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1 Introduction

586F61/F61-PB Mainboard Features

The 586F61/F61-PB is a high performance, function enhanced computer Mainboard that combines the power of Pentium Class CPU and the PCI Local bus. The features integrated onto the 586F61/F61-PB Mainboard are as follows:

. CPU: Supports the following CPUs in a ZIF socket.
- Intel Pentium P54C/P54CT/P54CTB/P55C - 75/90/100/ 120/133/150/166/180/200+ MHz with VRM and Socket 7.
- AMD K5 (reserved)
- Cyrix M1 (reserved)

. Chipset: Intel 82430FX Chipset.

. Cache Memory: Supports Asynchronous / Synchronous (Burst or Pipelined Burst SRAM), 256KB or 512KB Cache Memory.

. Main Memory:
- 72-Pin DRAM SIMM modules in multiple configurations up to 128MB.
- Supports Fast Page Mode and Extended Data Output (EDO) SIMMs.
- Supports Symmetric and Asymmetric SIMMs.

. On-Board I/O:
- 32-bit enhanced PCI IDE controller with two connectors supports four IDE devices in two channels. The controller supports both PIO and Bus Master IDE, up to Mode 4 timing with transfer rates to 22 MB/Second.

- Supports two 16550 Compatible high speed serial ports, one standard/ECP/EPP bi-directional parallel port, and one floppy disk controller.
- Supports one IrDA Compatible infra-red port for infra-red communication. (reserved).

. Slots:

- Four 16-bit ISA and three 32-bit Bus Master PCI expansion slots.

. Keyboard / Mouse:

- Provides Standard Keyboard connector for AT type keyboard and 6-pin header for PS2 mouse interface.
- PS2 Keyboard connector and PS2 Mouse connector are optional.

. BIOS:

- Award Pentium PCI BIOS.
- Flash with ESCD (Extended System Configuration Data) block to fully support Plug and Play.
- Supports Power Management, Plug and Play, and Enhanced IDE Devices.
- Built-in NCR SCSI BIOS firmware to support the NCR 53C810 PCI Fast SCSI controller.

Static Electricity Precautions

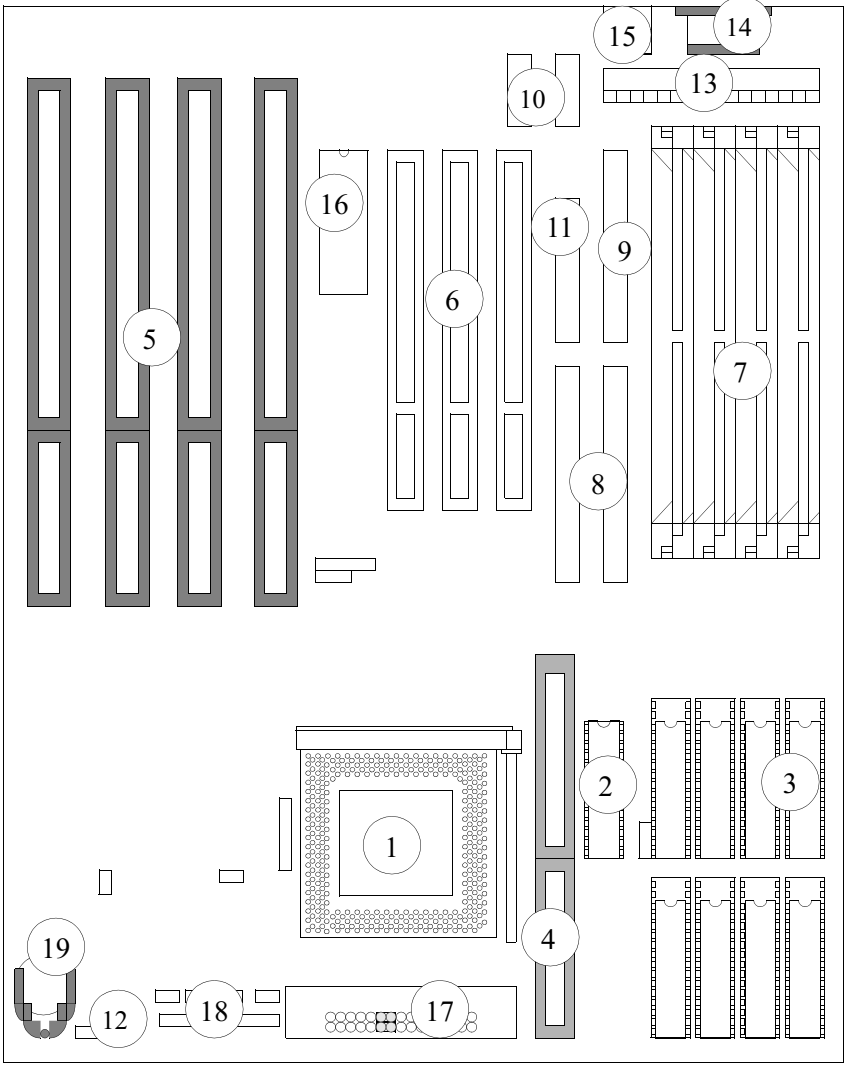
Before removing the Mainboard from its anti-static bag, you need to eliminate any static electricity that may be accumulated on your body. The charge that can build up in your body may be more than enough to damage integrated circuits on the system board. Therefore, it is important to observe basic precautions whenever you handle or use computer components. Although areas with humid climate are much less prone to static build-up, it is best to always safeguard against accidental damage that may lead to costly repairs. The following measures should be sufficient to protect your equipment from static discharge:

- After removing the system cover, discharge any static electricity that might have accumulated in your body by touching a grounded or anti-static surface (e.g. anti-static pads or using a grounding wrist strap). If nothing is available, touch the power supply housing. This assumes the system unit is plugged into the AC outlet. Be certain to do this before removing components from their anti-static coverings.

- When handling separate cards, boards or modules, be cautious to avoid contacting with the components on them, and also with the "gold finger" connectors that plug into the expansion slot. It is best to handle them either by their edges or by mounting brackets that attach to the slot opening in the system cases. However, the above recommendation are just intended to avoid the static discharge problem.

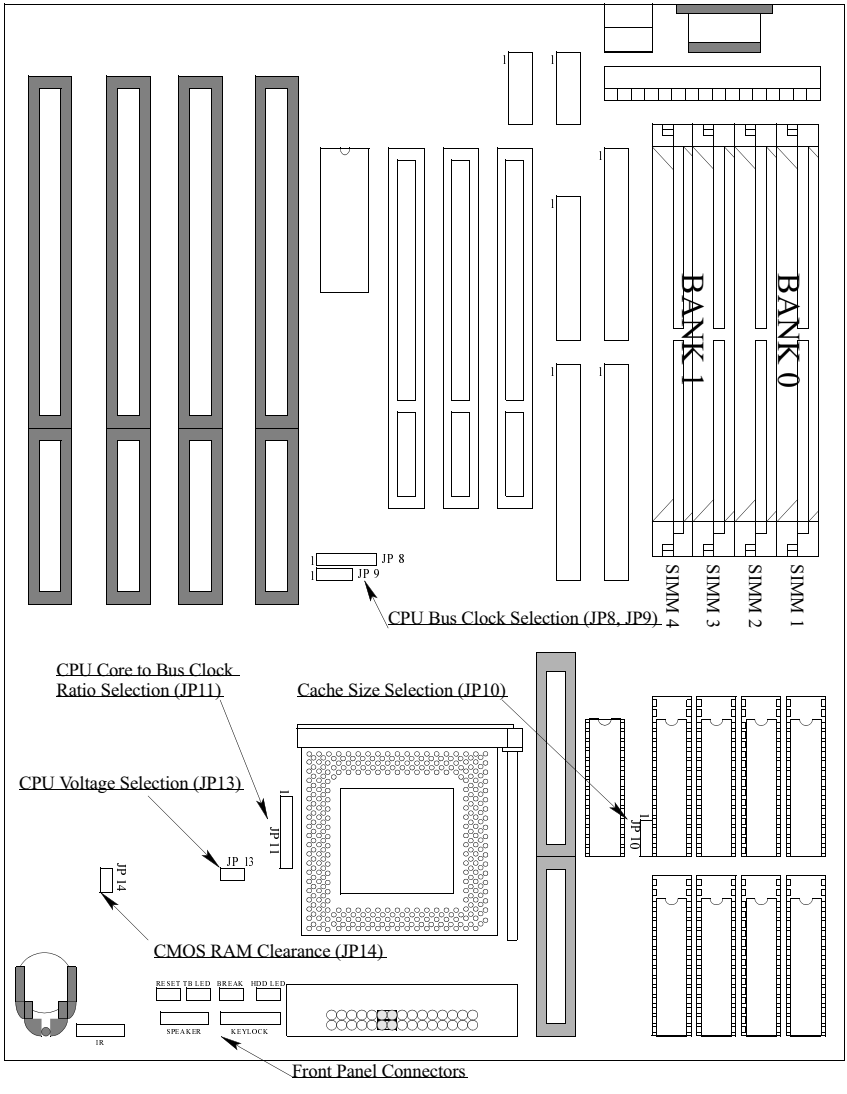
- Make certain that everything connects to the system case, including the power supply, is unplugged before doing the installation work.

586F61 Mainboard Layout

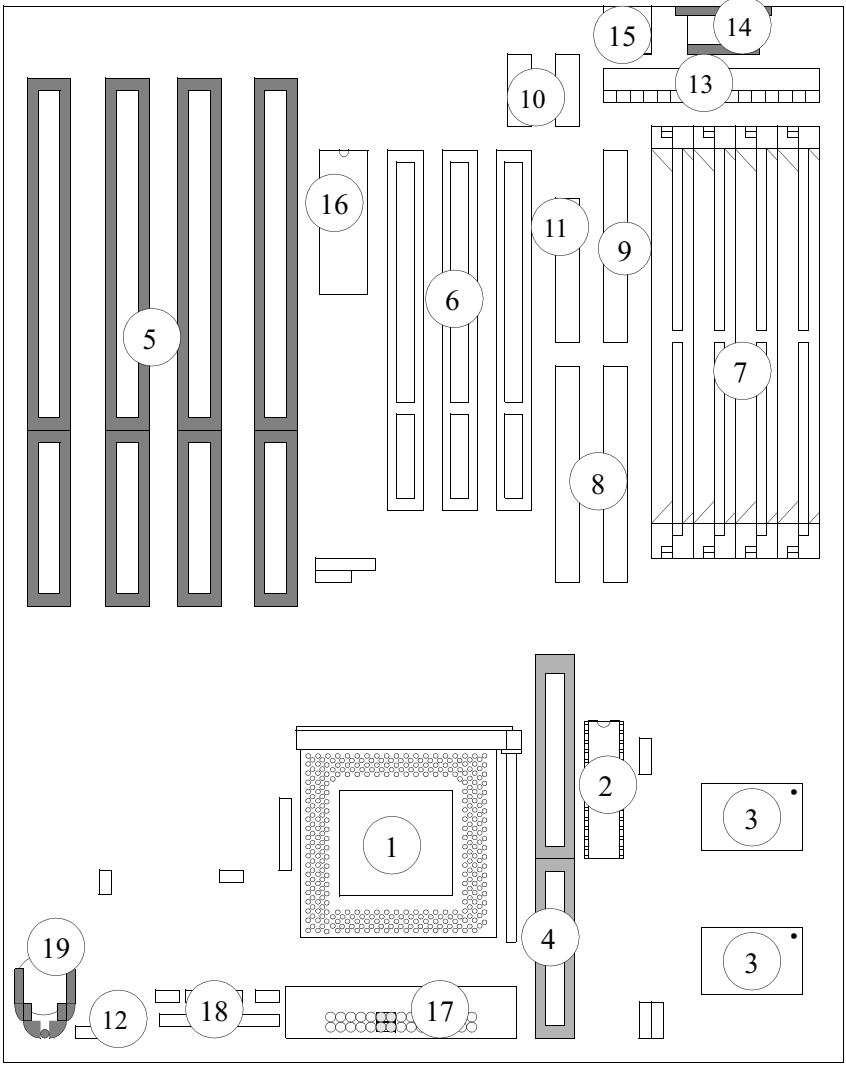


1:CPU
2:TAG SRAM Chips
3:Cache SRAM Chips
4:Cache Slot
5:ISA Expansion Slots
6:PCI Expansion Slots
7:SIMM Module Sockets
8:IDE Connectors
9:Floppy Drive Connector
10:Serial Port Connectors
11:Paralle Port Connector
12:IR Port Connector
13:Power Connector
14:Keyboard Connector
15: PS/2 Mouse Header
16: BIOS ROM
17:VRM Header
18:Front panel Connector
19:Battery (CR2032 Lithium)

586F61 Mainboard Jumper & Connector Location



586F61-PB Mainboard Layout



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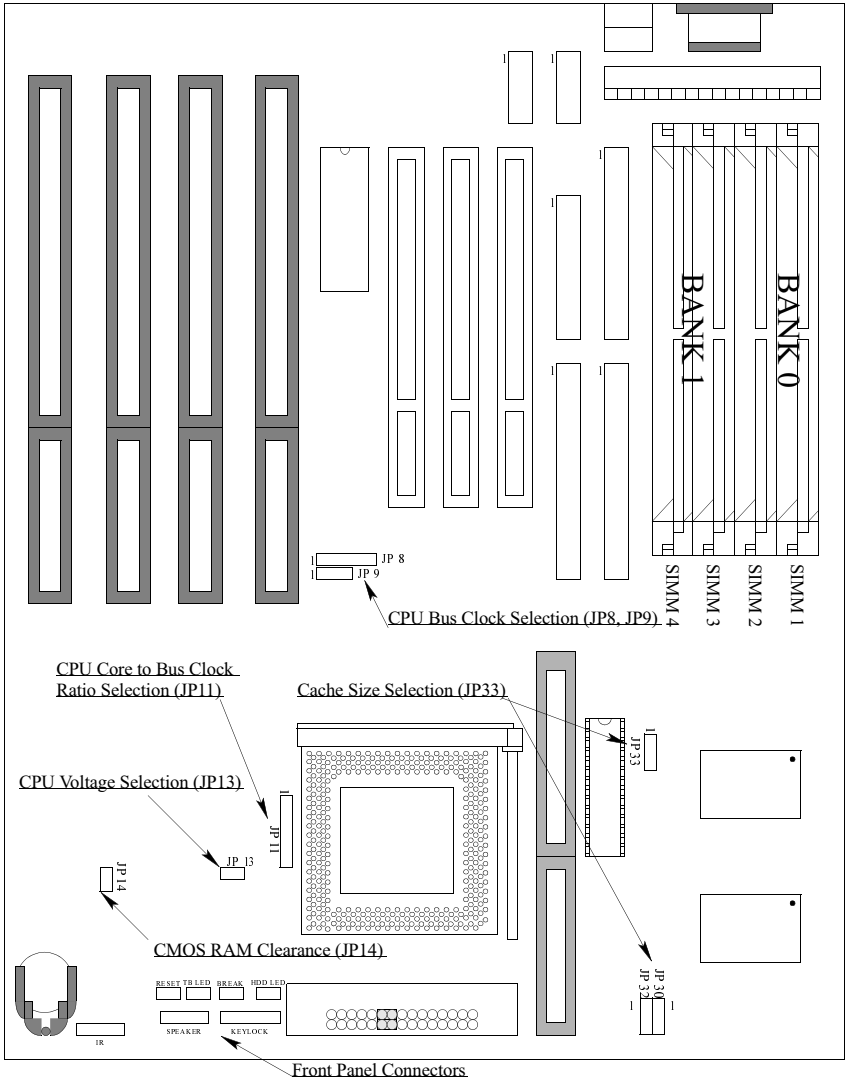


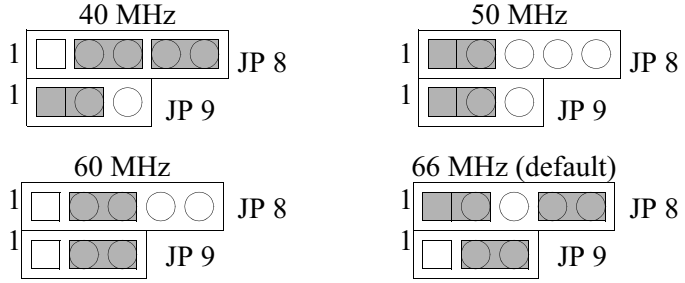
2 Hardware Guide

To install the Mainboard you need to set jumpers, attach connectors and install SIMM memory modules.

Setting Jumpers

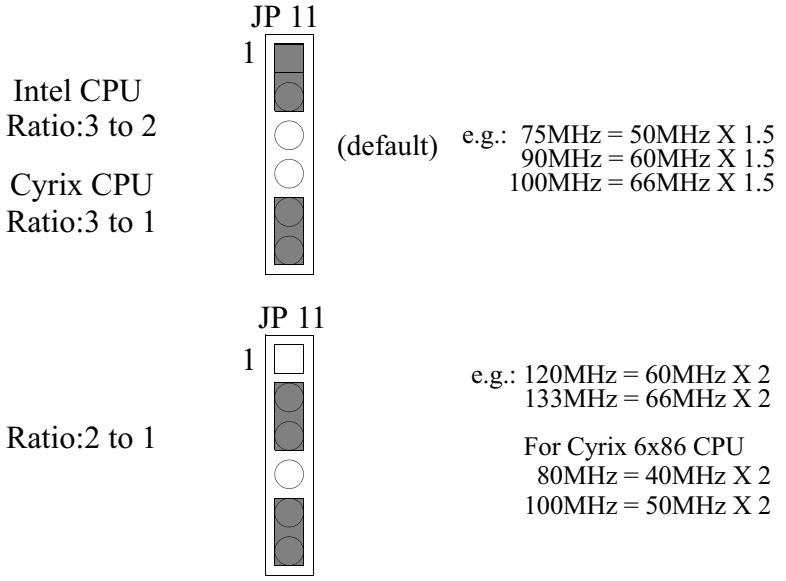
. CPU Bus Clock Selection

This jumper selects different CPU Bus Clock.



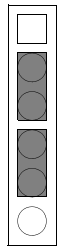
. CPU Core to Bus Clock Ratio Selection

This jumper selects different CPU core to bus clock ratio.



Ratio:5 to 2

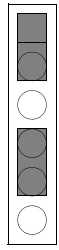
JP 11



e.g.: 150MHz = 60MHz X 2.5
167MHz = 66MHz X 2.5

Ratio:3 to 1

JP 11



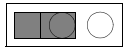
e.g.: 150MHz = 50MHz X 3
180MHz = 60MHz X 3
200MHz = 66MHz X 3

. CPU Voltage Selection

This jumper selects different voltages for the CPU.

3.2V+5%

JP13



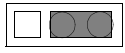
3.3V+5%
STD/VR

JP13

(default)

3.45V-3.6V
VRE

JP13



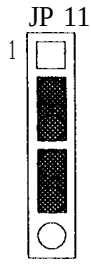
. Cache Memory Selection

A. 586F61 Cache Memory Selection:

The 586F61 Mainboard supports Asynchronous SRAMs in DIP Sockets or Cache Module in the Cache Slot. The 586F61 has two cache size options: 256KB or 512KB.

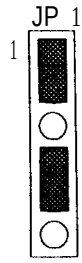
If using the cache module in the cache slot, neither TAG SRAM

Ratio:5 to 2



e.g.: 150MHz = 60MHz X 2.5
166MHz = 66MHz X 2.5

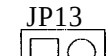
Ratio:3 to 1



e.g.: 150MHz = 50MH X 3
180MHz = 60MHz X 3
200MHz = 66MHz x 3

CPU Voltage Selection

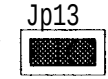
This jumper selects different voltages for the CPU.



3.3v+5%
STD/VR

(default)

(Only for boards with 2 pin JP13.)



3.45v-3.v
VRE

(For boards with 3 pin JP13 please see page 12)

Cache Memory Selection

A. 586F61 Cache Memory Selection:

The 586F6 1 Mainboard supports Asynchronous SRAMs in DIP Sockets or Cache Module in the Cache Slot. The 586F61 has two cache size options: 256KB or 5 12KB.

If using the cache module in the cache siot, neither TAG SRAM

nor DATA SRAMs are installed. Otherwise the system may not function properly. Also the JP10 connection is irrelevant.

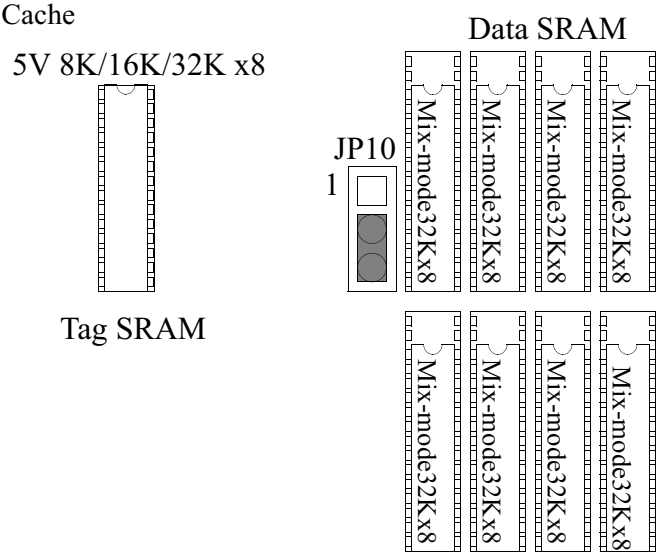
The Chart below shows the Asynchronous SRAM chips required for each configuration.

Cache Size	Tag RAM 15ns, 5V SRAM	Data RAM 15ns, 3.3/5V mix-mode SRAM
256 KB	one 8K/16K/32K x8	eight 32Kx8 chips
512 KB	one 16K/32K x8	eight 64Kx8 chips

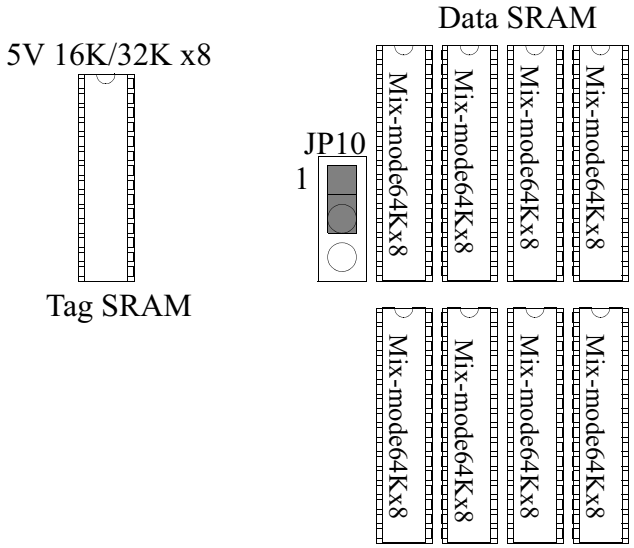
NOTE:
Top 4 socket pins must be open when install a 28-pin SRAM chip in a 32-pin socket.

The figures below show where to install the SRAM chips and jumper setting for each configuration.

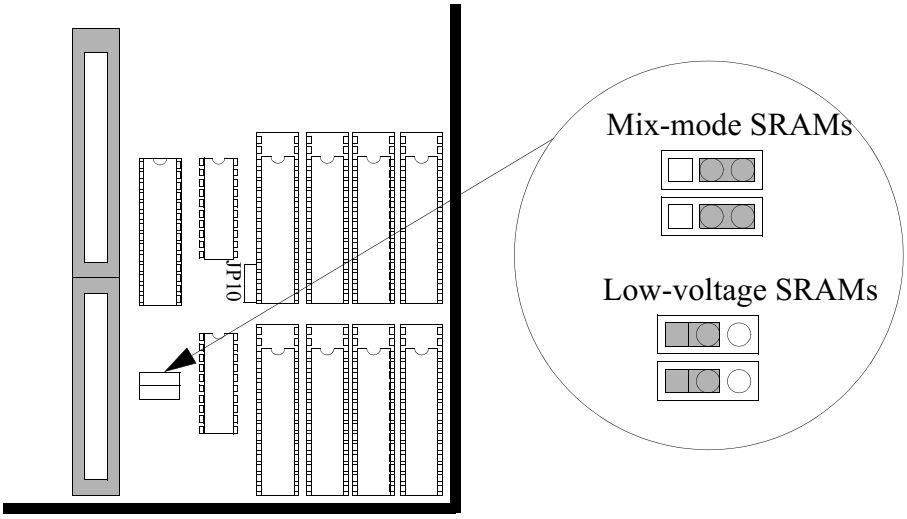
(1) 256KB Cache



(2) 512 KB Cache



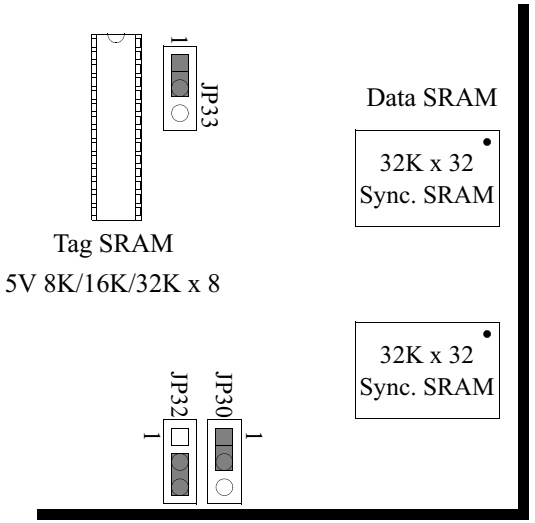
Note: Some 586F61 Mainboards are assembled with the option to use either mix-mode or low-voltage (3.3V) SRAMs as Data RAMs. Those boards are equipped with two 3-pin headers located between the cache slot and asynchronous SRAMs. Install shunts to the headers as follows:



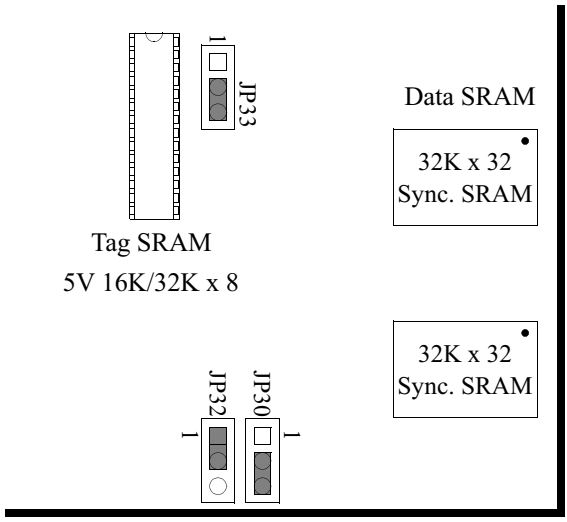
B. 586F61-PB Cache Memory Selection:

The 586F61-PB Mainboard supports Synchronous SRAMs on board and/or Cache module in the Cache Slot. The 586F61-PB has two cache size options: 256KB or 512KB. The figures below show jumper setting for each configuration.

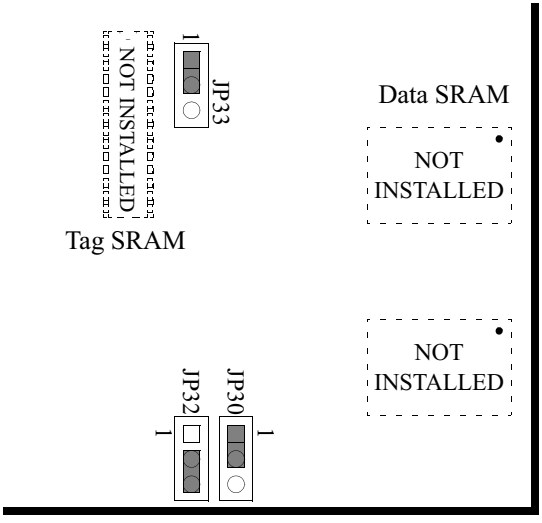
(1) 256KB Cache On Board



(2) 256KB Cache On Board and 256KB Cache Module, Total 512KB
Note: Only Cache Module designed following Intel COAST specification will work in this configuration.



(3) 256KB/512KB Cache Module:
Neither Tag SRAM nor DATA SRAMs are installed



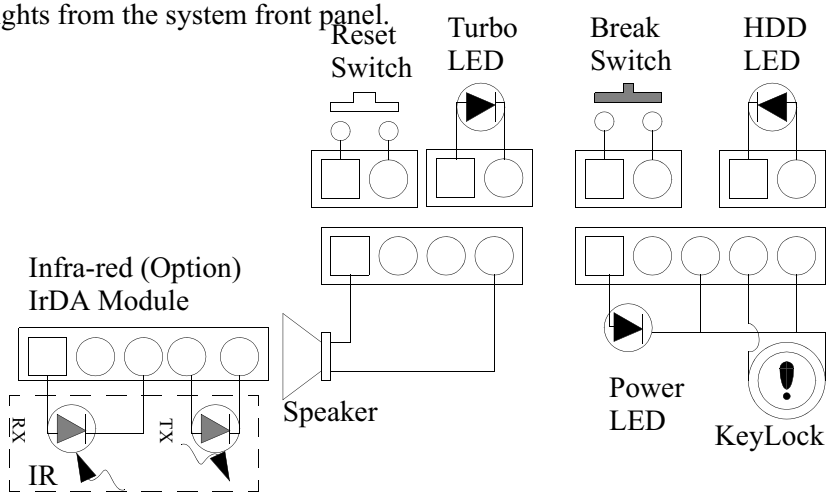
. CMOS RAM Clearance

If you need to clear the CMOS RAM data, put a shunt to short JP14 pin1 to pin2 for 5 seconds and the data stored in the CMOS RAM will be wiped out.

Attaching Connectors

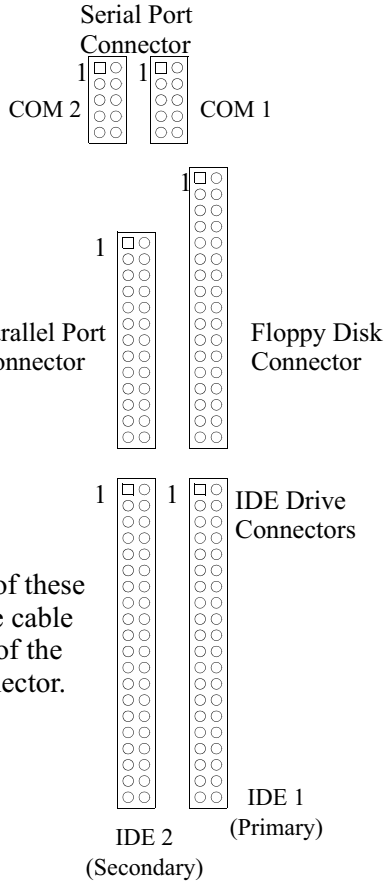
. Front Panel Connectors

There are 7 connectors on the Mainboard for switches and indicator lights from the system front panel.



. I/O Port Connectors

Pin 1 is the upper left pin on each port connector.



When you attach a ribbon cable to any of these I/O port connectors, you must orient the cable connector so that the pin 1(color) edge of the cable is at the pin 1 of the I/O port connector.

. Cable Set

Included with 586F61/F61-PB Mainboard is a cable set which contains:

- one IDE Cable.
- one floppy disk drive cable.
- two serial ports cable with mounting bracket.
- one parallel port cable with mounting bracket.

. Power Supply Connector

The Power Supply Connector on the Mainboard is a 12-pin male connector. **Make sure the power supply is unplugged before connect the leads from the power supply**. Most power supplies have two leads. Each lead has six wires, two of which are black. Connect the leads with the four black wires at the center.

. Voltage Regulator Module (VRM)

The Voltage Regulator Module (VRM) Socket provides flexibility to support various Pentium processor with different voltage requirements in one mainboard.

The VRM can be defined as a voltage converter with a standardized pin-out capable of converting the system power supply voltage to the voltage required for the Processor Core.

CPU:P54C/P54CT/P54CTB
75/90/100/120/133/150/167/180/200 MHz
Std Voltage 3.135 V ~ 3.60 V

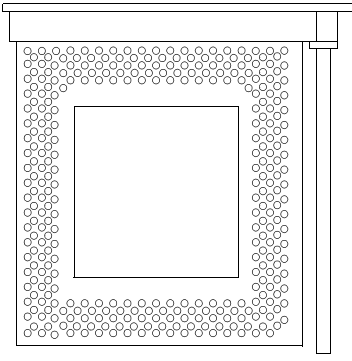
. Install 2 shunts to short VRM socket pin11 to pin13 and pin12 to pin14.

. No VRM Required
. P54CTB based on P55C requires Socket 7

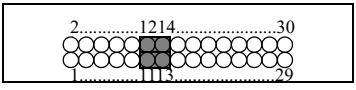
CPU:P54C/P54CT/P54CTB
75/90/100/120/133/150/167/180/200 MHz
VRE Voltage 3.4 V ~ 3.6 V

. Install 2 shunts to short VRM socket pin11 to pin13 and pin12 to pin14
. Install a shunt to short JP13 pin1 to pin2 (see CPU Voltage Selection at Jumper Setting)

. No VRM Required
. P54CTB based on P55C requires Socket 7



CPU SOCKET 7

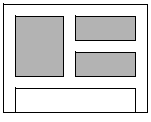


VRM SOCKET

CPU:P55C 150/167/180/200 MHz
Core Voltage 2.5 V

. Requires a 2.5 V VRM
. Requires Socket 7

2.5V VRM



. PS/2 Mouse Connector

The PS/2 Mouse connector (PS2MS) is a 6-pin header for the lead from a case-mounted PS/2 mouse port.

Installing System Memory

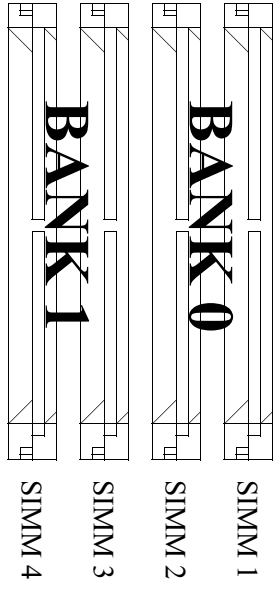
The 586F61/F61-PB Mainboard has four SIMM Sockets to support up to 128MB of system memory. The four SIMM sockets (SIMM1 ~ SIMM4) are divided into 2 Banks, Bank0 (SIMM1, SIMM2) and Bank1 (SIMM3, SIMM4).

Memory can be installed by using 4MB, 8 MB, 16MB, 32 MB, 72-pin EDO or Fast Page Mode SIMM memory modules. Due to the 586F61/F61-PB Mainboard high speed design, the memory modules for the 586F61/F61-PB must meet all of following requirements:

Modules Size: Single-sided 4MB, 16MB.
Double-side 8MB, 32MB.
DRAM Type: Fast page mode or
Extended Data Output (EDO).
DRAM Speed : 70ns or faster
RAS Access Time : 60ns ~ 70ns
CAS Access Time : 10ns ~ 25ns

SIMMs have cut-out at one end that matches an extension on one of the vertical posts of each socket.

You must use two SIMM modules at a time, and each pair of modules must be the same size, mode and speed.



The following are all available memory configuration:

SIMM Socket l&2	SIMM Socket 3&4	Total Memory
4MBx2	NONE	8MB
4MBx2	4MBx2	16MB
4MBx2	8MBx2	24MR
4MB x 2	16MBx2	40MB
4MBx2	32MBx2	72MB
8MBx2	NONE	16MB
8MBx2	4MBx2	24MB
8MBx2	8MBx2	32MB
8MBx2	16MBx2	48MB
8MBx2	32MBx2	80MB
16MBx2	NONE	32MB
16MBx2	4MBx2	4oMB
16MBx2	8MBx2	48MB
16MBx2	16MBx2	64MB
16MBx2	32MBx2	96MB
32MBx2	NONE	64MB
32MBx2	4MBx2	72MB
32MBx2	8MBx2	80MB
32MBx2	16MBx2	96MB
32MB x 2	32MBx2	128MB
NONE	4MBx2	8MB
NONE	8MBx2	16MB
NONE	16MBx2	32MB
NONE	32MR x 2	64MB

3 Software Guide

Software Setup

After hardware configuration of 586F61/F61-PB Mainboard is completed, and system hardware has been assembled, the completed system may be powered up. At this point, software setup should be run to ensure that system information is correct.

Normally, system setup is needed when the system hardware is not consistent with the information contained in the CMOS RAM, whenever the CMOS RAM has lost power, or the system features need to be changed.

Running AWARD BIOS

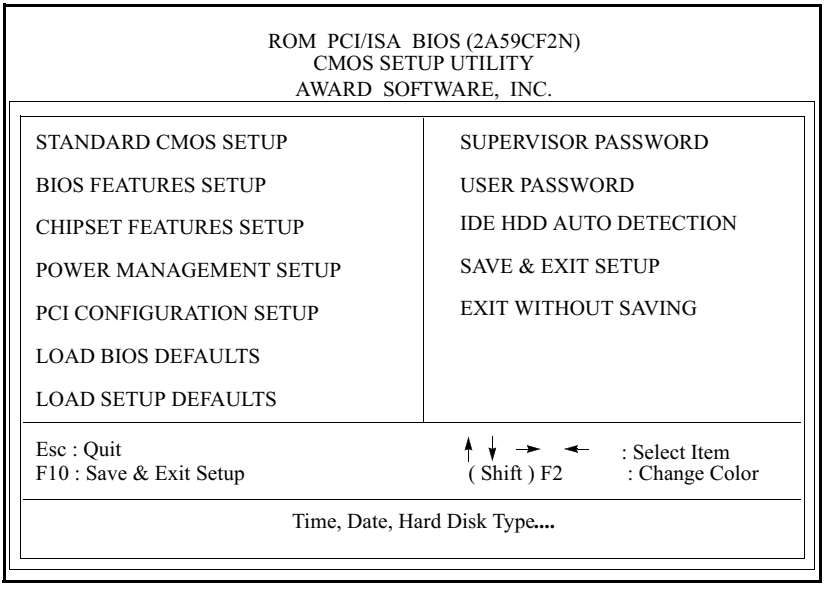
When the system is powered on, the BIOS will enter the Power-On Self Test (POST) routines. These routines perform various diagnostic checks at the time the system is powered up; if an error is encountered, the error will be reported in one of two different ways. If the error occurs before the display device is initialized, a series of beeps will be transmitted. If the error occurs after the display device is initialized, the screen will display the error message.

After the POST routines are completed, the following message appears:

“Press DEL to enter SETUP”

To access the AWARD BIOS SETUP program, press the <DEL> key. The main program screen will be displayed at this time.

The Main Program Screen



This screen provides access to the utility's various functions.

Listed below are explanations of the keys displayed at the bottom of the screen:

<ESC>: Exit the utility.

ARROW KEYS: Use arrow keys to move cursor to desired selection.

<F10>: Saves all changes made to Setup and exits program.

<Shift><F2>: Changes background and foreground colors.

STANDARD CMOS SETUP

Selecting "STANDARD CMOS SETUP "on the main program screen displays this menu:

Standard CMOS Setup Screen

ROM PCI/ISA BIOS (2A59CF2N)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC

Date (mm:dd:yy): Mon, Jul 24 1995
Time (hh:mm:ss): 10:00:00

HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	: User	852	826	32	0	1651	63	LBA
Primary Slave	: None	0	0	0	0	0	0	----------
Secondary Master	: None	0	0	0	0	0	0	----------
Secondary Slave	: None	0	0	0	0	0	0	----------

Drive A : None
Drive B : None

Video : EGA/VGA
Halt On : All Errors

Base Memory : 640K
Extended Memory : 15360K
Other Memory : 384K

Total Memory : 16384K

ESC: Quit ↑ ↓ → ← :Select Item PU/PD/+/-:Modify
F1 : Help (Shift) F2 :Change Color

The Standard CMOS Setup utility is used to configure the following features:

Set Date: Month, Date, Year.

Set Time: Hour, Minute, and Second. Use 24 Hour clock format (for PM numbers, add 12 to the hour, you would enter 4:30 p.m. as 16:30).

Hard Disks:
There are four hard disks listed: “Primary Master”, “Primary Slave”, “Secondary Master” and “Secondary Slave”. For Each IDE channel, the first device is the “Master” and the second device is “Slave”.

Hard disk Types from 1 to 45 are standard ones; Type “Auto” is IDE HDD auto detection; Type “User” is user definable, and Type “None” is not installed (e.g. SCSI).

There are six categories of information you must enter for a normal mode IDE HDD: “CYLS” (number of cylinders), “HEAD” (number of heads), “PRECOMP” (write pre-compensation), “LANDZ” (landing zone), “SECTOR” (number of sectors) and “MODE” (Normal, LBA, LARGE and AUTO). The hard disk vendor’s or system manufacturer’s documentation should provide you the information needed. For an IDE hard drive, you can set ‘Type’ to “Auto” or use the “IDE HDD AUTO DETECTION” utility in the main program screen to enter the drive specifications.

The Award BIOS supports three HDD modes: NORMAL, LBA, and LARGE.

NORMAL mode: Generic access mode in which neither the BIOS nor the IDE controller will make any transformation during accessing. The maximum HDD size supported by the NORMAL mode is 528 Megabytes restriction.

LBA mode: Logical Block Addressing mode is an HDD accessing method to overcome the 528Megabytes restriction.
The number of cylinders, heads, and sectors shown in setup may not be the number physically contained in the HDD.
During HDD accessing, the IDE controller will transform the logical address described by the cylinder, head and sector numbers

into its own physical address inside the HDD. The maximum HDD size supported by the LBA mode is 8.4 Gigabytes.

LARGE mode: Some IDE HDD contains more than 1024 cylinders without LBA support. This access mode tricks DOS (or other OS) that the number of cylinders is less than 1024 by dividing it by 2. At the same time, number of heads is multiplied by 2.

A reverse transformation process will be made inside INT13h in order to accessing the right HDD address. The maximum HDD size supported by the LARGE mode is 1 Gigabytes.

Note: To support LBA or LARGE mode, there must be some software involved. All these software are located in the Award HDD Service Routine "INT13h". It may fail to access an HDD with LBA or LARGE modes selected if you are running under an Operating System which replaces the whole INT13h.

Floppy Drive A and Floppy Drive B: The options are: "360K, 5.25 in.", "1.2M, 5.25in.", "720K, 3.5in.", "1.44M, 3.5in.", "2.88M, 3.5in." and "None (Not Installed)". Not Installed could be used as an option for diskless workstations.

Video: Options are "MONO", "CGA80", "CGA40" and "EGA/VGA".

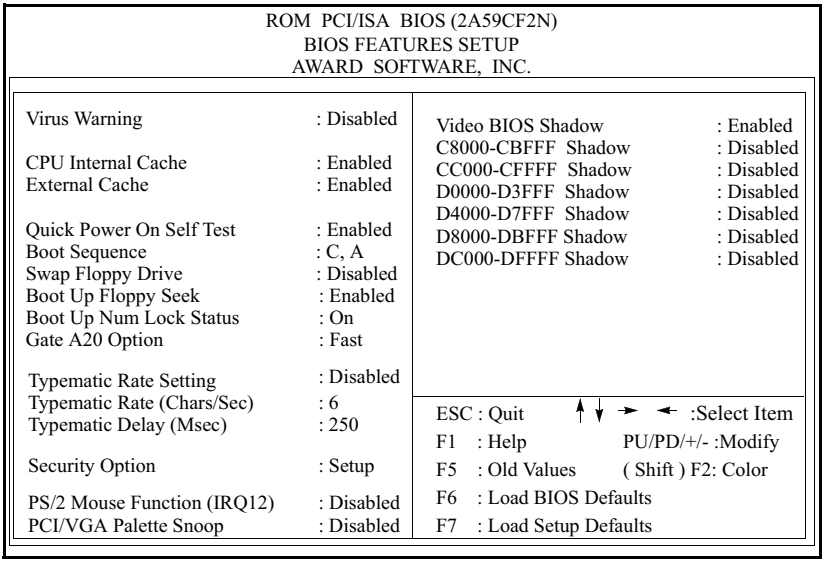
Halt On: Controls whether the system stops in the case of an error. The options are "All Errors", "No Errors", "All, But Keyboard", "All, But Diskette" and "All, But Disk/Key".

After you have made your selections, exit to the main program screen by pressing the <ESC> key.

BIOS FEATURES SETUP

Selecting "BIOS FEATURES SETUP" on the main program screen displays this menu:

BIOS Features Setup Screen



The following explains the options for each features:

Virus Warning: The Virus Warning's default setting is "Disabled". When enabled, any attempt to write the boot sector and partition table will halt the system and cause a warning message to appear. If this happens, you can use an anti-virus utility on a virus free, bootable floppy diskette to reboot and clean your system.

CPU Internal Cache: The default setting is "Enabled". This Setting enables the CPU internal cache.

External Cache: The default setting is "Enabled". This setting enables the external cache.

Quick Power On Self Test: The default setting is "Enabled". If enabled, this will skip some diagnostic checks during the Power On Self Test (POST) to speed up booting process.

Boot Sequence: The default setting is "C,A"; the other option is "A,C". The BIOS will load the operating system from the disk drives in the sequence selected here.

Swap Floppy Drive: The default setting is "Disabled". This setting gives you an option to swap A and B floppy disks. Normally the floppy drive A is the one at the end of the cable, if you set this option to "Enabled", the drive at the end of the cable will be swapped to B.

Boot Up Floppy Seek: The defaults setting is "Enabled". When enabled, the BIOS will check whether there is a floppy disk drive installed.

Boot Up Numlock Status: The default setting is "On". If set "Off", the cursor controls will function on the numeric keypad.

Gate A20 Option: the defaults setting is "Fast". This is the optimal setting for the Mainboard. The other option is "Normal".

Typematic Rate Setting: The default setting is "Disabled". If enabled, you can set the typematic Rate and typematic Delay.

Typematic Rate (Chars/Sec): This setting controls the speed at which the system registers repeated keystrokes. The choices range from 6 to 30 Chars/Sec. The default setting is "6" Chars/Sec.

Typematic Delay (Msec): This setting controls the time between the display of the first and second characters. There are four delay choices: 250ms, 500ms, 750ms and 1000ms. The default setting is "250" ms.

Security Option: This setting controls the password feature. The options are "Setup" and "System". Select "Setup" will protect the

configuration settings from being tampered with. Select "System" if you want to use password feature every time the system boots up. The default setting is "Setup". You can create your password by using the "SUPERVISOR/USER PASSWORD" utility on the main program screen.

PS/2 Mouse Function:
The default setting is "Disabled". Set to "Enabled" if you use the onboard PS/2 mouse.

PCI/VGA Palette Snoop: The default setting is "Disabled". Set to "Enable" if any ISA adapetor card installed requires VGA palette snooping.

Video BIOS Shadow: The default setting is 'Enabled". When enabled, the ROM BIOS on the video display card is copied into system DRAM to enhance performance.

C8000-CBFFF Shadow to DC000-DFFFF Shadow: The default setting for the shadow feature is "Disabled". When enabled, the ROM with the specific address is copied into system DRAM. It will also reduce the size of memory available to the system.

After you have made your selection in the BIOS FEATURES SETUP, press the <ESC> key to go back to the main program screen.

CHIPSET FEATURES SETUP

Selecting "CHIPSET FEATURES SETUP" on the main program screen displays this menu:

Chipset Features Setup Screen

ROM PCI/ISA BIOS (2A59CF2N)
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.

DRAM RAS# Precharge Time	: 4	PCI Concurrency	: Disabled
DRAM R/W Leadoff Timing	: 8/6	PCI Streaming	: Enabled
DRAM RAS To Cas Delay	: 3	PCI Bursting	: Enabled
DRAM Read Burst Timing	: x2222		
DRAM Write Burst Timing	: x3333	Onboard FDD Controller	: Enabled
System BIOS Cacheable	: Enabled	Onboard Serial Port 1	: COM1/3F8
Video BIOS Cacheable	: Enabled	Onboard Serial Port 2	: COM2/2F8
8 Bit I/O Recovery Time	: 3	Onboard Parallel Port	: 378H/IRQ7
16Bit I/O Recovery Time	: 3	Onboard Parallel Mode	: Normal
Memory Hole At 15M-16M	: Disable		
IDE HDD Block Mode	: Enabled	Serial Port 1 MIDI	: Disabled
IDE 32-bit Transfer Mode	: Enabled	Serial Port 2 MIDI	: Disabled
IDE Primary Master PIO	: Auto		
IDE Primary Slave PIO	: Auto	ESC : Quit	:Select Item
IDE Secondary Master PIO	: Auto	F1 : Help	PU/PD/+/- :Modify
IDE Secondary Slave PIO	: Auto	F5 : Old Values	(Shift) F2: Color
On-Chip Primary PCI IDE	: Enabled	F6 : Load BIOS Defaults	
On-Chip Secondary PCI IDE	: Enabled	F7 : Load Setup Defaults	
PCI Slot IDE 2nd Channel	: Disabled		

This screen controls the settings for the board's chipset. All the entries on the screen are automatically configured. However, you can change it according to your operating environment.

The default settings of IDE PIO modes are "Auto". Should you have problems running IDE drives with PIO mode set to "Auto", you may try using a slower PIO mode. All IDE drives should work with PIO mode 0.

If you make any change for onboard FDD controller, serial ports or parallel port in this setup, save the change and turn off the system. After turning system on again the change will be effective.

After you have made your selections in the CHIPSET FEATURES SETUP, press the <ESC> key to go back to the main program screen.

POWER MANAGEMENT SETUP

The power Management Setup controls the mainboard's "green" features.

Selecting "POWER MANAGEMENT SETUP" on the main program screen displays this menu:

ROM PCI/ISA BIOS (2A59CF2N)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

Power Management	:	Disable	IRQ3 (COM 2)	:	OFF
PM Control by APM	:	No	IRQ4 (COM 1)	:	OFF
Video Off Method	:	V/H SYNC+Blank	IRQ5 (LPT 2)	:	OFF
			IRQ6 (Floppy Disk)	:	OFF
Doze Mode	:	Disable	IRQ7 (LPT 1)	:	OFF
Standby Mode	:	Disable	IRQ8 (RTC Alarm)	:	OFF
Suspend Mode	:	Disable	IRQ9 (IRQ2 Redir)	:	OFF
HDD Power Down	:	Disable	IRQ10 (Reserved)	:	OFF
			IRQ11 (Reserved)	:	OFF
IRQ3 (Wake-Up Event)	:	OFF	IRQ12 (PS/2 Mouse)	:	OFF
IRQ4 (Wake-Up Event)	:	OFF	IRQ13 (Coprocessor)	:	OFF
IRQ8 (Wake-Up Event)	:	OFF	IRQ14 (Hard Disk)	:	OFF
IRQ12(Wake-Up Event)	:	OFF	IRQ15 (Reserved)	:	OFF
** Power Down Activity **			ESC : Quit		:Select Item
COM Ports Accessed	:	OFF	F1 : Help		PU/PD/+/- :Modify
LPT Ports Accessed	:	OFF	F5 : Old Values		(Shift) F2: Color
Drive Ports Accessed	:	OFF	F6 : Load BIOS Defaults		
			F7 : Load Setup Defaults		

Power Management: This setting controls the System Doze Mode, Standby Mode and Suspend Mode Timer features. There are four options:

User Define: Allow you to customize all power saving timer features.

Optimize: This is the recommended setting for general use.

Test/Demo: This is for test/demonstration purpose.

Disable: Disable the power management features.

PM Control by APM: The default setting is "No". If set to "Yes", system BIOS will wait for APM's prompt before it enters any PM mode.

Note: If your system power management is controlled by APM and there is a task running, the APM will not prompt the BIOS to enter any power saving mode after time out.

Video Off Method: This setting controls the Video off method in power saving mode. The default setting is "V/H SYNC+Blank" This setting disables V/H SYNC signals and blanks the screen in power saving mode. Other options are "Blank Screen" and "DPMS".

Doze Mode: Options are from "1 Min" to "1 Hour" and "Disable". The system speed will change from turbo to slow if no Power Management events occur for a specified length of time. Full power function will return when a wake-up event is detected.

Standby Mode: Options are from "1 Min" to "1 Hour" and "Disable". The system speed will change from turbo to slow and the video signal will be suspended if no Power Management events occur for a specified length of time. Full power function will return when a Wake-Up event is detected.

Suspend Mode: Options are from "1 Min" to "1 Hour" and "Disable". The CPU clock will be stopped and the video signal will be suspended if no Power Management events occur for a

specified length of time. Full power function will return when a Wake-Up event is detected.

HDD Power Down: Options are from "1 Min" to "15 Min" and "Disable". The IDE hard drive will spin down if it is not accessed within a specified length of time.

Wake-Up Events: When a hardware event is enabled, the occurrence of a corresponding event will return the system to full speed.

PM Events: when a hardware event is enabled, the occurrence of a corresponding event will prevent the system from entering any PM mode.

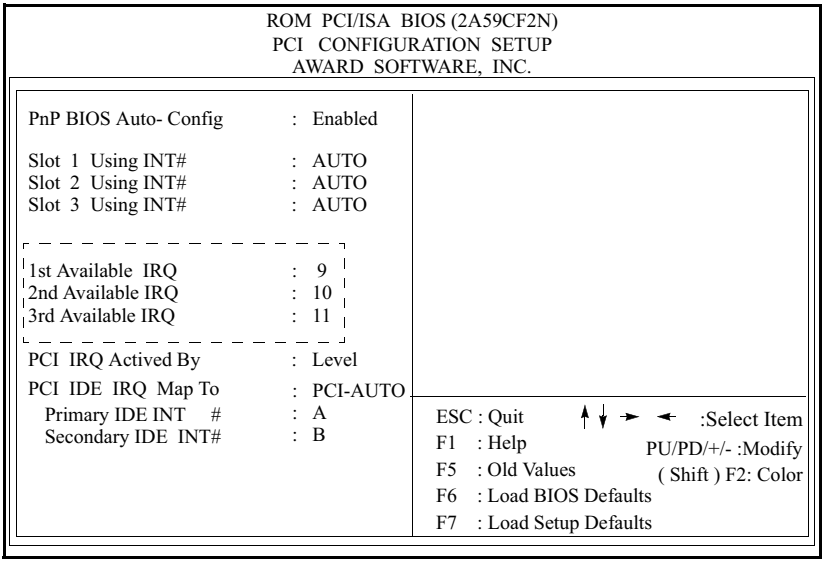
After you have made your selection in the POWER MANAGEMENT SETUP, press the <ESC> key to go back to the main program screen.

PCI CONFIGURATION SETUP

Both the ISA and PCI buses on the mainboard use system IRQs. You must set up the IRQ assignments correctly thru the PCI Configuration Setup utility, otherwise the mainboard will not work properly.

Selecting "PCI CONFIGURATION SETUP" on the main program screen displays this menu:

PCI Configuration Screen



Each PCI slot has four interrupts, “INT A”, “INT B”, “INT C” and “INT D” which could be connected to IRQ thru a hardware router in the Chipset. When you install a PCI expansion card which requires an “IRQ” (ISA interrupts IRQ 3, 4, 5, 7, 9, 10, 11, 12, 14 and 15) to operate, you must route the “INT” which is used by PCI expansion card to the proper IRQ.

PnP BIOS Auto Config.: The default setting is “Enabled” and the IRQ will be automatically assigned to the PCI Plug and Play card. Select “Disabled” if you use non Plug and Play PCI cards.

1st, 2nd and 3rd Available IRQs: Options are "NA, "IRQ3,4,5, 7, 9, 10, 11, 12, 14, 15". When system boots up, the BIOS will scan all PCI expansion cards starting from slot1 then slot2, 3. If a PCI expansion card exists and requires an IRQ to operate, the BIOS will assign an available IRQ to it in the sequence of all available IRQ's.

Do not select IRQ14 and/or IRQ15 when onboard PCI primary IDE and/or Secondary IDE are enabled. Do not select IRQ12 when a PS/2 mouse is connected to your system.

PCI IRQ Actived By: Options are "Level" or "Edge". The default setting is "Level". This option is used to select the IRQ's trigger method.

PCI IDE IRQ Map To, Primary IDE INT#; Secondary IDE INT#: If you disable onboard PCI IDE controller and install a PCI IDE card on the mainboard, you need to set this option.

If a PCI IDE Card which uses ISA IRQ directly thru a paddle card is installed on an ISA slot, select "ISA" for the option "PCI IDE IRQ Map To". If a PCI IDE Card uses PCI "INT" and is compliant to PCI Plug and Play specification, select "PCI-AUTO" for the option "PCI IDE IRQ Map To". Otherwise select "PCI-SLOT n" (PCI-SLOT 1, PCI-SLOT 2 or PCI-SLOT 3) depends on which slot the PCI IDE Card is installed.

Only INT A and INT B are available for a PCI IDE Card, therefore you must set the PCI IDE Card's primary interrupt to INT A and secondary interrupt to INT B. The INT A is routed to IRQ 14 and the INT B is routed to IRQ 15 thru a hardware router in the chipset.

LOAD BIOS DEFAULTS

This is useful if you have problems with your mainboard and need to debug or troubleshoot the system.

The defaults loaded only affect the BIOS Features Setup, Chipset Features Setup, Power Management Setup and PCI Configuration Setup. There is no effect on the Standard CMOS Setup. To use this feature, highlight on the main screen and press the <Enter>. A line will appear on the screen asking if you want to load the BIOS default values. Press the <Y> key and then press <Enter> key if you want to load the BIOS defaults. Press <N> if you don't want to proceed.

LOAD SETUP DEFAULTS

"LOAD SETUP DEFAULTS" loads optimal settings which are stored in the BIOS ROM.

The defaults loaded only affect the BIOS Features Setup, Chipset Features Setup, Power Management Setup and PCI configuration setup.There is no effect on the Standard CMOS Setup. To use this feature, highlight on the main screen and press <Enter>. A line will appear on the screen asking if you want to load the Setup default values. Press the <Y> key and then press the <Enter> key if you want to load the Setup defaults. Press <N> if you don't want to proceed.

SUPERVISOR/USER PASSWORD

The ”SUPERVISOR/USER PASSWORD” utility sets the password. The mainboard is shipped with the password disabled. If you want to change the password, you must first enter the current password. Then at the prompt enter your new password. The password is case sensitive and you can use up to 8 alphanumeric characters, press <Enter> after entering the password. At the next prompt, confirm the new password by typing it and pressing <Enter> again.

To disable the password, press the <Enter> key instead of entering a new password when the “Enter Password” dialog box appears. A message will appear confirming that the password is disabled.

If you have set both supervisor and user password, only the supervisor password allows you to enter the BIOS SETUP program.

Note:
If you forget your password, the only way to solve this problem is to discharge the CMOS memory by turning power off and placing a shunt on the JP14 to short pin 1 and pin 2 for 5 seconds, then removing the shunt.

IDE HDD AUTO DETECTION

If your system has an IDE hard drive, you can use this utility to detect its parameters and enter them into the Standard CMOS Setup automatically.

If the auto-detected parameters displayed do not match the ones that should be used for your hard drive, do not accept them. Press the <N> key to reject the values and enter the correct ones manually on the Standard CMOS Setup screen.

Note:
If you are setting up a new hard disk drive (nothing on it) that supports LBA mode, more than one line will appear in the parameter box, choose the line that lists LBA for an LBA drive. Do not choose Large or Normal. If the hard disk drive has been already fully formatted when you install it, choose the mode which was used to format it.

SAVE & EXIT SETUP

Selecting this option and pressing the <Enter> key to save the new setting information in the CMOS memory and continue with the booting process.

EXIT WITHOUT SAVING

Selecting this option and pressing the <Enter> key to exit the Setup Utility without recording any new values or changing old ones.