memory.Below, describe J2 jumper settings on 3.3V and 5V position respectively.*




**+5V SETTING**




**+3.3V SETTING**

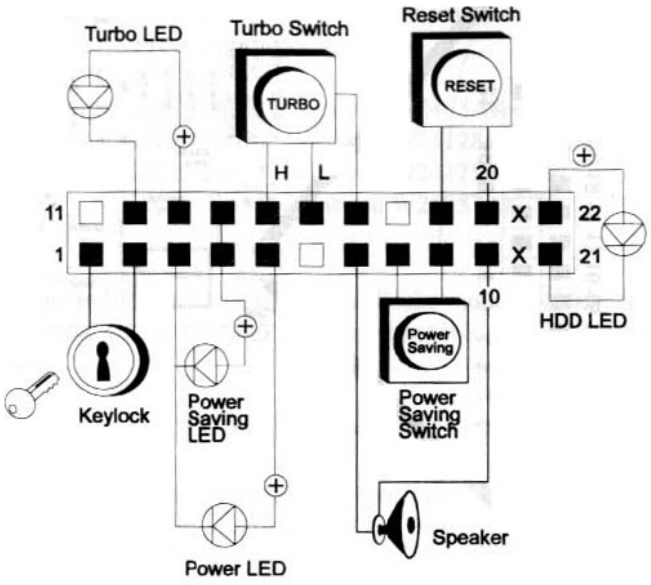
*Note 6: This mainboard supports Table Free so memory can be installed on Bank 0 (SIMM1 + SIMM2),Bank 1 (SIMM3 + SIMM4), or Bank 2 (DIMM1).*

*Note7: If the SIMM memory is 3.3V the following combinations are O.K. (Remember to adjust J2 to 3.3V settings.)*

**S=Single D=Double X=Not Installed**

| SIMM1+SIMM2 Bank 0 | SIMM3+SIMM4 Bank 1 | DIMM1 Bank 2 |
|---|---|---|
| S | X | X |
| S | S | X |
| S | S | S |
| S | X | S |
| S | D | X |
| S | X | D |
| D | X | X |
| D | S | X |
| D | S | S |
| D | N | S |
| D | D | X |
| D | X | D |
| X | S | X |
| X | S | S |
| X | X | S |
| X | D | X |
| X | X | D |

The Turbo LED, Turbo Switch, Hardware Reset, Key lock, Power LED, Power Saving LED, Sleep Switch, Speaker,and HDD LED all connect to the JFM1 connector block as below.

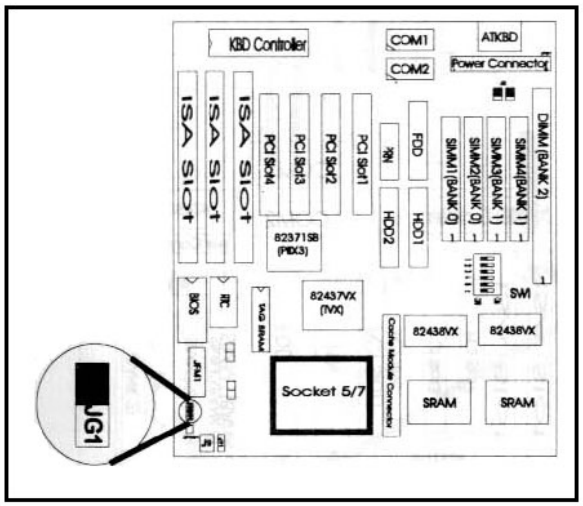


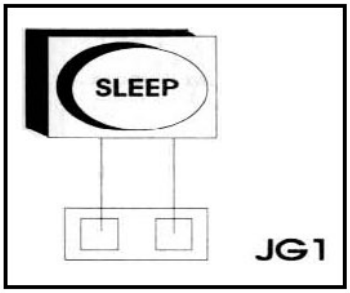

*Note : The hardware Turbo switch is not functional. The Turbo LED is always ON and cannot be toggled.*

## 2.5 Power Saving Switch Connector:

Attach a power saving switch to this connector. When the switch is pressed, the system goes immediately into suspend mode. Press any key and the system wakes up.

*Note: you should enable the Power Management Mode (At Bios Setup) to use this function.*



## 2.1.1 CPU SPEED SETTING (SW1)

Adjust SW1 (Dip switch) to set CPU speed. Figure 2-1 show SW1 location.

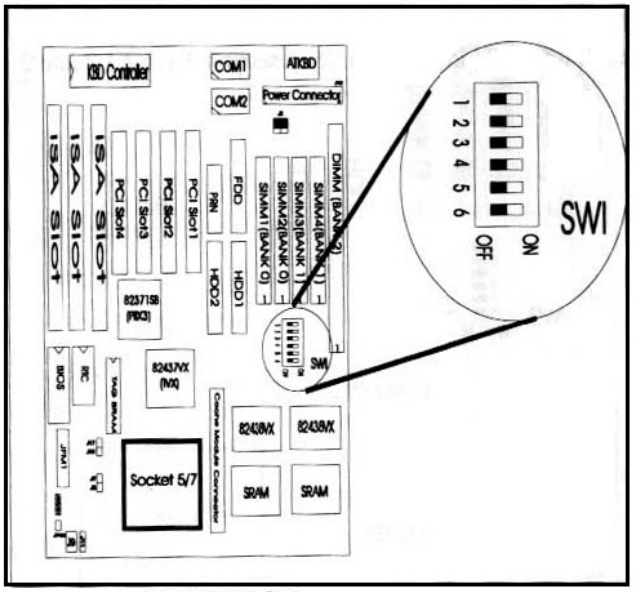
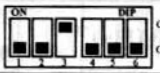
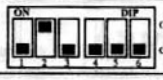
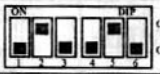
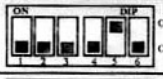
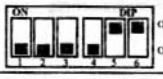
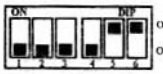
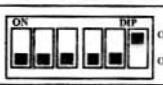
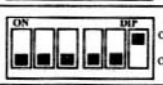
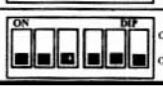
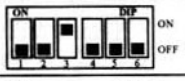
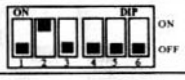
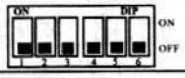
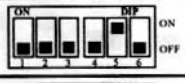
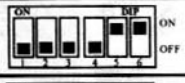
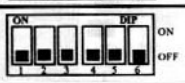



**FIGURE 2-1**

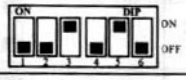
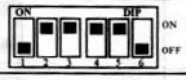
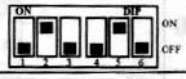
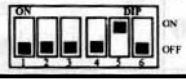
### 2.1.1.1 INTEL P54C ~ P55C CPU SPEED SETTING

| CPU Type | CPU Speed SW1 |
|---|---|
| P54C-75 |  |
| P54C-90 |  |
| P54C-100 |  |
| P54C-120 |  |
| P54C-133 |  |
| P54C-150 |  |
| P54C-166 |  |
| P55C-166 |  |
| P54C-200 |  |
| P55C-200 |  |
| P55C-233 |  |

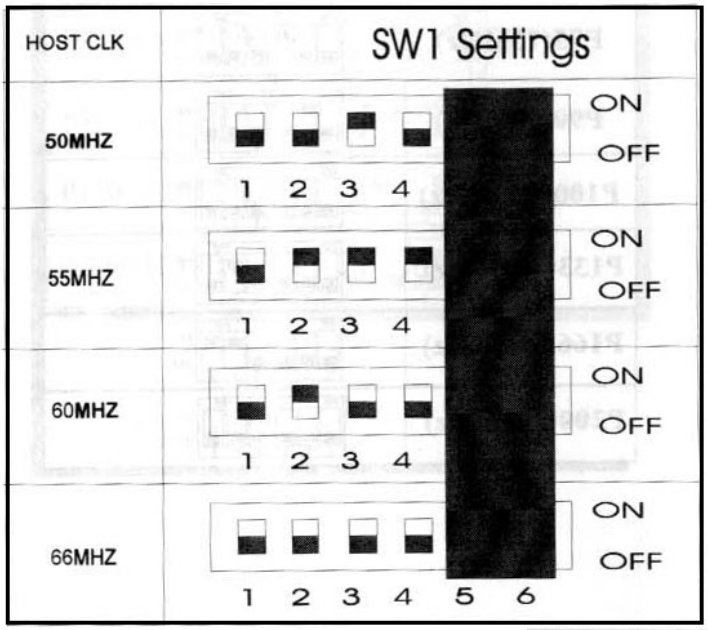
### 2.1.1.3 AMD 5k86 ~ K6 CPU SPEED SETTING

| CPU Type | CPU Speed SW1 |
|---|---|
| P75(75MHz) |  |
| P90(90MHz) |  |
| P100(100MHz) |  |
| P133(133MHz) |  |
| P166(166MHz) |  |
| P200(200MHz) |  |

### 2.1.1.2 CYRIX 6x86 ~ 6x86L CPU SPEED SETTING

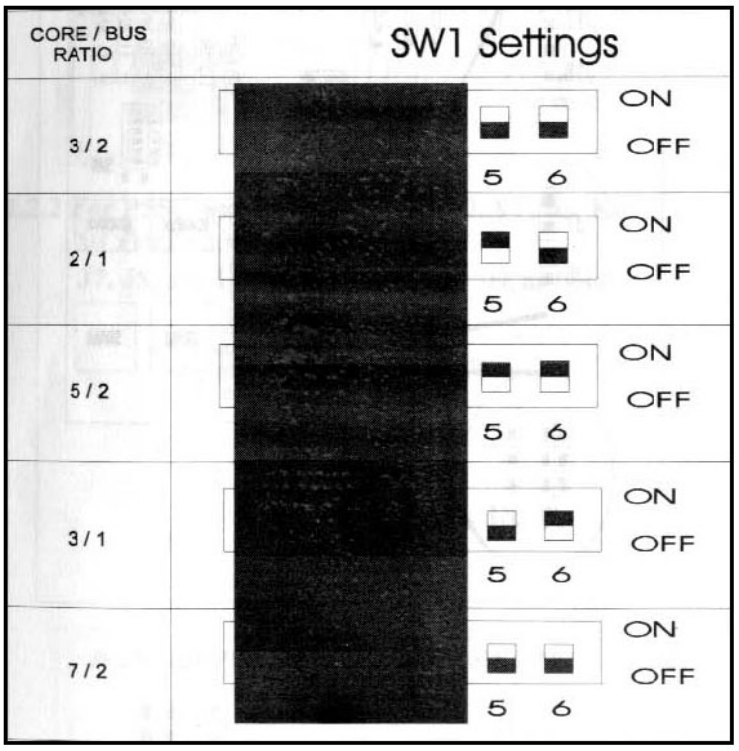
| CPU Type | CPU Speed SW1 |
|---|---|
| P120+(100MHz) |  |
| P133+(110MHz) |  |
| P150+(120MHz) |  |
| P166+(133MHz) |  |

*Note 1: The 4 Host Clock frequencies that the system supports are 50MHz, 55MHz, 60MHz, and 66.6MHz.(by adjusting SW1 pin 1,2,3,and 4). See the following chart to set the different Host Clock frequencies.*



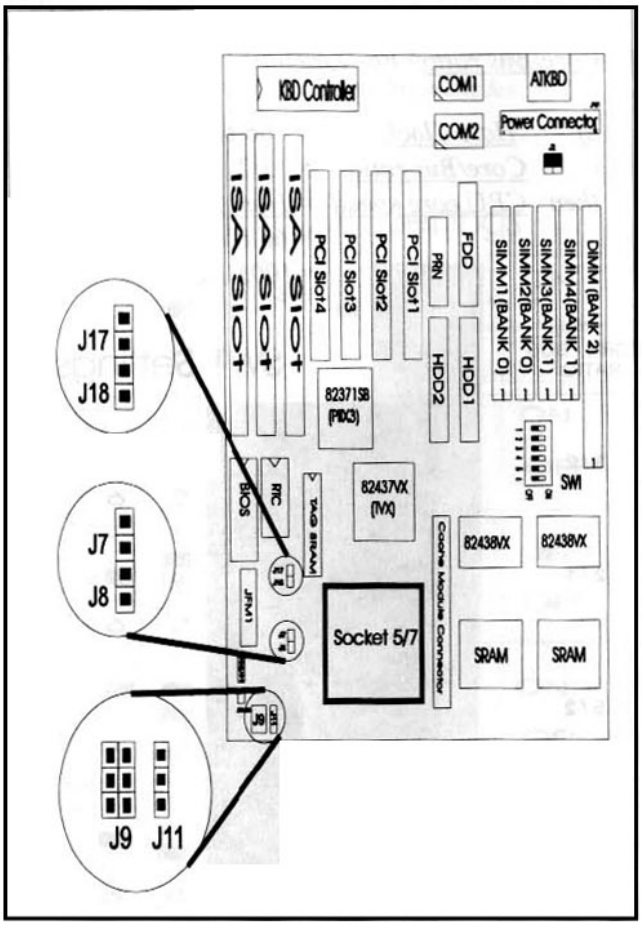

*Note 2: The DIP Switch SW1 (5,6) is used to set the Core/Bus (Fraction) ratio of the CPU. The actual core speed of the CPU is the Host Clock Frequency multiplied by the Core/Bus ratio. For example:*

*if Host Clock = 66.6MHz*
*Core/Bus ratio = 3/2*
*then CPU core speed = Host Clock x Core/Bus ratio*
*= 66.6MHz x 3/2*
*=100MHz*




*Note 3:The PCI Bus Clock is the Host Clock Frequency divided by 2.*

## 2.1.2 CPU VOLTAGE SETTING (J7,J8,J9,J11,J17,J18)




**2.1.2.2 For P55C and 6x86L VCORE=2..8V, for K**
**VCORE=2.9V**
**J7, J8, J9, J11, J17, J18 setting are as belov**

| CPU VOLTAGE VCORE | J7,J8 JUMPER SETTING |
|---|---|
| 2.8V | J7 J8 |
| 2.9V | J7 J8 |

| J9,J11 JUMPER SETTING | J17,J18 JUMPER SETTING |
|---|---|
| J9 J11 | J17 J18 |

**2.1.2.1 For P54C, J7, J8, J9, J11, J17, J18 setting is as below.**

| CPU VOLTAGE | J7,J8 JUMPER SETTING |
|---|---|
| 3.38V | J7 J8 |
| 3.52V | J7 J8 |

| J9,J11 JUMPER SETTING | J17,J18 JUMPER SETTING |
|---|---|
| J9 J11 | J17 J18 |