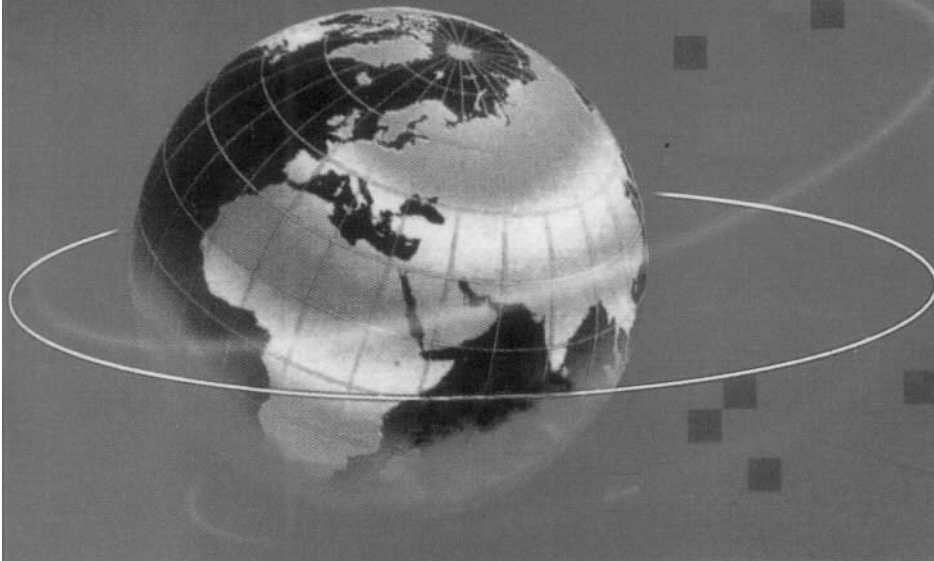


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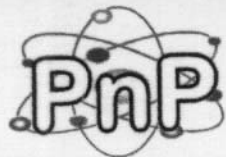
# USER'S MANUAL

PCI, ISA Pentium® Processor-75 MHz~200 MHz Mainboard  
With On Board PCI Bus Master IDE and Super Multi-I/O

# MAIN BOARD



CE



**USER'S MANUAL**

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# I - INTRODUCTION

## I INTRODUCTION

### How this manual is organized

#### After this User's Manual

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#### Model no. 617-011V

#### Version 0.1

#### October 1990

## II FEATURES

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## II FEATURES

### Features of This Motherboard

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The 82430 VX/P54C PCI mainboard is a high—performance system board that supports Pentium P54CX family CPUs. The mainboard is fully compatible with industry standards and adds many technical enhancements.

#### KEY Features

- CPU**
  - One 321—socket 7 for intel Pentium (P54C/CQS/CS, P55C MMX), AMD 5k86, and Cyrix 6X86 processors
- CPU Clock**
  - Intel:75/90/100/120/133/150/166/180/200MHz
  - Cyrix:P120<sup>+</sup>/133<sup>+</sup>/150<sup>+</sup>/166<sup>+</sup>
  - AMD:75/90/100MHz
- Memory Subsystem**
  - Integrated DRAM Controller
  - Expandable to 128MB With Four 72pin SIMM sockets. (Supports Fast—Page Mode & EDO DRAM)
  - Two 168pin DIMM Sockets (Support 5V Fast—Page Mode & EDO DRAM or 3.3V Synchronous DRAM)
- Cache Subsystem**
  - Integrated Second level (L2) cache Controller
  - Write Back Cache Modes and Direct Mapped Organization
  - On board 64bit 256KB L2 SYNC. Cache memory (COAST Module Slot up to 512KB Pipelined Burst Synchronous Cache)
- IDE**
  - Two on board PCI IDE Port (DMA Mode 0/1/2, PIO Mode 5)
- I/O (SMC 665/669)**
  - Supports Host/Hub & Two USB Ports.
  - Two high speed 16550 compatible serial ports, one Multi—Mode Parallet Port fixed SPP/EPP/ECP standard
  - Supports two 360KB /720KB 1.2MB/1.44MB/2.88MB floppy disk drives

## II FEATURES

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- 1 PS/2 Mouse port

BIOS

SYSTEM BIOS built-in NCR SCSI BIOS and plug & play function

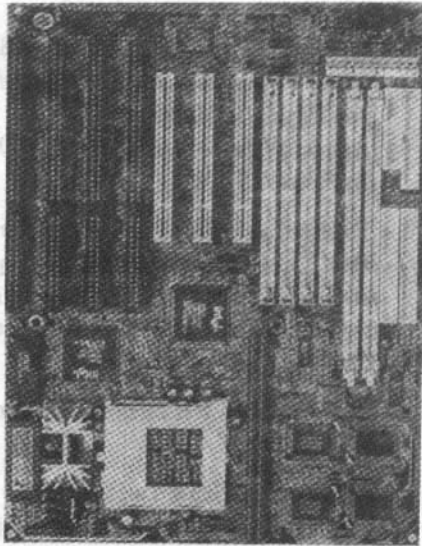
on-board supports FLASH Memory for easy upgrade BIOS

Expansion slot

- Three PCI Master Slots & Four 16-bit ISA slots

### Parts of the Motherboard

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### III INSTALLATION

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#### Jumpers

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- |               |       |                                      |
|---------------|-------|--------------------------------------|
| 1) JP1, JP2   | p. 13 | DIMM Voltage Selection               |
| 2) JP22       | p. 13 | Cache Size Selection                 |
| 3) JP20       | p. 31 | CMOS RAM (Operation/Clear CMOS Data) |
| 4) JP10, JP11 | p. 8  | CPU: BUS Ratio Selection             |
| 5) JP16, JP17 | p. 12 | Voltage Regulator Output Selection   |
| 6) JP3, JP4   | p. 9  | External BUS Frequency Selection     |

#### Expansion Slots

---

- |                      |      |                                |
|----------------------|------|--------------------------------|
| 1) SIMM Slots        | p. 5 | DRAM memory expansion slots    |
| 2) Cache Expansion   | p. 5 | Socket for SRAM cache module   |
| 3) CPU ZIF Socket    | p. 5 | CPU socket                     |
| 4) ISA 1,2,3,4 Slots | p. 5 | 16-bit ISA bus expansion slots |
| 5) PCI 1,2,3 Slots   | p. 5 | 32-bit PCI bus expansion slots |
| 6) DIMM Slots        | p. 5 | 168 pin Sync. DIMM Modules     |

#### Connectors

---

- |                      |       |  |
|----------------------|-------|--|
| 1) Keyboard          | p. 15 | Keyboard connector (5-pin Female)          |
| 2) PS/2 Mouse        | p. 16 | PS/2 Mouse connector (4PIND)               |
| 3) Parallel Port     | p. 5  | Parallel Port connector (26-pin Block)     |
| 4) Serial Port       | p. 16 | Serial Port COM1 & COM2 (10-pin Blocks)    |
| 5) Floppy Drive      | p. 16 | Floppy Drive connector (34-pin Block), J1  |
| 6) Power             | p. 16 | Motherboard Power Connector (12-pin Block) |
| 7) Primary IDE       | p. 5  | Primary IDE connector (40-pin Block), J2   |
| 8) Secondary IDE     | p. 5  | Secondary IDE connector (40-pin Block), J4 |
| 9) Keylock/power LED | p. 15 | Key Lock & power LED Connector J22 (1-5)   |
| 10) Reset Switch     | p. 16 | Reset Switch lead J22 (8, 18)              |
| 11) Speaker          | p. 15 | Speaker connector J22 (11, 14)             |
| 12) J22(10,20)       | p. 16 | IDE LED activity light                     |
| 13) JP13             | p. 15 | CPU cooling fan connector Voltage          |







## III INSTALLATION

### Installation Procedures

1. Set Jumpers on the Motherboard
2. Install the CPU
3. Setup the BIOS Software

### Jumper Settings

Several hardware settings are made through the use of jumper caps to connect jumper pins (JP) on the motherboard. See "Map of the Motherboard" for locations of the jumpers. The jumpers settings will be described numerically such as [...], [1-2], [2-3] for no connection, connect pins 1 & 2, and connect pins 2 & 3 respectively. Pin 1

for our motherboards is always on top  or on the right  Pin 1 when holding the motherboard with the keyboard connector away from yourself. A "1" is written besides pin 1 on jumpers with three pins on the board itself. The jumpers with three pins will also be shown graphically such as  to connect pins 1 & 2 and  to connect pins 2 & 3. Jumpers with two pins will be shown as  for short and  for open. For manufacturing simplicity, the jumpers may be sharing pins from other groups. Use the diagrams in this manual instead of following the pin layout on the board.

Settings with two jumper numbers require two jumper caps to be moved together. To connect the pins, simply place a plastic jumper cap over the two pins as needed.

Jumper pins without connection numbers are external connectors for LEDs or switches, not for jumper caps.

**CAUTION:** Computer motherboards and components contain very delicate IC chips. To protect the motherboard and other components against damage from static electric, you should follow some precautions whenever you work on your computer:

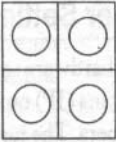
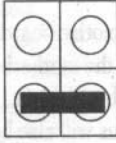
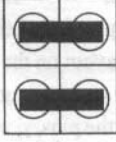

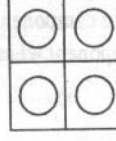
1. Unplug your computer when working on the inside.
2. Hold components by the edges and try not to touch the IC chips.
3. Use a grounded wrist strap before handling computer components.
4. Place components on a grounded antistatic pad or the bag that came with the component whenever you work on them outside the computer.



### III INSTALLATION

#### JP10, JP11: Bus Fraction Core/Bus Ratio Select

Set this jumper according to your CPU clock.

Ratio	586 CPU Family	JP11,JP10
1.5X	Pentium-75, 90-100MHz AMD 5k86-P75, P90, P100MHz AMD 5k86(k5)-P120, P133MHz	 JP10 JP11
2.0X Default	Pentium-120, 133MHz Cyrix-P120+, P133+, P150+, P166+ Pentium(MMX)-133MHz	 JP10 JP11
2.5X	Pentium-150,166MHz Pentium(MMX)-150,166MHz	 JP10 JP11
3.0X	Pentium-180,200MHz Pentium(MMX)-200MHz	 JP10 JP11
3.5X	Pentium(MMX)-233MHz	 JP10 JP11

### III INSTALLATION

#### CPU TYPE Configuration

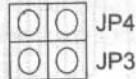
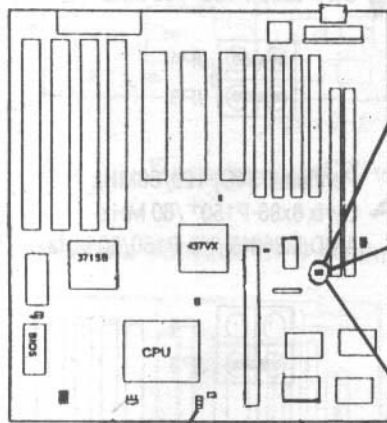
Set the mainboard's CPU jumpers JP4, JP3, JP10 and JP11 according to CPU type as described below, and then set for the proper voltage of the CPU.

Pentium-75/90/100.CPU Settings(1.5x clock)

AMD5k86(K5)/K6-P75/P90/P100/P120/P133(1.5x,clock)

Pentium(P54C)-75/50MHz

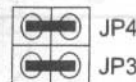
AMD5k86(K5)/K6-P75/50 MHz



Pentium(P54C)-90/60MHz

AMD5k86(K5)/K6-P90/60 MHz

AMD5k86(K5)/K6-P120/60 MHz



Pentium(MMX)-233/66MHz

Pentium(P54C)-100/66MHz

AMD5k86(K5)/K6-P100/66 MHz

AMD5k86(K5)/K6-P133/66 MHz

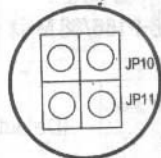
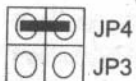


Figure 2-1-1.CPU Jumper Settings

Note: You must equip the CPU with a fan and heat sink for system stability.

### III INSTALLATION

Pentium-100/120/133 CPU Settings(2.0x clock)  
 Cyrix 6x86-P120<sup>+</sup>/P133<sup>+</sup>/P150<sup>+</sup>/P166<sup>+</sup> CPU Settings(2.0x clock)  
 AMD 5k86/K6-P150/P166 CPU Settings(2.0x clock)

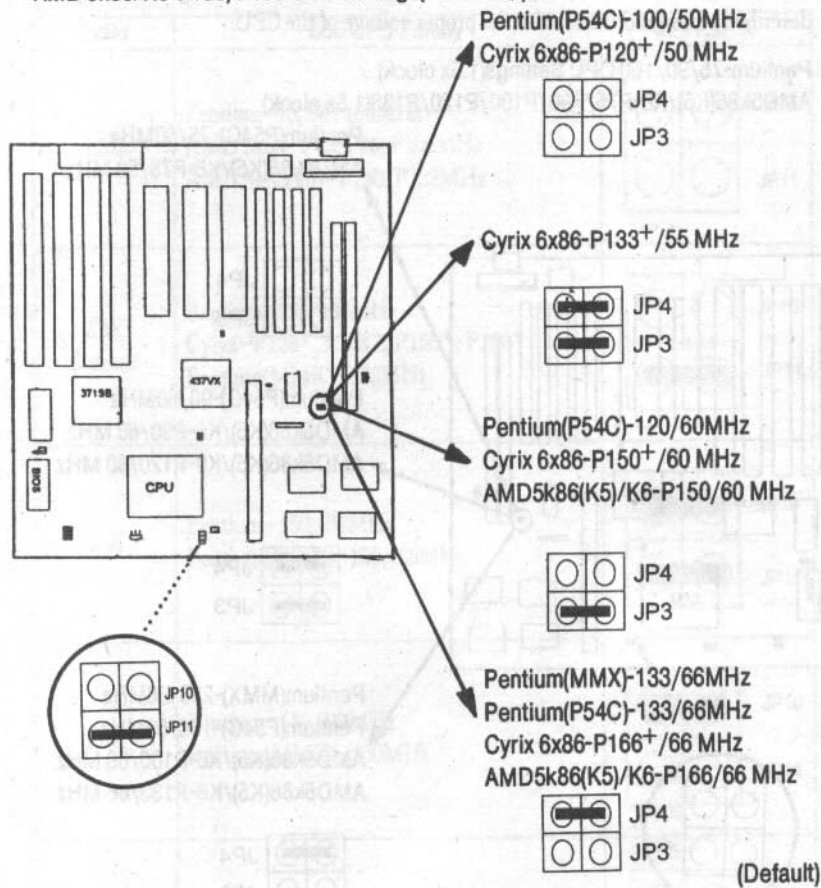


Figure 2-1-1.CPU Jumper Settings

- Note:
1. You must equip the CPU with a fan and heat sink for system stability.
  2. Cyrix 6x86-P166<sup>+</sup> has to be marched with 60ns DRAMs.
  3. If Install SDRAM pls clos JP9.

### III INSTALLATION

#### Pentium-150/166 CPU Settings (2.5x clock)

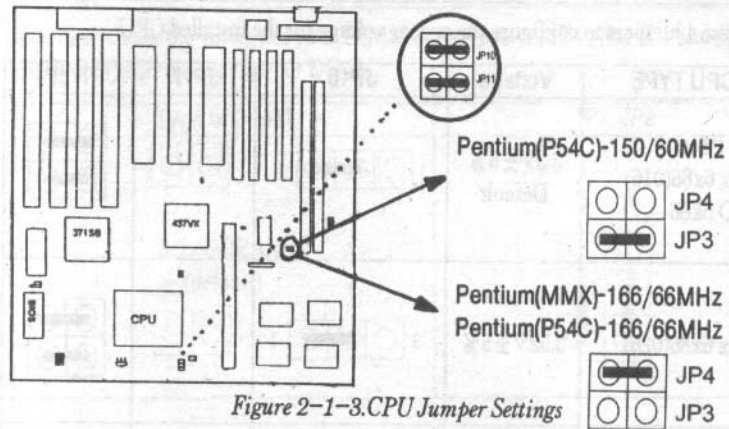


Figure 2-1-3. CPU Jumper Settings

Note: You must equip the CPU with a fan and heat sink for system stability.

#### Pentium-180/200 CPU Settings (3.0x clock)

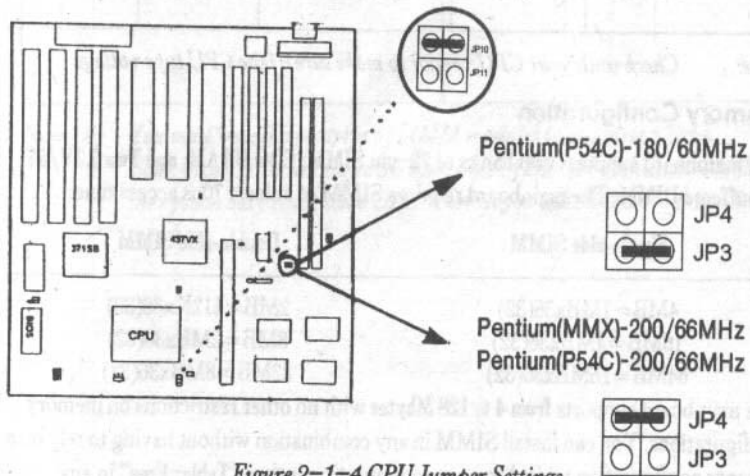


Figure 2-1-4. CPU Jumper Settings

Note: You must equip the CPU with a fan and heat sink for system stability.

### III INSTALLATION

#### JP16, JP17, JP7, JP15: CPU Voltage Select

Set these 4 jumpers to configure the proper voltage for the installed CPU.

CPU TYPE	Voltage	JP16	JP17	JP7/JP15
Intel P54C Cyrix 6x86(016) AMD 5k86	3.3V ±5% Default			
Cyrix 6x86(028)	3.52V ±5%			
P55C(MMX) Cyrix 6x86L AMD K6	2.8V ±5% ↓ 2.9V ±5%			

*Note:* Check with your CPU vendor to make sure of the CPU type voltage.

#### Memory Configuration

The mainboard supports two banks of 72-pin SIMM, EDO DRAM, and Two 3.3V/5V Unbuffered DIMM. The mainboard requires SIMM of at least 70ns access time.

##### Single-side SIMM

4MB=1MBx36(32)  
16MB=4MBx36(32)  
64MB=16MBx36(32)

##### Double-side SIMM

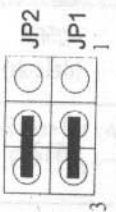
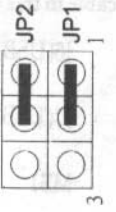
2MB=512Kx36(32)  
8MB=2MBx36(32)  
32MB=8MBx36(32)

The mainboard supports from 4 to 128 Mbytes with no other restrictions on memory configurations. You can install SIMM in any combination without having to rely on a memory configuration table. Memory configuration is thus "Table-Free" in any SIMM bank.

### III INSTALLATION

#### JP1, JP2: DIMM Voltage Setting

You must check the voltage of your DIMM before you install it. See JP1 and JP2 to configure the proper voltage for DIMM.

Type of DIMM	JP1, JP2
3.3V SDRAM (default)	
5V Fast-Page Mode and EDO	



- Note:**
1. You must install two strips of SIMM modules to complete a bank.
  2. Bank 1 and DIMM1 share the same part of DRAM architecture so that the system only recognizes DIMM when you install DIMM1 and Bank1 together.

### III INSTALLATION

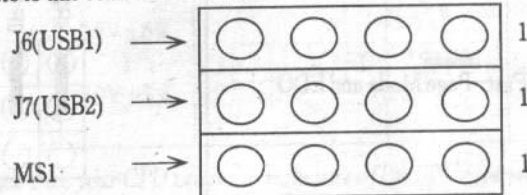
#### J3: Parallel Port Connector

Attach parallel port cable to this connector.

#### J14: Pipelined Burst SRAM Module Slot

Cache size	JP22
256K (default)	 default
512K	

J6/J7 Connectors: USB Connectors.  
Attach USB cable to this connector



#### Multi I/O Port Addresses

Default settings for multi-I/O Port Addresses are shown in the table below.

Port	I/O Addresses	IRQ	Status
LPT1*	378H	7	NORMAL
COM1	3F8H	4	
COM2	2F8H	3	

\* If default I/O Port Addresses conflict with other I/O cards (e. g. sound cards or I/O cards), you must adjust one of the I/O Address to avoid address conflict. (You can adjust these I/O Addresses from the BIOS.)

*Note: Some sound cards have a default IRQ setting for IRQ 7, which may conflict with printing function. If this occurs do not use sound card functions at the same time you print.*

## III INSTALLATION

### Connectors

Attach the mainboard to case devices, or an external battery, via connectors on the mainboard. Refer to Figure 1-1 for connector locations and connector pin positions.

#### KB1-Keyboard Connector

A five-pin female DIN keyboard connector is located at the rear repetition the board. Plug the keyboard jack into this connector.

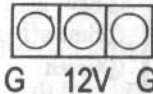
#### J22(1-5)-Keylock & Power LED Connector

J23 is a connector for a lock that may be installed on the system case for enabling or disabling the keyboard. J22 also attaches to the case's Power LED. (Pin 1-3 for power LED, pin4-5 for keylock.)

#### J22(11-14)-Speaker Connector

Attach the system speaker to connector J22(11-14).

#### JP13: CPU Cooling fan Voltage Connector

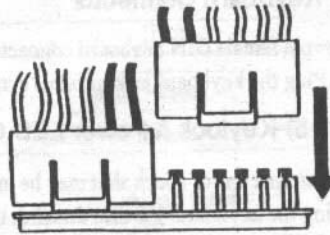




### III INSTALLATION

#### J5-Power Supply Connectors

The mainboard requires a power supply with at least 200 watts and a "power good" signal. J5 has two six-pin male header connectors. Plug the dual connectors from the power directly onto the board connector while making sure the black leads are in the center.

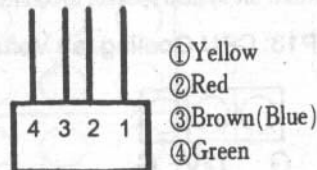


#### J22(8,18): Hardware Reset Control

Attach the Reset switch to J22. Closing the Reset switch restarts the system.

#### MS1: PS/2 Mouse Connector

Attach PS/2 mouse cable to this connector.



#### J2/J4: On-board Primary/Secondary IDE HDD Connectors

Attach on-board hard disk drives to these connectors.

#### J22(10,20): HDD LED Connectors

Attach on-board hard disk drive LEDs to these connectors. The LED lights when an HDD is active.

#### J12(COM1)/J11(COM2) Connectors

Attach COM1/COM2 cable to these connectors.

#### J1: FDC Connector

Attach floppy cable to this connector.

## IV BIOS SOFTWARE

# IV BIOS SOFTWARE

### BIOS Setup

The mainboard's BIOS setup program is the ROM PCI/ISA BIOS from Award Software Inc. Enter the Award BIOS program's Main Menu as follows:

1. Turn on or reboot the system. After a series of diagnostic checks, you are asked to press DEL to enter Setup.
2. Press the (DEL) key to enter the Award BIOS program and the main screen appears:

ROM PCI/ISA BIOS  
CMOS SETUP UTILITY  
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	IDE LOW LEVEL FORMAT
LOAD BIOS DEFAULTS	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
Esc: Quit	↑ ↓ → ←: Select Item
F10: Save & Exit Setup	(Shift) F2: Change Color
Time, Date, Hard Disk Type...	

3. Choose an option and (Enter). Modify the system parameters to reflect the options installed in the system. (See the following sections.)
4. Press (ESC) at any time to return to the Main Menu.
5. In the Main Menu, choose "SAVE AND EXIT SETUP" to save your changes and reboot the system. Choosing "EXIT WITHOUT SAVING" ignores your changes and exits the program.

The Main Menu option of the Award BIOS are described in the sections that follow.

## IV BIOS SOFTWARE

### Standard CMOS Setup

Run the Standard CMOS Setup as follows.

1. Choose "STANDARD CMOS SETUP" from the Main Menu. A screen appears.

ROM PCI/ISA BIOS  
STANDARD CMOS SETUP  
AWARD SOFTWARE, INC.

Date (mm: dd: yy): Thu, Aug 11 1996								
Time (hh: mm: ss): 7:30:33								
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	: Auto	0	0	0	0	0	0	Auto
Primary slave	: Auto	0	0	0	0	0	0	Auto
Secondary Master	: Auto	0	0	0	0	0	0	Auto
Secondary Slave	: Auto	0	0	0	0	0	0	Auto
Drive A: 1.44M, 3.5 in.				Base Memory: 640K				
Drive B: None				Extended Memory: 3328K				
Video: EGA/VGA				Other Memory: 128K				
Halt on: All Errors				Total Memory: 4096K				
Esc: Quit		↑ ↓ → ←: Select Item			PU/PD/+/ -: Modify			
F1: Help		(Shift) F2: Change Color						

2. Use arrow keys to move between items and select values. Modify selected fields using PgUp/PgDn/+/– keys. Some fields let you enter values directly.

<b>Date(mm/dd/yy)</b>	Type the current date.
<b>Time (hh:mm:ss)</b>	Type the current date.
<b>Primary (Secondary) Master &amp; Slave</b>	Choose from the standard hard disk types 1 to 46. Type 47 is user definable. If a hard disk is installed choose "AUTO" (default)
<b>Drive A &amp; B</b>	Choose 360KB, 51/4 in., 1.2MB, 51/4 in., 720KB, 31/2 in., 1.4M, 31/2 in. (default), 2.88MB, 31/2 in. or Not installed
<b>Video</b>	Choose Monochrome, Color 40x25, VGA/EGA(default), Color 80x25

3. When you finish, press the (ESC) key to return to the Main Menu.

## IV BIOS SOFTWARE

### BIOS Features Setup

Run the BIOS Features Setup as follows.

1. Choose "BIOS FEATURES SETUP" from the Main Menu and a screen with a list of items appears. (The screen below shows the SETUP default settings.)

ROM PCI/ISA BIOS  
BIOS FEATURES SETUP  
AWARD SOFTWARE, INC.

Virus Warning	: Disabled	Video BIOS Shadow	: Enabled
CPU Internal Cache	: Enabled	C8000—CBFFF Shadow	: Disabled
External Cache	: Enabled	CC000—CFFFF Shadow	: Disabled
Quick Power on Self Test	: Enabled	D0000—D3FFF Shadow	: Disabled
Boot Sequence	: A, C	D4000—D7FFF Shadow	: Disabled
Swap Floppy Drive	: Disabled	D8000—DBFFF Shadow	: Disabled
Boot up System speed	: high	DC000—DFFFF Shadow	: Disabled
Boot up NumLock Status	: on		
Gate A20 Option	: fast		
Typeomatic Rate Setting	: Disabled		
Typeomatic Rate (Chars/Sec)	: 6	ESC:Quit	↑ ↓ ← →: Select Item
Typeomatic Rate Delay (Msec)	: 250	F1:Help	PU/PD/+/-: Modify
Security Option	: Setup	F5:Old Values	(Shift) F2: Color
PS/2 mouse function control	: Enabled	F6: Load BIOS Defaults	
PCL/VGA Palette Snoop	: Disabled	F7: Load Setup Defaults	
On Select for DRAM >64MB	: Non-OS2		

2. Use the arrow keys to move between items and to select values. Modify the selected fields using the PgUp/ +/ - keys. (F) keys are explained below:

- (F1): "Help" gives options available for each item.
- Shift (F2): Change color.
- (F5): Get the old values. These values are the values with which the user started the current session.
- (F6): Load all options with the BIOS Setup default values.
- (F7): Load all options with the Power-On default values.

A short description of screen items follows:

- Virus Warning** This option enables/disables the HDD Boot virus check. (The Default Setting is Disabled)
- CPU Internal Cache** This option enables/disables the CPU's internal cache. (The Default setting is Enabled.)
- External Cache** This option enables/disables the external cache memory. (The Default setting is Enabled.)
- Quick Power On Self Test** Enabled provides a fast POST at boot-up.

## IV BIOS SOFTWARE

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<b>Boot Sequence</b>	The default setting attempts to first boot from drive A:, drive C, or CD-ROM. You can reverse this sequence with "C:A:", but then drive A: cannot be booted up directly. (It depends on the specifications of CD-ROM or CD-ROM drivers to boot from CD-ROM.)
<b>Swap Floppy Drive</b>	Enabled changes the sequence of the A: and B: drives. (The Default setting is Disabled.)
<b>Boot Up Num</b>	Choose On or Off. On puts numeric keypad in Num Lock.
<b>Lock Status</b>	Mode at boot-up. Off puts this keypad in arrow key mode at boot-up.
<b>Boot Up System Speed</b>	Choose High or Low. This option lets you choose system bootup speed. The default is High.
<b>PS/2 Mouse function control</b>	This option enables/disables the PS/2 Mouse. (The Default Setting is Enabled)
<b>Gate A20 Option</b>	Choose Fast (default) or Normal. Fast allows RAM accesses above 1MB using the fast gate A20 line.
<b>Typematic Rate Setting</b>	Enable this option to adjust the keystroke repeat rate.
<b>Typematic Rate (Chars/Sec)</b>	Choose the rate a character keeps repeating.
<b>Typematic Delay (Msec)</b>	Choose how long after you press a key that a character begins repeating.
<b>Security Option</b>	Choose Setup or System. Use this feature to prevent unauthorized system boot-up or use of BIOS Setup. "System"—Each time the system is booted, the password prompt appears. "Setup"—If a password is set, the password prompt only appears if you attempt to enter the Setup program.



## IV BIOS SOFTWARE

### Chipset Features Setup

The Chipset Features Setup option changes the values of the chipset registers. These registers control system options in the computer.

*Note:* Change these settings only if you are familiar with the Chipset.

Run the Chipset Features Setup as follows.

1. Choose "CHIPSET FEATURES SETUP" from the Main Menu and the following screen appears. (The screen below shows default settings.)

ROM PCI/ISA BIOS CHIPSET FEATURES SETUP AWARD SOFTWARE, INC.	
Auto Configuration	: Enabled
DRAM Timing	: 70 ns
DRAM RAS# Precharge Time	: 4
DRAM R/W Leadoff Timing	: 7
Fast RAS# To CAS# Delay	: 2
DRAM Read Burst Timing	: ×222×333
DRAM Write Bursts Timing	: ×222
Fast MA to RAS# Delay CLK	: 1
Fast EDO Path Select	: Enabled
Refresh RAS# Assertion	: 4 CLKS
ISA Bus Clock	: PCICLK/4
System BIOS Cacheable	: Disabled
Video BIOS Cacheable	: Disabled
8 Bit L/O Recovery Time	: 1
16 Bit L/O Recovery Time	: 1
Memory Hole At 15M-16M	: Disabled
Peer Concurrency	: Enabled
Early NA Control	: Enabled
ESC: Quit	↑ ↓ ← →: Select Item
F1: Help	PU/PD/ +/ -: Modify
F5: Old Values	(Shift) F2: Color
F6: Load BIOS Defaults	
F7: Load Setup Defaults	

2. Use the arrow keys to move between items and select values. Modify selected fields using the PgUp/PgDn/+/–keys.

A short description of screen items follows:

**Auto Configuration** Enable this option (strongly recommended) and the system automatically sets all options on the left side of the screen (except cache update mode & BIOS cacheable).

**If this option is Enabled you must boot from Turbo mode.**

**DRAM Timing** Choose the right speed to fit your DRAM's spec.



## IV BIOS SOFTWARE

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<b>DRAM RAS Precharge Time</b>	Use the default setting.
<b>DRAM R/W Leadoff Timing</b>	Use the default setting.
<b>DRAM RAS to CAS Delay</b>	Use the default setting.
<b>DRAM Read Burst Timing</b>	Use the default setting.
<b>DRAM Write Burst Timing</b>	Use the default setting.
<b>Fast MA to RAS # Delay CLK</b>	Use the default setting.
<b>Fast EDO Path Select</b>	Use the default setting.
<b>Refresh RAS # Assertion</b>	Use the default setting.
<b>ISA Bus Clock</b>	Use BIOS default setting or choose: /4: for 60, 66MHz CPU Bus Frequency /3: for 50, 55MHz CPU Bus Frequency.
<b>System BIOS Cacheable</b>	Disabled: The ROM area F0000H-FFFFFH is not cached. Enabled: The ROM area F0000H-FFFFFH is cacheable if cache controller is enabled.
<b>Video BIOS Cacheable</b>	Disabled: The video BIOS C0000H-C7FFFH is not cached. Enabled: The video BIOS C0000H-C7FFFH is cacheable if cache controller is enabled.
<b>8Bit I/O Recovery Time</b>	Use the default setting.
<b>16Bit I/O Recovery Time</b>	Use the default setting.
<b>Memory Hole At 15M-16M</b>	Choose Enabled or Disabled (default). Some interface cards will map their ROM address to this area. If this occurs, you should select Enabled, otherwise use Disabled.
<b>Peer Concurrency</b>	Use the default setting.
<b>Early NA Control</b>	Use the default setting.

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## IV BIOS SOFTWARE

### Power Management Setup

The Power Management Setup option sets the system's power saving functions.

Run the Power Management Setup as follows.

1. Choose "POWER MANAGEMENT SETUP" from the Main Menu and a screen with a list of items appears.

ROM PCI/ISA BIOS  
POWER MANAGEMENT SETUP  
LAWARD SOFTWARE, INC.

Power Management	: Disabled	**	Power Down & Resume Events	**
PM Control by APM	: Yes	IRQ 3 (COM 2)	: ON	
Video off Method	: V/H SYNC+Blank	IRQ 4 (COM 1)	: ON	
MODEN USE IRQ	: 3	IRQ 5 (LPT 2)	: OFF	
Doze Mode	: Disabled	IRQ 6 (Floppy Disk)	: OFF	
Standby Mode	: Disabled	IRQ 7 (LPT 1)	: OFF	
Suspend Mode	: Disabled	IRQ 8 (RTC Alarm)	: OFF	
HDD Power Down	: Disabled	IRQ 9 (IRQ2 Redir)	: OFF	
**	Wake Up Events In Doze & Standby	IRQ 10 (Reserved)	: OFF	
IRQ3 (Wake-Up Event)	: ON	IRQ 11 (Reserved)	: OFF	
IRQ4 (Wake-Up Event)	: ON	IRQ 12 (PS/2 mouse)	: OFF	
IRQ8 (Wake-Up Event)	: ON	IRQ 13 (Coprocessor)	: OFF	
IRQ12 (Wake-Up Event)	: ON	IRQ 14 (Hard Disk)	: ON	
		IRQ 15 (Reserved)	: OFF	
		ESC: Quit	↑ ↓ ← →: Select Item	
		F1: Help	PU/PD/+/-: Modify	
		F5: Old Values	(Shift) F2: Color	
		F6: Load BIOS Defaults		
		F7: Load Setup Defaults		

2. Use the arrow keys to move between items and to select values. Modify the selected fields using the PgUp/PgDn/+/- keys.

A short description of selected screen items follows:

**Power Management** Options are as follows:

**User Define** Allows you to define the HDD and system power down times.

**Disabled** Disables the Green PC Features.

**Min Saving** Doze timer=1 Hour  
Standby timer=1 Hour  
Suspend timer=1 Hour  
HDD Power Down=15 Min

**Max Saving** Doze timer=1 Min

## IV BIOS SOFTWARE

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Standby timer=1 Min  
Suspend timer=1 Min  
HDD Power Down=1 Min

<b>PM Control by APM</b>	Choose No or Yes (default). APM stands for Advanced Power Management. To use APM, you must run "power.exe" under DOS v6.0 or later version.
<b>Video Off Method</b>	Choose V/H Sync + Blank (default), Blank screen, or DPMS for the selected PM mode.
<b>Modem Use IRQ</b>	The Modem IRQ us from 3/4/5/7/9/10/11/NA Default Setting is IRQ3.
<b>Doze Mode</b>	When the set time has elapsed, the BIOS sends a command to the system to enter doze mode (system clock drops to 33MHz). Time is adjustable from 1 Min to 1 Hour.
<b>Standby Mode</b>	The default is Disabled. Time is adjustable from 1 Min to 1 Hour.
<b>Suspend Mode</b>	The default is Disabled. Only an SL-Enhanced (or SMI) CPU can enter this mode. Time is adjustable from 1 Min to 1 Hour. Under Suspend mode, the CPU stops completely (no instructions are executed.)
<b>HDD Power Down</b>	When the set time has elapsed, the BIOS sends a command to the HDD to power down, which turns off the motor. Time is adjustable from 1 to 15 minutes. The default setting is Disabled. Some older model HDDs may not support this advanced function.
<b>IRQx (Wake-Up Events)</b>	The BIOS monitors these items for activity. If activity occurs from the Enabled item the system wakes up.
<b>Power Down Activities</b>	The BIOS monitors these items for no activity. If no activity occurs from the Enabled item the system will enter power saving mode (Doze/Standby/Suspend/HDD Power Down mode).

3. After you have finished with the Power Management Setup, press the <ESC> key to return to the Main Menu.

## IV BIOS SOFTWARE

### PNP/PCI Configuration Setup

This option sets the mainboard's PCI Slots. Run this option as follows:

1. Choose "PNP/PCI CONFIGURATION SETUP" from the Main Menu and the following screen appears. (The screen below shows default settings.)

ROM PCI/ISA BIOS  
PNP/PCI CONFIGURATION  
AWARD SOFTWARE, INC.

Resources Controlled By	: Manual	PCI IRQ Activated By	: Level
Reset Configuration Data	: Disabled	PCI IDE IRQ Map To	: PCI-AUTO
IRQ-3 assigned to: Legacy ISA*		Primary IDE INT #	: A
IRQ-4 assigned to: Legacy ISA*		Secondary IDE INT #	: B
IRQ-5 assigned to: PCI/ISA PnP*		Used MEM base addr	: C800
IRQ-7 assigned to: PCI/ISA PnP*		Used MEM Length	: 16K
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: PCI/ISA PnP*			
IRQ-15 assigned to: PCI/ISA PnP*			
DMA-0 assigned to: PCI/ISA PnP*			
DMA-1 assigned to: PCI/ISA PnP*			
DMA-3 assigned to: PCI/ISA PnP*			
DMA-5 assigned to: PCI/ISA PnP*			
DMA-6 assigned to: PCI/ISA PnP*			
DMA-7 assigned to: PCI/ISA PnP*			
		ESC: Quit	↑ ↓ → ←: Select Item
		F1: Help	PU/PD/ +/ -: Modify
		F5: Old Values	(Shift) F2: Color
		F6: Load BIOS Defaults	
		F7: Load Setup Defaults	

\*: These items will disappear when Resource Controlled is Auto.

2. Use the arrow keys to move between items and select values. Modify selected fields using the PgUp/PgDn/ +/ - keys.

A short description of screen items follows:

**Resources Controlled By** Manual: BIOS doesn't manage PCI/ISA PnP card (i.e., IRQ) automatically.

Auto: BIOS auto manage PCI and ISA PnP card (recommended).

**Reset Configuration Data** Disabled: Retain PnP configuration data in BIOS.

Enabled: Reset PnP configuration data in BIOS.

## IV BIOS SOFTWARE

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**IRQX and DMAX assigned to** Choose PCI/ISA PnP or Legacy ISA. If the first item is set to Manual, you could choose IRQX and DMAX assigned to PCI/ISA PnP card or ISA card.

PCI/ISA PnP: BIOS auto assigns IRQ/DMA to the device.

Legacy ISA: User assigns IRQ/DMA to the device.

**PCI IRQ Activated By** Choose Edge or Level. Most PCI trigger signals are Level. This setting must match the PCI card.

**PCI IDE IRQ Map To** Select PCI-AUTO, ISA, or assign a PCI SLOT number (depending on which slot the PCI IDE is inserted). The default setting is PCI-AUTO. If PCI-AUTO does not work, then assign an individual PCI SLOT number.

**Primary IDE INT #** Choose INTA #, INTB #, INTC #, or INTD #. The default setting is INTA #.

**Secondary IDE INT #** Choose INTA #, INTB #, INTC #, or INTD #. The default setting is INTB #.

3. After you have finished with the PCI Slot Configuration, press the (ESC) key and follow the screen instructions to save or disregard your settings.

### Load Setup Defaults

---

This item loads the system values you have previously saved. Choose this item and the following message appears:

"Load SETUP Defaults (Y/N)? N"

To use the SETUP defaults, change the prompt to "Y" and press (Enter).

This item is recommended if you need to reset the system setup.

## IV BIOS SOFTWARE

### Integrated Peripherals

The Integrated Peripherals option changes the values of the chipset registers. These registers control system options in the computer.

*Note: Change these settings only if you are familiar with the Chipset.*

Run the Integrated Peripherals as follows.

1. Choose "Integrated Peripherals" from the Main Menu and the following screen appears. (The screen below shows default settings.)

ROM PCI/ISA BIOS INTEGRATED PERIPHERALS AWARD SOFTWARE, INC.	
IDE HDD Block Mode	: Enabled
IDE Primary Master PIO	: Auto
IDE Primary Slave PIO	: Auto
IDE Secondary Master PIO	: Auto
IDE Secondary Slave PIO	: Auto
On-Chip Primary PCI IDE	: Enabled
On-Chip Secondary PCI IDE	: Enabled
PCI Slot IDE 2nd Channel	: Enabled
USB Controller	: Disabled
Onboard FDD Controller	: Enabled
Onboard Serial Port 1	: COM1/3F8
Onboard Serial Port 2	: COM2/2F8
Onboard Parallel Port	: 378H/IRQ7
Parallel MODE	: Normal
ESC: Quit	↑   ← →: Select Item
F1: Help	PU/PD/+/-: Modify
F8: Old Values	(Shift) F2: Color
F6: Load BIOS Defaults	
F7: Load Setup Defaults	

2. Use the arrow keys to move between items and select value. Modify selected fields using the PgUp/PgDn/+/- keys.

A short description of screen items follows:

- IDE HDD Block Mode** Choose Enabled (default) or Disabled. Enabled invokes multi-sector transfer instead of one sector per transfer. Not all HDDs support this function.
- IDE Primary Master PIO** Choose Auto (default) or mode 0~4. Mode 0 is the slowest speed, and HDD mode 4 is the fastest speed. For better performance and stability, we suggest you use the Auto setting to set the HDD control timing.
- IDE Primary Slave PIO**
- IDE Secondary Master PIO**
- IDE Secondary Slave PIO**
- On-chip Primary PCI IDE** Enabled: Use the on-board IDE (default)

## IV BIOS SOFTWARE

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- On-chip Secondary PCI IDE** Disabled: Turn off the on-board IDE
- PCI Slot IDE 2nd Channel** Choose Enabled (default) or Disabled. When Enabled is set, IRQ15 is dedicated for secondary IDE use. When Disabled is set, IRQ15 is released for other devices.
- USB Controller** Enabled it when you use USB device.
- Onboard FDC Controller** Enabled: Use the on-board floppy controller (default).  
Disabled: Turn off the on-board floppy controller.
- Onboard Serial Port 1**  
**Onboard Serial Port 2** Choose serial port 1 & 2's I/O address. Do not set port 1 & 2 to the same value except for Disabled.
- |            |  |           |
|------------|--|-----------|
| COM 1/3F8H |  | COM3/3E8H |
| COM 2/2F8H |  | COM4/2E8H |
| (default)  |  |           |
- Onboard Parallel Port** Choose the printer I/O address:  
378H/IRQ7 (default), 3BCH/IRQ7, 278H/IRQ5
- Onboard Printer Mode** Choose ECP + EPP, EPP, ECP, Normal (default), mode. The mode depends on your external device that connects to this port.

## IV BIOS SOFTWARE

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### Supervisor Password

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Based on the setting you made in the "Security Option" of the "BIOS FEATURES SETUP", this Main Menu item permits you configure the system so that a password is required every time the system boots up or an attempt is made to enter the Setup program. Change the password as follows:

1. Choose "SUPERVISOR PASSWORD" in the Main Menu and press **Enter**.  
The following message appears:

**"Enter Password:"**

2. Enter a password and press **Enter**.

(If you do not wish to use the password function, you can just press **Enter** and a "Password Disabled" message appears.)

3. After you enter your password, the following message appears prompting you to confirm the new password:

**"Confirm Password:"**

4. Re-enter your password and then Press **ESC** to exit to the Main Menu.
5. You have the right to change any changeable settings in the "CMOS SETUP UTILITY."

**Important:** *Keep a safe record of the new password. If you forget or lose the password, the only way to access the system is to discharge CMOS memory using jumper JP20.*

## IV BIOS SOFTWARE

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### User Password

---

Based on the setting you made in the "Security Option" of the "BIOS FEATURES SETUP", this Main Menu item allows you configure the system so that a password is required every time the system boots up or an attempt is made to enter the Setup program. Change the password as follows:

1. Choose "USER PASSWORD" in the Main Menu and press  $\langle$ Enter $\rangle$ . The following message appears:

**"Enter Password:"**

2. Enter a password and press  $\langle$ Enter $\rangle$ .

(If you do not wish to use the password function, you can just press  $\langle$ Enter $\rangle$  and a "Password Disabled" message appears.)

3. After you enter your password, the following message appears prompting you to confirm the new password:

**"Confirm Password:"**

4. Re-enter your password and then Press  $\langle$ ESC $\rangle$  to exit to the Main Menu.
5. You are not allowed to change any settings in "CMOS SETUP UTILITY", except to change the user's password.

**Important:** *Keep a safe record of the new password. If you forget or lose the password, the only way to access the system is to discharge CMOS memory using jumper JP20.*



## IV BIOS SOFTWARE

### IDE HDD Auto Detection

This Main Menu item automatically detects the hard disk type and configures the STANDARD CMOS SETUP accordingly.

*Note: This function is only valid for IDE hard disks.*

ROM PCI/ISA BIOS  
CMOS SETUP UTILITY  
AWARD SOFTWARE, INC.





HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	: None	0	0	0	0	0	0	---
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	---

Do you accept this drive C (Y/N) ?N

































ESC : Skip

### Jumper setting For P55C(MMX)




#### CPU Type

CPU TYPE	* P54C,Cyrix 6X86 ,AMD	P55C(MMX),Cyrix 6X86L
JP7 JP15	 JP7  JP15	 JP7  JP15

#### Intel/AMDCPU Clock

P55C(MMX)	P54C	JP10 /JP11	JP3/JP4
NA	75MHz (50MHz X 1.5)	 JP10  JP11	 JP4  JP3
NA	90MHz (60MHz X 1.5)	 JP10  JP11	 JP4  JP3
233MHz (66MHz X 3.5)	100MHz (66MHz X 1.5)	 JP10  JP11	 JP4  JP3
NA	120MHz (60MHz X 2)	 JP10  JP11	 JP4  JP3
NA	*133MHz (66MHz X 2)	 JP10  JP11	 JP4  JP3
NA	150MHz (60MHz X 2.5)	 JP10  JP11	 JP4  JP3
166MHz (66MHz x 2.5)	166MHz (66MHz x 2.5)	 JP10  JP11	 JP4  JP3
200MHz (66MHz X 3)	200MHz (66MHz X 3)	 JP10  JP11	 JP4  JP3

#### CPU Voltage

CPU TYPE	P54C/K5	6X86	P55C(MMX)/K6/6X86L
VOLTAGE	*3.3V	3.52V	2.8~2.9V
JP16	3  1	3  1	3  1
JP17	