



**CHAINTECH**  
COMPUTER CO., LTD.

CHAINTECH

**5SIM**

**User's Manual**

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## ***Declaration of Conformity***

According to 47 CFR, Parts 2 and 15 of the FCC Rules

OCT. 17, 1997

The following designated product:

**EQUIPMENT: MAINBOARD  
MODEL NO.: 5SIM**

is a Class B digital device that complies with 47 CFR Parts 2 and 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

This declaration is given to the manufacturer:

**CHAINTECH COMPUTER U.S., INC  
509 Valley Way, Milpitas, CA 95035, U.S.A.**

**Tel: 1-408-935-6988**

**Fax: 1-408-935-6989**

  
Manufacturer Signature

---

## **Federal Communications Commission Statement**

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

- This device may not cause harmful interference
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy. If this equipment is not installed and used in accordance with the manufacturer's instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

## **Canadian Department of Communications Statement**

This digital apparatus does not exceed the Class B limits for audio noise emissions from digital apparatuses set out in the Radio Interference Regulations of the Canadian Department of Communications.

## **Manufacturer's Disclaimer Statement**

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**100% POST-CONSUMER**  
**RECYCLED PAPER** 

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# **Memo**

## Introduction

### 1-1 Product Specifications

#### □ CPU

- Supports up to 200MHz Pentium® processors and up to 233MHz Pentium processors with **MMX™** technology
- Supports Cyrix/IBM 6x86™/6x86L™ PR120+ ~ PR233+ (processor rev. 2.7 or later) and **6x86MX** PR 166+ ~ PR200+ processors
- Supports AMD-K5™ PR75 ~ PR166 and 166 ~ 233MHz **K6™** processors
- Supports 50/55/60/66/75/83 MHz system clock speeds
- 321-pin ZIF Socket 7
- High efficiency Switching Power module
- ✎ Supports 75/83MHz system frequency for overclocking possibility
- ✎ Supports up to 4.5 frequency ratio for future 266 and 300 MHz processors
- ✎ Supports 2.1v to 3.52v CPU core voltages

#### □ Main Memory

- Two 5V 72-pin SIMM sockets support 4/8/16/32/64MB, 32/36-bit, 70-ns or faster memory modules
- Two 3.3V 168-pin DIMM sockets support 8/16/32/64/128MB, 64/72-bit, unbuffered memory modules
- Supports up to 256MB main memory
- Full size DRAM cacheability

#### □ Cache Memory

- 512(64k\*64x1)KB Pipelined Burst SRAM on board

#### □ I/O Slots

- Three 16-bit ISA slots
- Four 32-bit PCI slots (Master Mode, PCI 2.1 compliant)
- Special PCI Asynchronous mode enables operation of 50/75/83 MHz system frequencies

**❑ BIOS**

- Award System BIOS
- 1Mb Flash ROM
- Supports PnP, APM, DMI & Multi-device (such as floppy, IDE/SCSI hard drive, CD-ROM, LS120, ZIP-ATAPI, etc.) booting features
- Built-in SYMBIOS SCSI BIOS

**❑ Chipset**

- SiS 5582 single-chip PCIset

**❑ On-Board Ultra I/O**

- ITE 8661 I/O chip
- One Floppy disk drive connector supports up to 2.88MB, 3 Mode, and 1Mbps transfer rate
- Two 16550A compliant serial ports, One SPP/ECP/EPP parallel port
- Supports up to 115.2kbps IrDA IR

**❑ Two Ultra DMA-33 PCI IDE Ports**

- Supports up to PIO Mode 4, Multiword DMA Mode 2, & Ultra DMA33 timings
- Bus Mastering software drivers for all well-known multi-tasking operating systems

**❑ Dual Channel USB Connector**

 Now under compatibility testing with different peripherals

**❑ Board Dimensions**

- Standard half AT form factor
- 220mm x 230mm, 4-layer PCB
- Six mounting holes

**❑ Green PC**

- Meets EPA Green PC standards: power consumption under 30W in Doze, Standby or Suspend modes

**❑ Advanced Management Features**

- Software power-off control, Modem ring power on, Power on by alarm and Override power button
- Flash BIOS protection and System reset protection via BIOS
- Poly-fuse over-current protection for USB and keyboard

## 1-2 Installing a PGA type CPU in a ZIF Socket

The Intel Socket 7, designed for the Pentium processor, has been incorporated as a standard mainboard specification and is compatible with AMD and Cyrix CPUs. To insert your CPU into Socket 7 please do the following:

1. Locate a small dot marked on the top surface of the CPU close to one of its corners. The same corner will also be cut off, leaving a noticeable notch. These markings indicate Pin 1 of the CPU. See Figure 2-1.



Figure 2-1 The markings on top of a CPU

2. Pull up the lever of Socket 7 so that it is perpendicular with the surface of the mainboard. Gently insert the CPU with Pin 1 at the same corner of Socket 7 that contains the end of the lever. Allow the the weight of the CPU to push itself into place. Do not apply extra pressure as doing so may result in damaging your CPU. Snap the lever back into place. See Figure 2-2.



Figure 2-2 Inserting a CPU into Socket 7

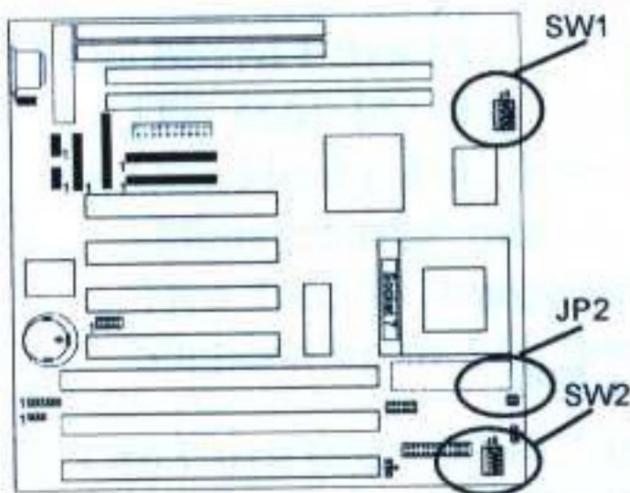
⚠ Installing a heat sink and cooling fan on top of your CPU is necessary for proper heat dissipation. Failing to install these items may result in overheating and possible burn-out of your CPU.

## 1-3 CPU DIP Switch Configuration

### Frequency Configuration

If you install a CPU on this mainboard, you must set SW1 (1, 2, 3, 4) for CPU Bus Frequency and SW1 (5, 6, 7) for CPU Bus Frequency Ratio. See the Bus Frequency and Ratio chart below and on the center page of this manual for setting diagrams.

### CPU Bus Frequency & Frequency Ratio Configuration



Frequency ratio	SW1(5, 6, 7)	CPU Bus Frequency (MHz)	SW1(1, 2, 3, 4)
1.5		50	
2		55	
2.5		60	
3		66	
3.5		75**	
4		83**	
4.5			

\* CPU Speed = Frequency ratio x CPU Bus frequency

\*\* PCI has a maximum frequency of 33MHz--one half of the 66MHz bus speed. Seventy-five (75) and 83MHz bus speeds are not supported by the current PCI Rev. 2.1 specification. If using 75 or 83MHz bus speeds, it is recommended that you enable asynchronous PCI mode by setting SW1(4) to ON for maximum stability. SW1(4) may be set to OFF for synchronous mode if your computer's components (i.e. hard drives, CD drives, peripheral cards, etc. can support frequencies higher than 33MHz.)

### Overclocking

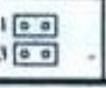
Operating a CPU at a higher frequency than it's specification allows is called overclocking. If the CPU frequency is set at a higher frequency than it's specification allows, it may or may not run at that frequency, depending on the quality of your CPU and the extent to which the frequency has been overset. The mainboard manufacturer highly discourages overclocking as it may result in data loss, CPU burn-out, system failure, etc.

## Voltage Configuration

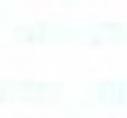
There are two major processor types in general use--single and dual voltage processors. Most single voltage processors such as Pentium, AMD-K5, and Cyrix 6x86 processors use a single voltage value of 3.5v for both core and I/O voltage settings. To make the voltage setting for single voltage processors, simply make sure the two caps have shorted **JP2** and set **SW2 (5)** to **ON**. Most dual voltage processors such as Pentium processors with MMX technology and Cyrix 6x86L processors, use a dual voltage value of 2.8v for core and 3.3v for I/O voltage settings. To make the voltage setting for dual voltage processors, simply remove the two caps from **JP2** and set **SW2 (5)** to **OFF**. Refer to the CPU voltage configuration tables below and on the center page of this manual for these settings.

## CPU Voltage Configuration Tables

For most single and dual voltage processors make the setting below:

CPU Type	I/O Vcc	Core Vcc	JP2	SW2
Single-voltage processors (Pentium, 6x86, K5)	3.5			
Dual-voltage processors (MMX Pentium, 6x86L)	3.3	2.8		

However, some processors such as AMD-K6 processors require special voltage support as outlined in the following table. Please refer to your processor documentation for configuration information.

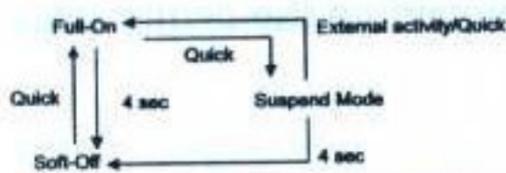
CPU Type	I/O Vcc	Core Vcc	JP2	SW2
Single-voltage processors (Pentium, 6x86)	3.3			
Dual-voltage processors (K6)	3.3	2.9		
		3.1		
		3.2		

Processor configuration information is summarized for all current 586 and 6x86 level CPUs in a table found on the center page of this manual.

## 1-4 Mainboard Features

### A. Override Power Button

The power button on the ATX chassis can be used as a normal power switch as well as a button to activate Advanced Power Management Suspend mode. This mode is used for saving electricity when the computer is not in use for long periods of time. Pushing the power button rapidly will switch the system to Suspend mode. Pushing the power button any occurrence of external activity such as pressing a key on the keyboard or moving the mouse will bring the system back to a Full-On state. Pushing



the button while in Full-On for more than 4 seconds will switch the system completely off and pushing the power button quickly will bring the system back to Full-on. See Over-ride Power Button Operation diagram.

Over-ride Power Button Operation

### B. Software Power-Off Control

This mainboard can be powered down using the Windows 95 Software Power-Off function. To power down your computer, click the START button on the Windows 95 task bar. Select "Shut Down The Computer" and the system turns off. The message "It is now safe to turn off your computer" will not be shown when using this function.

### C. Modem Ring Power-On

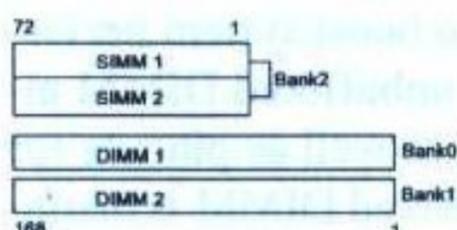
When the Modem Ring Power-On function in BIOS's Integrated Peripherals Menu is enabled, a modem that receives a call will wake up the system from Soft-off or green modes. You must connect the modem to COM2 (default INT=3), enable IRQ3 in the PM Event section of the Power Management Setup screen, turn of the computer via Software-power off or enable Green power saving modes in the Power Management Setup screen, and leave the modem's power on.

### D. Power On by Alarm

If you have connected an ATX power supply you can take advantage of this programmable computer wake-up feature by enabling it in BIOS's Integrated Peripherals Menu and setting the desired time of the month or week.

## 1-5 Main Memory Configuration

The DRAM memory system on board consists of bank0, bank1, and bank2. The memory size range is 8 ~ 128 MBytes. If using SIMM modules, you should install 2 modules that are the same size, same speed, and have the same polarity (both either single or double sided) for each bank at a time.



"S/S" - Single sided  
 "D/S" - Double sided  
 "----" - Do not use

SIMM1,2	DIMM1	DIMM2
S/S	----	----
D/S	----	----
----	S/S	----
----	S/S	S/S
----	S/S	D/S
----	----	S/S
----	D/S	----
----	D/S	S/S
----	D/S	D/S
----	----	D/S

### DRAM Specifications

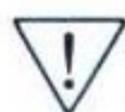
Types supported	FP(Fast Page), EDO(Extended Data Output) and Synchronous type DRAM
Speed requirement of	For FP and EDO: 70-ns or faster for a system frequency 50 or 60MHz and 60-ns for system frequency 66MHz. For SDRAM: 10 or 12-ns
Module types & sizes	4/8/16/32/64 MBytes, single/double-side, 5v SIMM 8/16/32/64/128 MBytes, single/double-sided, 3.3v DIMM
Parity	Both parity and non-parity modules may be used however the parity function is not supported by this mainboard.



NEC 16M-bit SDRAM, part number D4516821G5 and lot number 97xxLxxxx is not support by this mainboard.



Most SDRAM will be 3.3V (i.e. SDRAM I/O pins will not be 5V tolerant). **Don't mix and match 3.3V EDO/SDRAM DIMM with 5V EDO/FP SIMM.**

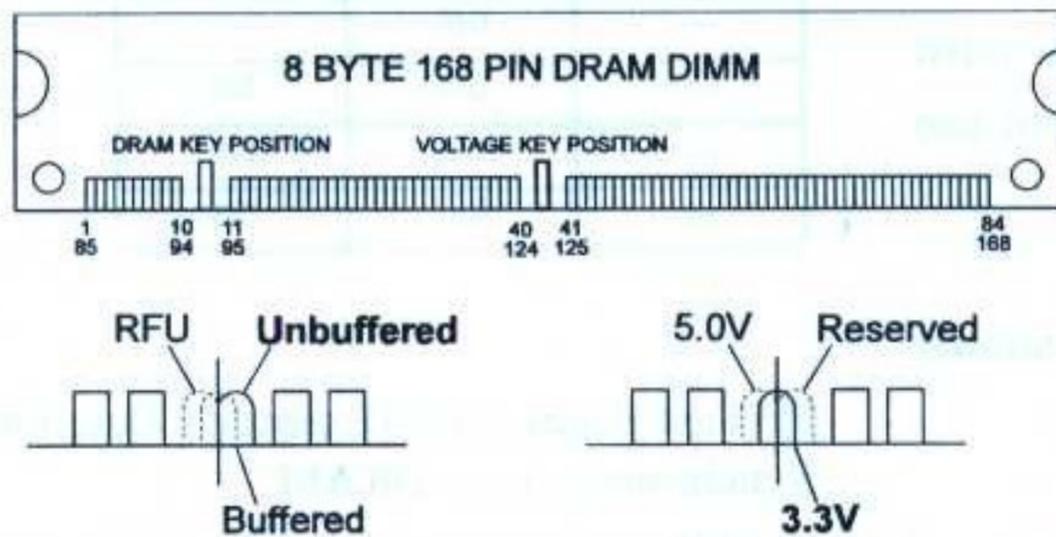


Because 128MB DIMM is not mainstream, the compatibility of 128MB DIMM cannot be 100% guaranteed.

 **The DIMM sockets on this board are limited to supporting 3.3V, unbuffered, 4-clock SDRAM modules**

 Due to loading anomalies, using DIMM with an 'n x 4' DRAM base on this mainboard is not recommended. For example, a DIMM that uses sixteen 16Mb x 4 devices should not be used.

This board is equipped with two DIMM (Dual-in-line Memory Module) sockets to support SDRAM which has optimized read timings (7-1-1-1) to boost system performance when compared with traditional SIMM modules. The unbuffered DIMM allows for SDRAM, BEDO, EDO and FP DRAM compatibility as well as pinouts for x64, x72 with parity, x72 with ECC and x80 with ECC. Unbuffered DIMM is distinguished by the keyed notch lying to the right of the centerline of the DRAM key position as shown in the figure below.



## Chapter 2

# Award BIOS Setup Program

This mainboard's system BIOS includes SCSI BIOS for PCI SYMBIOS 810 based SCSI cards. In the case that such a SCSI card is installed, the system BIOS will auto-scan the ROM address and install BIOS in the first available addresses.

Award's BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This information is stored in CMOS RAM so that it can retain the Setup information when the power is turned off.

When you turn on (or reboot) the system, press the Delete key to enter the Award BIOS setup screen as following:

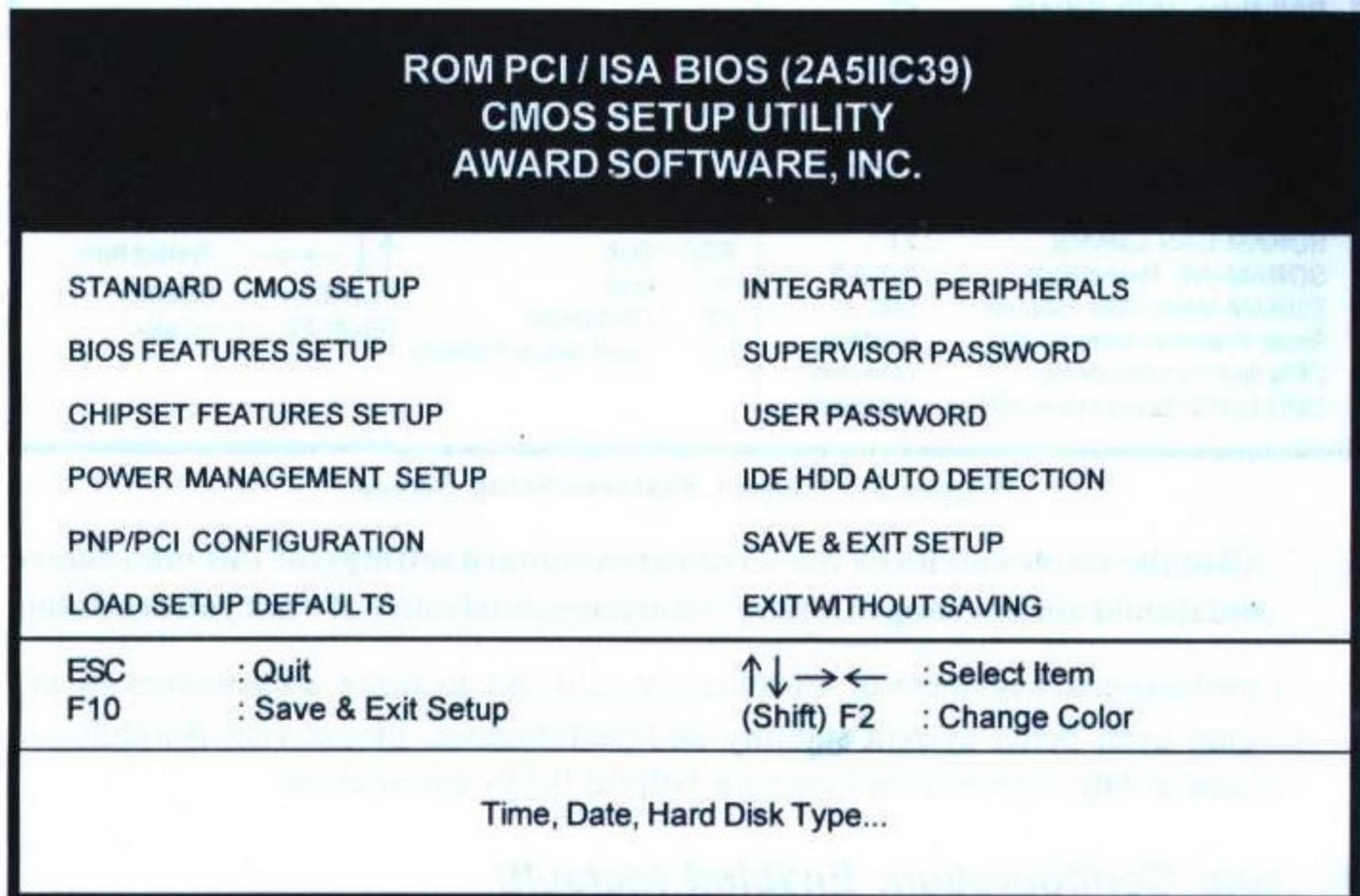


Figure 2-1 Initial Setup Program Screen

## 2-1 Chipset Features Setup

By choosing the **CHIPSET FEATURES SETUP** option from the **CMOS SETUP UTILITY** menu (Figure 2-1), the screen below is displayed. This sample screen contains the manufacturer's default values for the mainboard.

ROM PCI / ISA BIOS (2A5IIC39) CHIPSET FEATURES SETUP AWARD SOFTWARE, INC.			
AUTO Configuration	: Enabled	ISA Bus Clock Frequency	: PCICLK/4
DRAM Timing	: 70ns	System BIOS Cacheable	: Enabled
SRAM Back-to-Back	: Enabled	Video BIOS Cacheable	: Enabled
NA# Enable	: Enabled	Memory Hole at 15M-16M	: Disabled
Starting Point of Paging	: 1T	Hardware Reset Protect	: Disabled
Refresh Cycle Time (us)	: 15.6	Flash BIOS Protection	: Disabled
RAS Pulse Width Refresh	: 6T		
RAS Precharge Time	: 4T		
RAS to CAS Delay	: 4T		
CAS# Pulse Width (FP)	: 2T		
CAS# Pulse Width (EDO)	: 1T		
CAS Precharge Time (FP)	: 1T/2T		
CAS Precharge Time (EDO)	: 1T/2T		
SDRAM CAS Latency	: 2T		
SDRAM WR Retire Rate	: X-2-2-2	ESC : Quit	↑ ↓ → ← : Select Item
SDRAM Wait State Control	: 1WS	F1 : Help	PU/PD/+/- : Modify
Read Prefetch Memory RD	: Enabled	F5 : Old Values	(Shift) F2 : Color
CPU to PCI Post Write	: Disabled	F7 : Load Setup Defaults	
CPU to PCI Burst Mem. WR	: Disabled		

Figure 2-2 Chipset Features Setup Screen

 **All of the above entries on the screen are standard settings for this mainboard and should not be changed unless you are absolutely sure of what you are doing.**

 If professional engineers or customers would like to make adjustments so as to gain even better system stability and performance, please visit Award's website at <http://www.award.com> for helpful BIOS information.

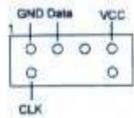
### A. Auto Configuration: Enabled (default)

#### DRAM Timing: 70ns (default)

If Auto Configuration is enabled, BIOS can autodetect the DRAM module type (i.e. EDO or FP) and set the optional timings for items 7-9. If the Auto configuration setting is enabled, you must choose between 60ns and 70ns DRAM timings in item 2.

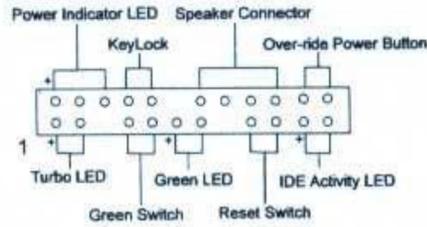
# Quick Connector and Jumper Reference

**CN4:** PS/2 mouse connector

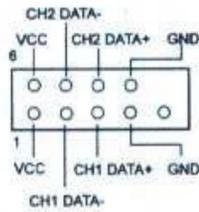


**CN7:** Fan78 connector (Optional)

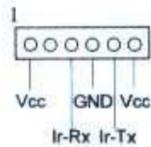
**CN8:** Front Panel connector set



**J7:** Dual channel USB connector



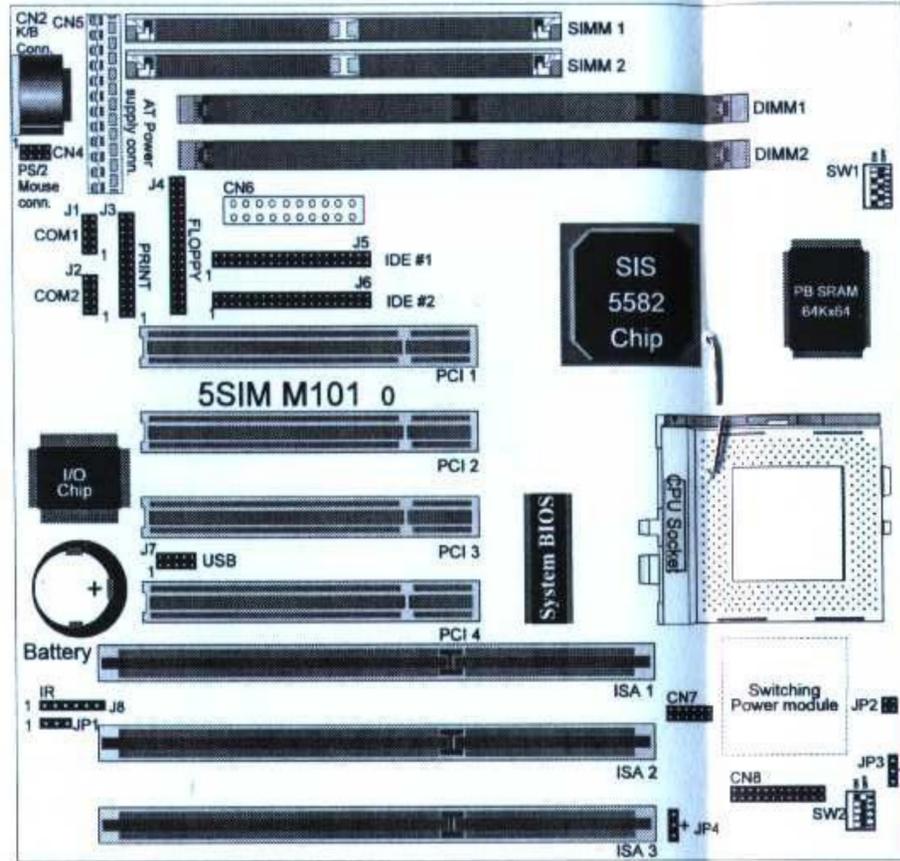
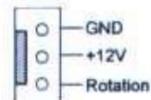
**J8:** Infrared connector



**JP1:** CMOS clear data jumper

1~2 short: Normal (default)  
2~3 short: Clear CMOS data

**JP3/JP4:** CPU/System cooling fan connectors



### Voltage Configuration:

There are two major processor types in general use. Most single-voltage processors such as Pentium, AMD-K5, and Cyrix 6x86 processors use a single voltage value 3.5v for both core and I/O voltage settings. Most dual-voltage processors such as Pentium processors with MMX technology and Cyrix 6x86L processors use a dual voltage value of 2.8v for core and 3.3v for I/O voltage settings. For most of these two types of processors, you can set JP2 and SW2 as follows:

CPU Type	I/O Vcc	Core Vcc	JP2	SW2
Single-voltage processors (Pentium, 6x86, K5)	3.5		1 2 3	ON OFF
Dual-voltage processors (MMX Pentium, 6x86L)	3.3	2.8	1 2 3	ON OFF

However, some processors such as AMD-K6 may need special voltage support. Please refer to the following table:

CPU Type	I/O Vcc	Core Vcc	JP2	SW2
Single-voltage processors (Pentium, 6x86)	3.3		1 2 3	ON OFF
Dual-voltage processors (K6)	3.3	2.9	1 2 3	ON OFF
		3.1	1 2 3	ON OFF
		3.2	1 2 3	ON OFF

CPU-type	CPU Power Voltage				CPU Speed		
	I/O Vcc	Core Vcc	JP2	SW2	MHz	Freq. ratio	SW1
Intel	3.5		1 2 3		50	x1.5	ON OFF
					60	x1.5	ON OFF
					60	x2	ON OFF
					60	x2.5	ON OFF
					66	x1.5	ON OFF
					66	x2	ON OFF
					66	x2.5	ON OFF
					66	x3	ON OFF
					66	x2.5	ON OFF
					66	x3	ON OFF
Cyrix /IBM	3.5		1 2 3		50		ON OFF
					55		ON OFF
					60		ON OFF
					66	x2	ON OFF
					75		ON OFF
					66		ON OFF
					75		ON OFF
					66		ON OFF
					75		ON OFF
					75		ON OFF
AMD	3.5		1 2 3		50		ON OFF
					60	x1.5	ON OFF
					66		ON OFF
					60		ON OFF
					66		ON OFF
					60	x2	ON OFF
					66		ON OFF
					60		ON OFF
					66	x2.5	ON OFF
					66		ON OFF
AMD	3.3	2.9	1 2 3		66	x2.5	ON OFF
					66	x3	ON OFF
					66	x3.5	ON OFF
					66		ON OFF
					66		ON OFF

## B. SDRAM CAS Latency

The SDRAM CAS Latency setting should be made at 2T or 3T depending on the the system clock speed and the speed of your SDRAM modules as indicated in the table below.

System Freq.	10ns SDRAM	12ns SDRAM
83MHz	3T	3T
75MHz	3T	3T
66MHz	2T	2T
60MHz	2T	2T
50MHz	N/A	2T

Table 2-1 Suggested SDRAM CAS Latency Settings



When using a 66MHz clock speed and 10ns Hitachi/Mitsubishi DIMM modules with chip part number HM5216805TT10H/M5M4 V16S30CTP-10, the SDRAM CAS Latency value should be set to 3T.

## C. ISA Bus Clock Frequency

The PCI clock speed is the CPU bus speed divided in half. The ISA bus speed is derived from the PCI clock speed and has a maximum bandwidth of 8MHz. Select the value that results in the closest number to 8 when dividing the PCI clock by 3 or 4. If you are using a frequency higher than 66 MHz bus speed use the 7.159MHz option.

## D. System/Video BIOS Cacheable

This function allows BIOS values to be temporarily placed into the system's cache memory. System performance slightly increases when these functions are enabled.

## E. Memory Hole at 15M-16M

Enabling this feature will reserve the 15MB to 16MB memory address space for ISA expansion cards. However, enabling this function will result in not allowing the system to have access to memory above 16MB. Please note that some expansion cards require this setting to be enabled.

## F. Hardware Reset Protect

When this function is enabled, your PC's hardware reset button will not function. This function is especially useful to prevent accidental resets for file servers, routers, etc. which should be available 24 hrs/day. When disabled, your PC's hardware reset button will function normally.



**For Minimum. Saving** - All timers use the following value--  
Doze - 40min, Standby - 40min, Suspend - 40min.

**For Max. Saving** - all timers use the following value--  
Doze - 20sec, Standby - 20sec, Suspend - 20sec.

### **PM Control by APM**

This mainboard supports the Intel and Microsoft INT 15h APM BIOS function which creates an interface to allow the OS to communicate with the SMM code. If APM is not installed, this option has no effect.

☒ **APM (Advanced Power Management)** should be installed to keep the time updated when the computer enters suspend mode activated by BIOS's Power Management functions. For the DOS environment, you need to add `DEVICE=C:\DOS\POWER.EXE`. For Windows 3.1x and Windows 95, you need to install Windows with the APM feature.

### **Video Off Option**

This item determines the power management modes (see **PM Timers** explained in this section for an explanation of power management modes) the monitor will enter before entering the Off-state as defined by the **Video Off Method** below.

**Always On** - the monitor will not go into any power management modes.

**Suspend--Off** - the monitor will enter power management mode while in Suspend.

**Susp, Stby--Off** - the monitor will enter power management mode while in Standby or Suspend modes.

**All Modes--Off** - the monitor will enter power management mode while in either Doze, Standby, or Suspend modes.

### **Video Off Method**

These are the Off-states described in the **Video Off Option** section above. They are power saving modes and are defined below.

**Blank** - BIOS will only blank the monitor's screen. This is not an electricity saving mode and is used as a screen saver to prevent screen damage while the screen is on but not in use.

**V/H SYNC+Blank** - BIOS will blank the screen and turn off the V-SYNC and H-SYNC signals from the VGA card to the monitor. This serves as both a screen saver and an electricity saver.

**DPMS Supported** - Select this option if your monitor supports the Display Power Management Signaling (DPMS) standard (i.e. Green monitors). Use software supplied by your your video subsystem to set video power management options.

- ⌘ If Green monitors detect that V/H-SYNC signals have turned off, the electron gun will turn off to save power consumption.

### **Doze Speed (div by)/Stdbby speed (div by)**

This option determines the Doze and Standby speeds of the CPU's external clock when the Power Management mode is enabled. If the value is 2, the CPU's speed is 1/2 its original speed, 3 is 1/3 its original speed, etc.

## **B. Modem Use IRQ**

If your computer has a modem, use this function to tell BIOS which IRQ is being occupied by the modem card. When the system is in Green mode, the modem requires an IRQ assignment to wake up the system and perform tasks. See Modem Ring Power-On function in Section 2-4 of this manual for setting the system wakeup function.



This assignment is compliant with the APM 1.2 specification and is to be used in coordination with APM 1.2 compliant operating systems.

## **C. PM Timers**

### **HDD Off After**

Select times between 1 and 15 minutes to power manage the HDD. The hard disk drive will enter sleep mode when no power is supplied to the hard drive. Any read/write activity to the hard drive will bring it back to full-on state. This function is only valid for IDE HDDs that support power saving functions.

### **Doze Mode**

This function is enabled via the Power Management function at the top of the Power Management screen. Enabling this function allows the system to enter Doze mode if no activity occurred during the specified expiration time.

### **Standby Mode**

This function is enabled via the Power Management function at the top of the Power Management screen. Enabling this function allows the system to enter Standby mode if no activity occurred during the specified Doze mode time. The CPU speed in Standby mode is CPU clock/3 MHz.

- ⌘ The CPUCLK (external CPU clock) refers to the system clock speed mentioned in this manual.

### **Suspend Mode**

This function is enabled via the Power Management function at the top of the Power Management screen. Enabling this function allows the system to enter Suspend mode if no activity occurred during specified Standby mode time. The CPU speed of Suspend mode is 0 MHz.

- ⌘ In Standby or Suspend modes, the system may also turn off the video signal and power down the hard disk drive (depending on HDD Power Down setting).

## D. PM Events

### Individual IRQ wake up Events

When enabled, if a device generates an interrupt request, the system will wake up to normal mode. If any event happens when the system is running in Suspend mode the system will return to normal mode. If any event happens when the system is running in Doze or Standby mode the timer will start recounting from zero.

## 2-3 PNP/PCI Configuration

This section provides IRQ and DMA setting information. By choosing the PnP/PCI Configuration option from the CMOS Setup Utility menu (Figure 2-1), the screen below is displayed. This sample screen contains the manufacturer's default values for the mainboard.

ROM PCI / ISA BIOS (2A59GC39) PNP/PCI CONFIGURATION AWARD SOFTWARE, INC.			
PNP OS Installed	: No	PCI IRQ Activated By	: Level
Resources Controlled By	: Manual	PCI IDE 2nd Channel	: Enabled
Reset Configuration Data	: Disabled	PCI IDE IRQ Map To	: ISA
IRQ-3 assigned to	: Legacy ISA	FDD IRQ Can Be Free	: No
IRQ-4 assigned to	: Legacy ISA	Assign IRQ For VGA	: Disabled
IRQ-5 assigned to	: PCI/ISA PnP		
IRQ-7 assigned to	: Legacy ISA		
IRQ-9 assigned to	: PCI/ISA PnP		
IRQ-10 assigned to	: PCI/ISA PnP		
IRQ-11 assigned to	: PCI/ISA PnP		
IRQ-12 assigned to	: PCI/ISA PnP		
IRQ-14 assigned to	: Legacy ISA		
IRQ-15 assigned to	: Legacy ISA		
DMA-0 assigned to	: PCI/ISA PnP	ESC : Quit	↑↓→← : Select Item
DMA-1 assigned to	: PCI/ISA PnP	F1 : Help	PU/PD/+/- : Modify
DMA-3 assigned to	: PCI/ISA PnP	F5 : Old Values	(Shift) F2 : Color
DMA-5 assigned to	: PCI/ISA PnP	F7 : Load Setup Defaults	
DMA-6 assigned to	: PCI/ISA PnP		
DMA-7 assigned to	: PCI/ISA PnP		

Figure 2-4 PCI & ONBOARD I/O Setup Screen

### **A. PNP OS installed**

If you want to install a PNP compatible OS such as Windows 95 please set to **Yes**.

### **B. Resources Controlled By**

When set to Manual, the system BIOS will not refer to the ESCD for IRQ & DRAM information. Instead, it will refer to the items in the setup menu for assigning IRQ & DMA values. When set to Auto, the system BIOS will refer to the ESCD for all legacy information.

- ✎ ESCD (Extended System Configuration Data) provides a detailed format of the configuration data structures stored in flash memory. Each data structure defines the resources used by a device or a card in the system. This includes legacy and PCI/ISA PnP devices.

### **C. Reset Configuration Data**

Enabled: The system BIOS will clear/reset the ESCD during POST.



After clearing ESCD, the BIOS will then change this item's value to "Disabled." Otherwise, the ESCD data would become useless.

### **D. IRQ#/DMA# Assigned To**

When resources are controlled manually, you can assign each system interrupts & DMA channels for each "Legacy ISA" or "PCI/ISA PnP" card used.



While using **Legacy ISA Cards** (non-PnP ISA cards), please set their necessary corresponding resources (INT#, DMA#) from "PCI/ISA PnP" to "Legacy ISA".

- ✎ All ISA non-PnP devices are legacy devices that select resources (I/O Addr., INT# or DMA#) by setting hardware jumpers on the device itself.
- ✎ IRQ-3/4/7/14/15 have been set as default for on board devices (COM2, COM1, Printer port, IDE1 and IDE2).

### **E. PCI IRQ Activated By**

This function indicates to the chipset the type of IRQ signal. Current PCI IRQs are type Level. Do not select Edge unless the PCI device assigned to the interrupt specifies Edge-triggered interrupts.

### **F. PCI IDE 2nd Channel**

If you insert an IDE board into a PCI slot you must disable the 2nd IDE channel on the mainboard by disabling this function. Then, set the Internal PCI/IDE function in BIOS's Integrated Peripherals menu.

### **G. PCI IDE IRQ Map To**

This function allows the user to designate PC AT (ISA) interrupts or PCI IDE IRQ mapping.

ISA: BIOS does not designate any IRQ signals to the PCI slot.

PCI-SLOT 1-3: The user can designate into which PCI slot (1-3) the IDE card is inserted. This setting is suitable for use with older PCI IDE cards that BIOS is not able to recognize.

PCI-AUTO: BIOS automatically detects into which PCI slot the PCI IDE card is inserted.

### **H. FDD IRQ Can Be Free**

This function allows the user to choose if the FDD IRQ is able to be freed up. The default setting is No and this does not allow the IRQ to be free.

### **I. Assign IRQ For VGA**

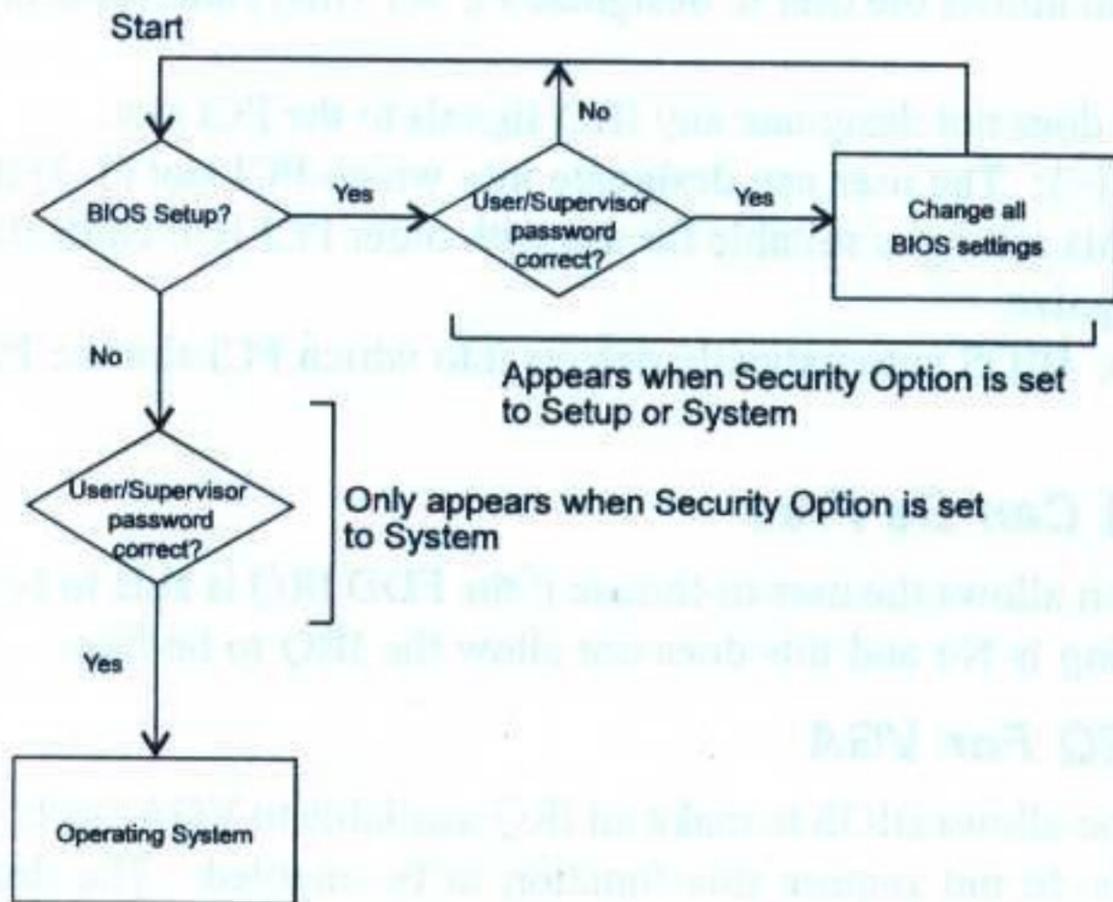
This function allows BIOS to make an IRQ available to VGA cards. Current VGA card models do not require this function to be enabled. The default setting is disabled.

## **2-4 Supervisor Password & User Password Setting**

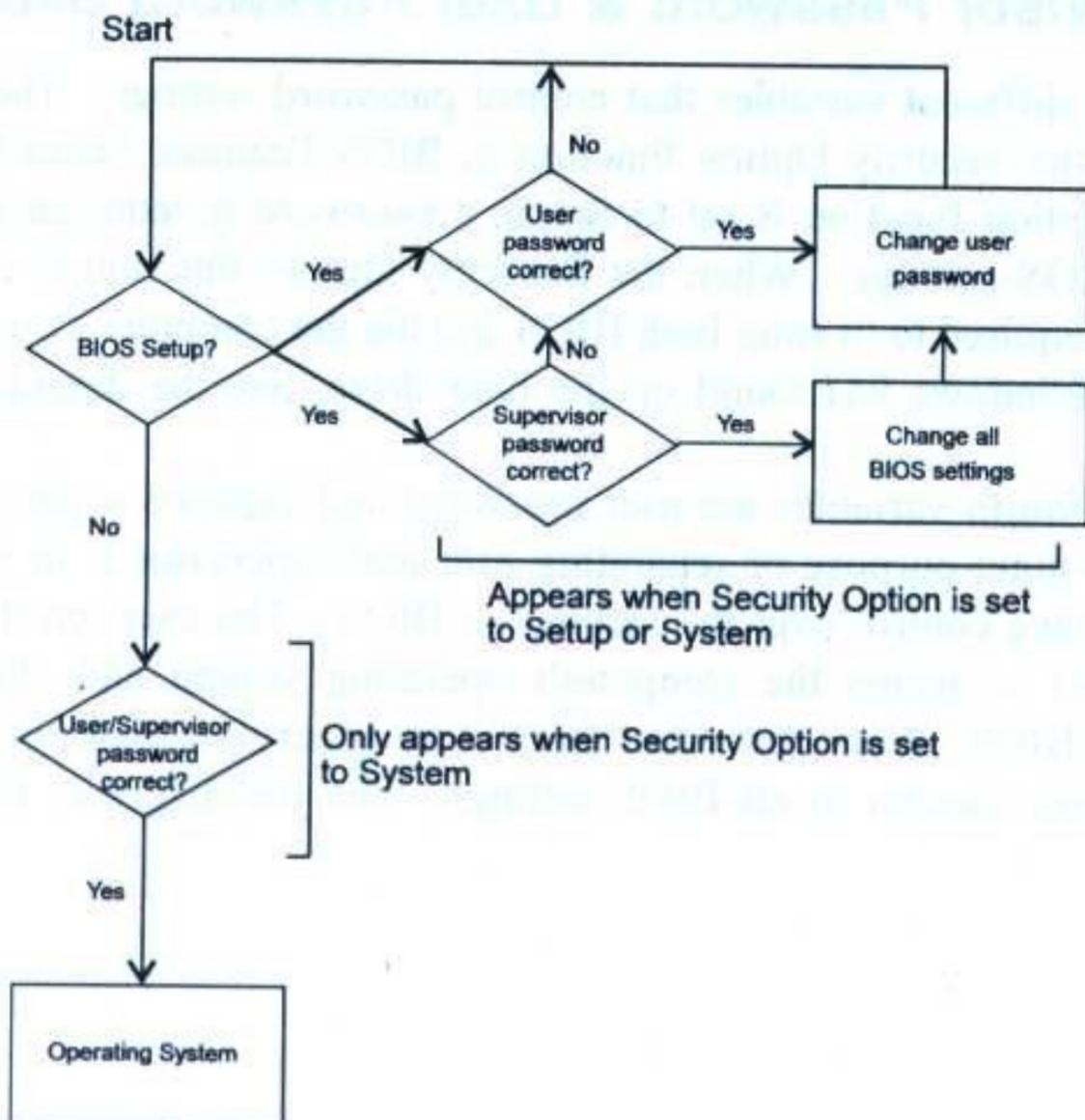
There are four different variables that control password settings. The first two are located under the Security Option function in BIOS Features Setup Menu. When the Security Option function is set to Setup, a password is required to enter BIOS and change BIOS settings. When the Security Option function is set to System, a password is required to enter both BIOS and the computer's operating system (for example Windows 95) found on the boot drive. See the diagrams below.

The third and fourth variables are user password and supervisor password selected in BIOS. The main purpose of separating user and supervisor is to allow only the supervisor to have control over the settings in BIOS. The user, on the other hand, is only allowed to access the computer's operating system and change the user password in BIOS. Note that when there is no supervisor password set, the user password controls access to all BIOS settings. See the diagrams below.

### A. Set Either Supervisor Password or User Password



### B. Set Both Supervisor Password and User Password



# Business Reply Card

Fax to: 886-2-248-3009 Chaintech Computer Co., Ltd.

## Reader's Feedback

5SIM User's Manual

P/N : 9411820810

Code : 5SIM0.1B

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MEMO



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Memo De



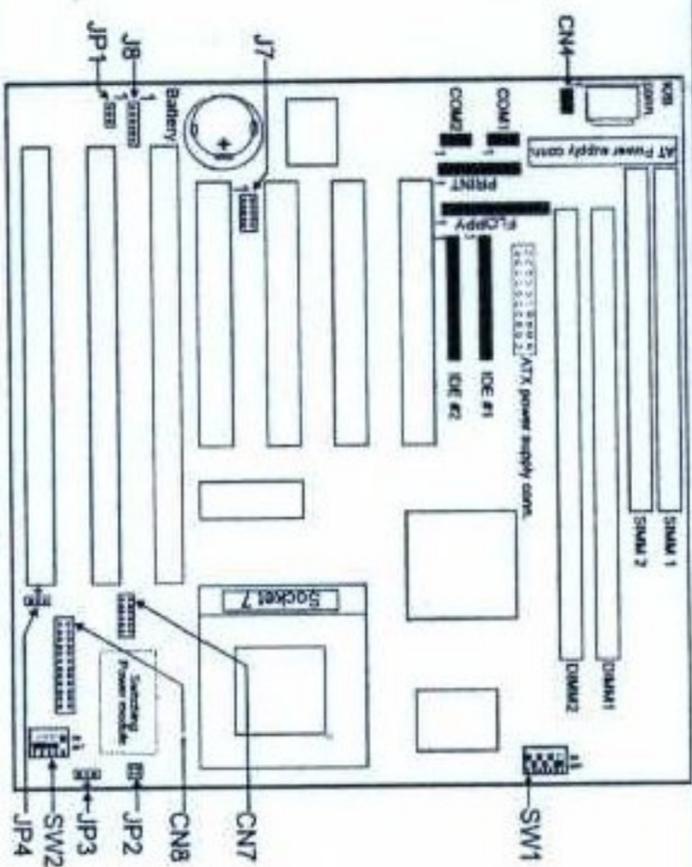
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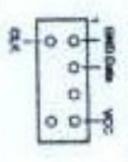


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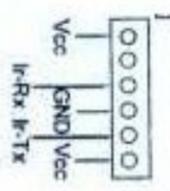
Memo 15



CN4: PS/2 mouse connector

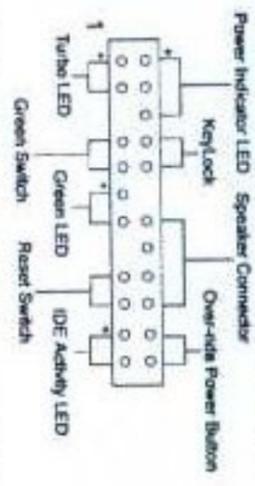


J8: Infrared connector

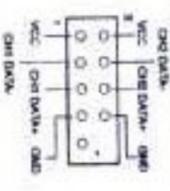


CN7: Fan78 connector (Optional)

CN8: Front panel connector set



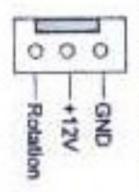
J7: Dual channel USB connector



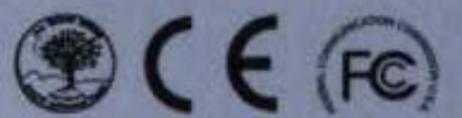
JP1: CMOS clear data jumper

1~2 short: Normal (default)  
2~3 short: Clear CMOS data

JP3/JP4: CPU/System cooling fan connectors



Processor	CPU TYPE	Core Vcc	CPU Bus Freq.	Freq. ratio	JP2	SW2	SW1
Intel AMD	PS4C-90MHz KS-PR90	1.5	60	x1.5	1 0 0 3 0 0	SW2	SW1
Intel AMD	PS4C-100MHz KS-PR100		60	x1.5			
Intel AMD	PS4C-120MHz KS-PR120	1.5	60	x2	1 0 0 3 0 0	SW2	SW1
Intel AMD	PS4C-130MHz KS-PR133		60	x2			
Intel	PS4C-150MHz	1.5	60	x2.5	1 0 0 3 0 0	SW2	SW1
Intel AMD	PS4C-160MHz KS-PR166		60	x2.5			
Intel	PS5C-160MHz	2.8	66	x2.5	1 0 0 3 0 0	SW2	SW1
Intel	PS5C-200MHz		66	x3			
Intel	PS5C-233MHz	2.8	66	x3.5	1 0 0 3 0 0	SW2	SW1
Intel	6x86-PR120+ @100MHz		50	x2.5			
Cyrus	6x86-PR133+ @110MHz	3.5	55	x2	1 0 0 3 0 0	SW2	SW1
	6x86-PR150+ @120MHz		60	x2			
	6x86-PR166+ @133MHz		66	x2			
	6x86-PR200+ @150MHz		75	x2			
	6x86L-PR166+ @133MHz		66	x2			
	6x86L-PR200+ @150MHz		75	x2			
AMD	KS166	2.9	66	x2.5	1 0 0 3 0 0	SW2	SW1
AMD	KS200		66	x3			



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