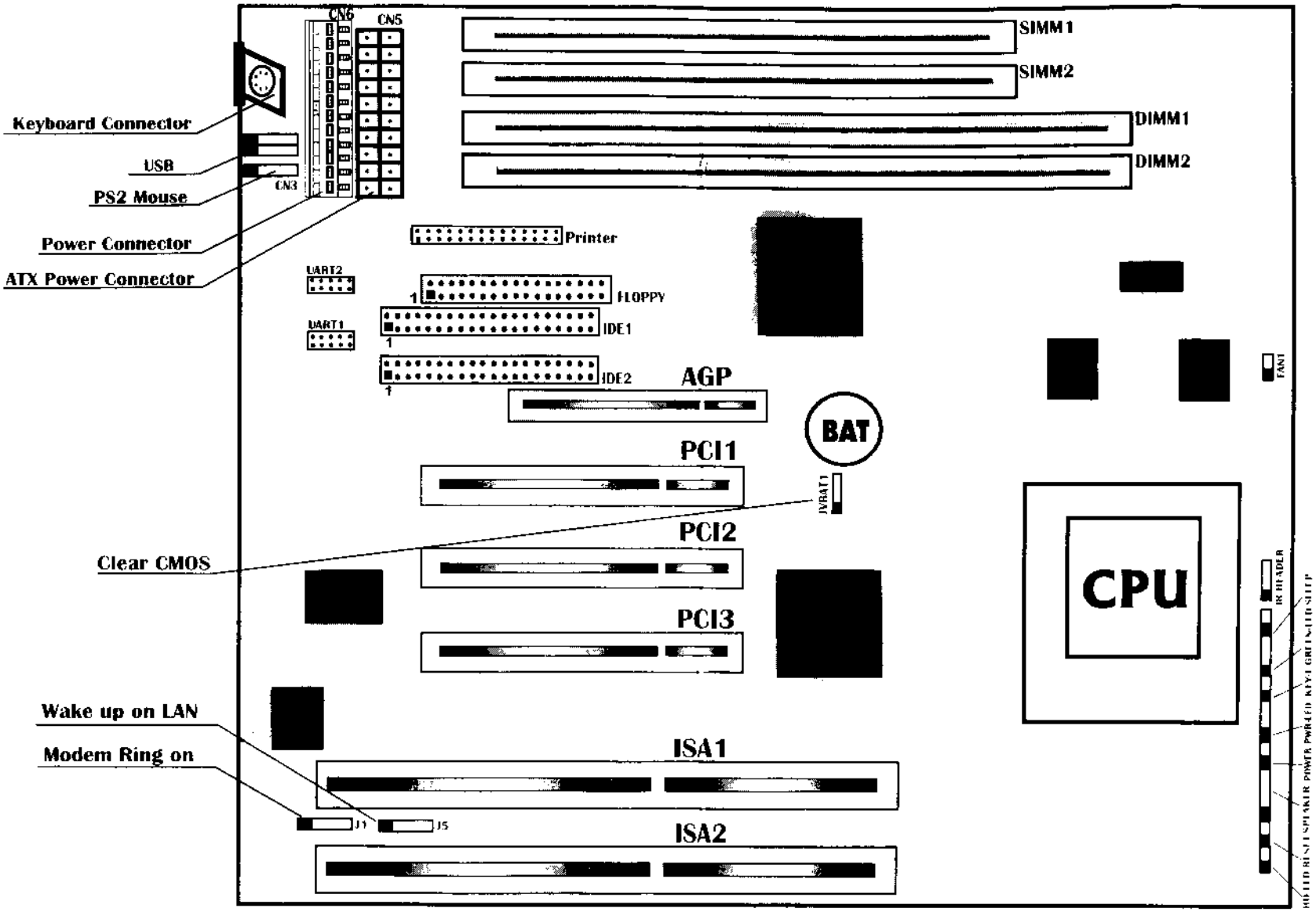
PENTIUM®

P5V580 VP3
Advance II

User Manual

PC Main Board



** Remark: The black block indicates connector pin1 in this picture

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Quarry Bay, Hong Kong

declare that the product

Pentium®Motherboard
P5V580 VP3 Advance II

is in conformity with
(reference to the specification under which conformity is declared in accordance with 89/336 EEC-EMC Directive)

☑	EN 55022	Limits and methods of measurements of radio disturbance characteristics of information technology equipment
☑	EN 50081-1	Generic emission standard part 1: Residential, commercial and light industry
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Signature : _____ Place / Date HONG KONG /1998

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Declaration of conformity

FC

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Supplementary Information:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Signature : _____ Date : 1998

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SpeedEasy Quick Setup

Procedures :

1. Insert the CPU correctly.
2. Plug in other configurations and restore the system.
3. Press <Del> key and power on the system to enter BIOS Setup.
4. Enter "SpeedEasy CPU Setup" menu to set up CPU speed.

Note: If you don't set CPU speed, your system will run at default setting (75MHz for Pentium and AMD CPU, 100MHz for Cyrix etc).

5. Save and exit BIOS Setup, then your system can boot successfully as you expected.

SpeedEasy CPU Setup Menu

Select <SpeedEasy CPU Setup> item from the main menu and enter the sub-menu:

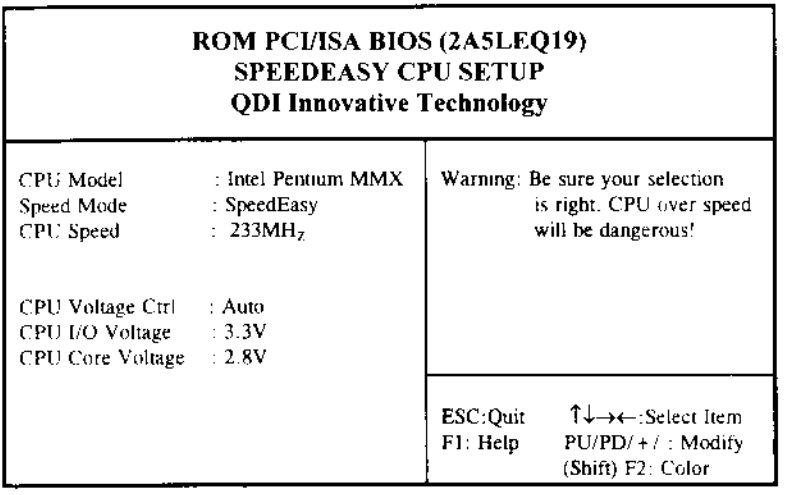


Figure - 1 SpeedEasy CPU Setup Menu

For *SpeedEasy* mainboard, BIOS will provide you a set of basic values for your CPU selection instead of jumper setting. To make your system run as fast as possible, you can manually select CPU speed value in "CPU Speed" item on "*SpeedEasy* CPU Setup" menu screen.

Warning
You'd better not to set CPU frequency higher than its working frequency. Otherwise, we will not be responsible for any damage it causes.

Note: In addition, if your system can not boot up again because of wrong CPU setting, you can hold down the hot-key<Del> while power on the system, the system will reboot and run at basic values.

Schneller Überblick über die Einstellungen:

Vorgehensweise:

1. Setzen Sie die CPU richtig ein.

2. Stecken Sie weitere Komponenten ein und vervollständigen Sie das System.

3. Drücken < DEL > oder < ENTF > und schalten Sie das System ein, um in das BIOS-Setup zu gelangen.

4. Wählen Sie das Menü „Speed Easy CPU Setup", um die CPU-Taktfrequenz einzustellen.

Anmerkung: Wenn Sie die CPU-Taktfrequenz nicht einstellen, wird Ihr System in der Grundeinstellung laufen (75 MHz bei Intel Pentium® und AMD CPUs, 100 Mhz bei Cyrix 6x86 CPUs usw.).

5. Wählen Sie die Option „Save and Exit BIOS Setup", um die vorgenommen Änderungen abzuspeichern. Anschließend können Sie wie erwartet das System erfolgreich hochfahren.

Menü für die SpeedEasy CPU-Einstellungen

Wählen Sie das Menü < SpeedEasy CPU Setup > aus und gehen Sie in das folgende Untermenü:

ROM PCI/ISA BIOS (2A5LEQ19)
SPEEDEASY CPU SETUP
QDI Innovative Technology

CPU Model	: Intel Pentium MMX	Warning: Be sure your selection is right. CPU over speed will be dangerous!
Speed Mode	: SpeedEasy	
CPU Speed	: 233MHz	
CPU Voltage Ctrl	: Auto	
CPU I/O Voltage	: 3.3V	
CPU Core Voltage	: 2.8V	
		ESC:Quit ↑↓→←:Select Item F1: Help PU/PD/+/-: Modify (Shift) F2: Color

Bild 1 „SpeedEasy CPU Setup Menu“

Beim den *SpeedEasy*-Mainboard stellt Ihnen das BIOS anstelle von Jumper-Einstellungen eine Auswahl von Grundeinstellungen zur Verfügung. Um Ihr System optimal zu betreiben, können Sie von Hand die Werte für die CPU-Taktfrequenz unter der Option „CPU-Taktfrequenz unter der Option „CPU Speed“ im „*SpeedEasy* CPU Setup“ Menü einstellen.

Warnung: Sie sollten die CPU-Taktfrequenz nicht höher als die angegebene Arbeitsgeschwindigkeit einstellen. Anderfalls sehen wir uns für irgendwelche hierdurch hervorgerufene Schäden nicht verantwortlich.

Anmerkung: Falls Ihr System aufgrund einer falschen CPU-Einstellung nicht mehr hochfahren kann, halten Sie beim Inschalten des Rechners die Taste < DEL > bzw. < ENTF > gedrückt. Das System wird dann mit den Grundeinstellungen neu gestartet.

Setup Rápido

Procedimiento:

1. Insertar la CPU correctamente.

2. Insertar otros dispositivos en el sistema.

3. Presionar la tecla <Del> y arrancar el sistema para entrar en BIOS setup.

4. Seleccionar el menu "SpeedEasy CPU setup" para seleccionar la velocidad de la CPU.

Nota: si no selecciona la velocidad de la CPU, el sistema funcionará a la velocidad por defecto (75 Mhz para Pentium y AMD, 100 MHz para Cyrix 6x86, etc.)

5. Grabar y salir de BIOS Setup, entonces el sistema arrancará y funcionará como Ud. espera.

Configuración de la CPU en el menu SpeedEasy

Seleccione <SpeedEasy CPU setup> en el menu principal para entrar en el siguiente menu:

ROM PCI/ISA BIOS (2A5LEQ19) SPEEDEASY CPU SETUP QDI Innovative Technology	
CPU Model : Intel Pentium MMX Speed Mode : SpeedEasy CPU Speed : 233MHz CPU Voltage Ctrl : Auto CPU I/O Voltage : 3.3V CPU Core Voltage : 2.8V	Warning: Be sure your selection is right. CPU over speed will be dangerous! ESC:Quit ↑↓→←:Select Item F1: Help PU/PD/+/-: Modify (Shift) F2: Color

Figure -1. SpeedEasy CPU Setup Menu

Para la placa base *SpeedEasy*, la BIOS proporciona un juego de valores básicos para seleccionar el tipo de CPU, en lugar de los jumpers. Para hacer que su sistema funcione lo más rapidamente posible, Ud. puede manualmente aumentar el valor de la velocidad de frecuencia en "CPU Speed" en el menu <*SpeedEasy* CPU setup>.

Aviso: es recomendable no seleccionar una frecuencia superior para la CPU a la que esta fue diseñada. En caso contrario, no nos hacemos responsables de los posibles daños que esto pueda causar.

Nota: por lo tanto, si su sistema no puede rearrancar de nuevo tras haber variado la frecuencia de trabajo de la CPU por una incorrecta, Ud. puede arrancar manteniendo apretada la tecla <Del> mientras conecta su equipo. El sistema arrancará con los valores básicos.

Mise en marche rapide

Démarche à suivre:

1) Insérer correctement le Processeur.

2) Assembler les autres éléments et mettez le système en place.

3) Appuyer sur la touche <Del> (Efface) et mettre le système en marche afin d'accéder à la configuration du BIOS.

4) Accédez au menu "SpeedEasy CPU Setup " pour mettre au point la fréquence du processeur.

Remarque : Si vous ne réglez pas la vitesse du processeur, votre système va fonctionner à la fréquence par défaut, (75Mhz pour les processeurs Pentium d'Intel et d' AMD , 100Mhz pour les processeurs 6X86 de Cyrix etc...)

5) Sauvegarder la configuration et sortir du BIOS , alors votre système peut démarrer comme vous le voulez.

Menu de configuration de processeur de SpeedEasy

Sélectionnez <SpeedEasy CPU Setup> du menu principal et accédez au sous-menu comme suit :

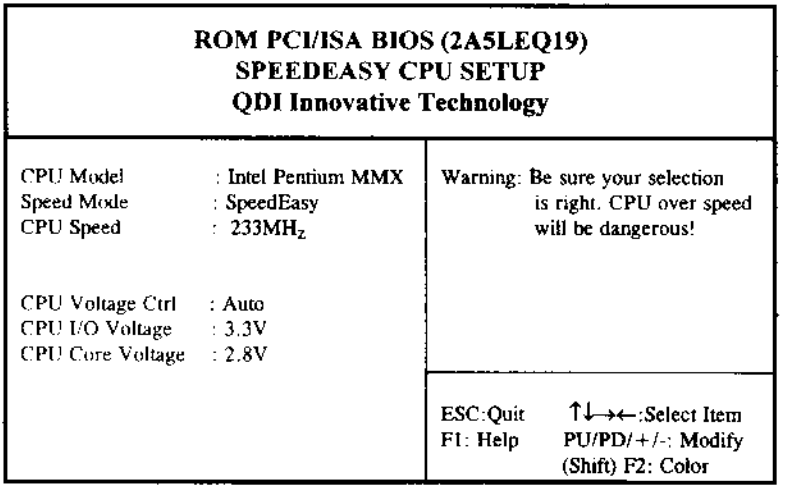


Figure -1. SpeedEasy CPU Setup Menu

Pour les cartes mère *SpeedEasy* , le BIOS va vous procurer un ensemble de paramètres de base pour le choix de votre processeur au lieu de placer des cavaliers (Jumpers). Pour faire fonctionner votre système à la plus haute fréquence possible , vous pouvez augmenter manuellement les valeurs de fréquence du processeur dans "CPU Speed" sur l'écran menu "*SpeedEasy* CPU Setup".

Avertissement : Vous avez intérêt à ne pas mettre la fréquence du processeur plus haute que celle indiquée par le manufacturier.Sinon, nous ne pourrions pas être tenu responsables des dégâts que cela peut causer.

Remarque : En plus si votre système ne peut pas redémarrer à cause du mauvais réglage du processeur, vous pouvez appuyer sur la touche clé <Del> (ou Efface) pendant que vous remettiez le système en marche. Le système va redémarrer et va fonctionner avec les paramètres de base.

Setup Rapido

Procedure:

1. Inserire la CPU correttamente.

2. Inserire gli altri componenti e ricomporre il systema.

3. Premere il tasto <Del> e accendere il sistema per entrare nel setup del Bios.

4. Entrare nel menu "SpeedEasy CPU Setup" per impostare la velocita` della CPU.
Nota: Se la velocita` di CPU non viene impostata, il sistema lavorera` alla velocita` di default (75Mhz per CPU Pentium e AMD, 100 Mhz per Cyrix 6 x 86 CPU ecc.).

5. Salvare e uscire dal Setup del Bios. Il sistema si riavviera` alla velocita` voluta.

Menu SpeedEasy per l`impostazione della CPU

Selezionare <SpeedEasy CPU Setup> dal menu principale ed entrare nel seguente sottomenu:

ROM PCI/ISA BIOS (2A5LEQ19)
SPEEDEASY CPU SETUP
QDI Innovative Technology

CPU Model	: Intel Pentium MMX	Warning: Be sure your selection is right. CPU over speed will be dangerous!
Speed Mode	: SpeedEasy	
CPU Speed	: 233MHz	
CPU Voltage Ctrl	: Auto	
CPU I/O Voltage	: 3.3V	
CPU Core Voltage	: 2.8V	
		ESC:Quit ↑↓→←:Select Item F1: Help PU/PD/+/-: Modify (Shift) F2: Color

Figura 1: Menu SpeedEasy per l`impostazione della CPU

Per una mainboard *SpeedEasy*, il BIOS fornisce una serie di valore base per la specifica CPU, invece di dover impostarli via jumpers. Per far lavorare il sistema in modo ottimale, si puo` impostare la velocita` di CPU manualmente, alla voce "CPU Speed" del menu "*SpeedEasy* CPU Setup".

Attenzione: QDI declina ogni responsabilita` per eventuali danni causati alla CPU da una impostazione della velocita` piu` alta di quanto indicato dal produttore della CPU stessa.

Nota: Se il sistema non completa il boot per impostazioni errate della CPU, riaccendere tenendo premuto il tasto <Del>. Il sistema si riavviera` con i valori di base.

快速設置的步驟

1、正確安裝 CPU.

2、安裝好系統, 準備開機.

3、按下 <Del> 鍵保持不動， 然後開機進入 BIOS 設置程序.

4、進入 "SpeedEasy CPU Setup" 目錄設置 CPU 速度.

注意: 如果用户不設置CPU 速度， 則系統會用原設定值運行 (Intel 奔騰和 AMD K5 CPU 會用75HMz 運行, Cyrix 6x86 CPU 會用100MHz 運行).

5、保存及退出BIOS設置程序，然後系統就可在設定的速度下順利運行.

SpeedEasy CPU 設置目錄

在 BIOS 設置程序主目錄中選擇 <SpeedEasy CPU Setup> 項，進入如下子目錄:

ROM PCI/ISA BIOS (2A5LEQ19) SPEEDEASY CPU SETUP QDI Innovative Technology	
CPU Model : Intel Pentium MMX Speed Mode : SpeedEasy CPU Speed : 233MHz CPU Voltage Ctrl : Auto CPU I/O Voltage : 3.3V CPU Core Voltage : 2.8V	Warning: Be sure your selection is right. CPU over speed will be dangerous! ESC:Quit ↑↓→←:Select Item F1: Help PU/PD/+/-: Modify (Shift) F2: Color

圖－1 SpeedEasy CPU 設置目錄

對于 *SpeedEasy* 主板，BIOS 爲 CPU預設了一套基本參數而無須設置任何跳綫。爲了使系統運行于CPU標識的頻率，用户可以在 "*SpeedEasy* CPU Setup" 目錄屏幕上自行修改 CPU 的速度.

警告:

不要將CPU的工作頻率設于高出其標識的頻率，否則我們對由此引起的損害概不負責.

注意:

如果系統因爲用户設置錯誤導致系統不能再啓動，則可以按下熱鍵 <Del> 保持不動，然後開機 － 系統會以預設的基本參數啓動及運行.

快速设置的步骤

1、正确安装 CPU.

2、安装好系统,准备开机.

3、按下 <Del> 键保持不动， 然后开机进入 BIOS 设置程序.

4、进入 "SpeedEasy CPU Setup" 目录设置 CPU 速度.

注意: 如果用户不设置 CPU 速度，则系统会用原设定值运行 (Intel 奔腾和 AMD K5 CPU 会用75HMz 运行， Cyrix 6x86 CPU 会用 100MHz 运行).

5、保存并退出BIOS设置程序，然后系统就可在设定的速度下顺利运行.

SpeedEasy CPU 设置目录

在 BIOS 设置程序主目录中选择 <SpeedEasy CPU Setup> 一项，进入如下子目录:

ROM PCI/ISA BIOS (2A5LEQ19)
SPEEDEASY CPU SETUP
QDI Innovative Technology

CPU Model : Intel Pentium MMX Speed Mode : SpeedEasy CPU Speed : 233MH$_2$ CPU Voltage Ctrl : Auto CPU I/O Voltage : 3.3V CPU Core Voltage : 2.8V	Warning: Be sure your selection is right. CPU over speed will be dangerous! ESC:Quit ↑↓→←:Select Item F1: Help PU/PD/+/-: Modify (Shift) F2: Color

图－1 SpeedEasy CPU 设置目录

对于*SpeedEasy*主板，BIOS为CPU预设了一套基本参数而无须设置任何跳线。为了使系统运行于CPU标识的频率，用户可以在"*SpeedEasy* CPU Setup" 目录屏幕上自行修改 CPU 的速度。

警告:

不要将CPU的工作频率设于高出其标识的频率，否则我们对由此引起的损害概不负责.

注意:

如果系统因为用户设置错误导致系统不能再启动，则可以按下热键 <Del> 保持不动，然后开机 － 系统会以预设的基本参数启动及运行.

Chapter 1
Introduction

1.1 Overview

P5V580 VP3 Advance II green mainboard provides a highly integrated solution for fully compatible, high performance PC/ATX platforms, and supports Intel Pentium*, Cyrix 6x86, 6x86MX and AMD K5, K6 microprocessors. It features Write-Back Secondary Cache memory for 512KB in size. Flexible main memory size can be installed from 8MB up to 384MB DRAMs, so as to give full play to the advantages of the Pentium , Cyrix 6x86, 6x86MX and AMD K5, K6 CPUs. The mainboard offers a wide range of interface to support integrated on-board IDE and on-board I/O function. The current green function is compliant to ACPI specification and OS Directed Power Management.

1.2 Key Features

CPU	- Supports Intel Pentium 75, 90, 100, 120, 133, 150, 166, 180, 200, 233MH_Z, Intel Pentium Processor with MMX technology.
	- Supports Cyrix 6x86 100MH_Z (P120 Plus), 110MH_Z (P133 Plus), 120MH_Z (P150 Plus), 133MH_Z (P166 Plus), 150MH_Z (P200 Plus)*, 175 MH_Z (P233 plus), Cyrix 6x86L and 6x86MX CPUs
	- Supports AMD K5 PR75, PR90, PR100, PR120, PR133, PR166, PR200 and K6 PR166, PR200, PR233, PR266 CPUs
	- Switching regulator (2.0~3.5V circuit) on board
Chipset	- VIA VP3 chipset
Clock Chip	- Supports I^2C clock chip on board
Main memory	- Supports 2x72 pin SIMM modules and 2x168 pin DIMM modules
	- 64-bit data path for flexible memory size expanded from 8MB up to 384MB DRAMs
	- Supports Fast Page mode DRAM and EDO DRAM for SIMM socket

"*": The max speed of VIA chipset specification is 66MH_Z only, so it's not recommended by VIA to set system clock frequency as 75MH_Z or 83 MH_Z.

	- Supports from 8MB to 128MB 3.3V unbuffered SDRAM DIMM or 3.3V unbuffered EDO DIMM for DIMM slot
AGP Support	- AGP V1.0 compliant - Supports SideBand Addressing (SBA) mode - Supports 133 MH_Z 2X mode for AD and SBA signaling pipeline split-transaction long-burst transfers up to 533MB/sec.
Cache Memory	- Provides 512KB L2 Pipeline Burst Cache on board
On-board IDE	- Supports 2 PCI Bus Master IDE ports - Supports PIO mode up to Mode 4 Timing - Supports "Ultra DMA/33" synchronous DMA mode transfers up to 33MBytes/sec - Supports 2 Fast IDE interfaces for up to 4 IDE devices e.g. IDE hard disks and CD ROMs drives
Green function	- Supports 3 green mode: Doze, Standby and Suspend
ACPI Ready (requires ATX power supply)	- ACPI (Advanced Configuration and Power Interface) is also implemented on P5V580 VP3 Advanced II. ACPI provide more Energy Saving Features for the future operation system (OS) supporting OS Direct Power Management (OSPM) functionality. With these features implemented in the OS, PCs can be ready around the same time everyday, yet satisfy all the energy saving standards. To fully utilize the benefits of ACPI, an ACPI-supported OS such as in the next release of Windows 9X must be used
Auto Fan Off	- The CPU fan will power off automatically even in sleep mode. This function reduces both energy consumption and system noise, and is an important feature to implement silent PC system
Dual Function Power Button (requires ATX power supply)	- The system can be in one of two states, one is Sleep mode and the other is the Soft-Off mode. Pushing the power button for less than 4 seconds places the system into Sleep mode. When the power button is pressed for more than 4 seconds, it enters the Soft-Off mode
Remote Ring On (requires ATX power supply)	- This allows a computer to be turned on remotely through a modem (internal modem card or external modem), so that any user can access vital information from their computer from anywhere in the world

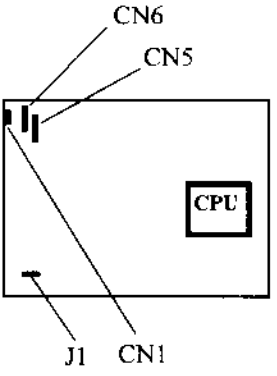
Wake up on LAN (require ATX power supply)	- Supports wake up on LAN function
On-board I/O	- 2 x ISA Slots, 3 x PCI Slots and 1 AGP Slot - Use ITE Plug & Play IO chip IT8661 - Supports up to two 3.5" or 5.25" floppy drives 360K/720K/1.2M/1.44M/2.88M format - Supports 120MB floppy drive & zip drive - All I/O ports can be enabled or disabled in BIOS - Two high speed 16550 compatible UARTs (COM1/COM2/COM3/COM4 selectable) with 16-byte send/receive FIFOs and support MIDI compliant) - One parallel port at I/O address 378H/278H/3BCH with additional bi-direction I/O capability and multi-mode selection (SPP/EPP/ECP) (IEEE 1284 compliant) - Provides protection circuit to prevent damage to the parallel port when a connected printer is powered up or operated at a higher voltage - Supports PS/2 mouse and PS/2 keyboard (optional) - Supports IrDA TX/RX Header - Supports USB (Universal Serial Bus) in specification
BIOS	- Licensed advanced AWARD BIOS. Supports Flash ROM BIOS, Plug and Play ready, DMI ready. Built-in NCR810 SCSI BIOS
Board size	- 220mm x 235mm

Chapter 2
Connector Configuration

This section lists all connector pin assignment and port description on the mainboard. The situations of the connectors and ports are illustrated in the following figures. Before inserting these connectors, please pay attention to the directions.

2.1 Power Connector (CN6)

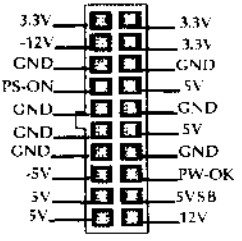
PIN NUMBER	FUNCTION
1	POWER GOOD
2	+5V
3	+12V
4	-12V
5	GND
6	GND
7	GND
8	GND
9	-5V
10	+5V
11	+5V
12	+5V



2.2 Modem Ring on Connector (J1)

PIN NUMBER	FUNCTION
1	5VSB
2	INST-ON
3	GND

2.3 ATX Power Connector (CN5)



2.4 Power Switch (POWER)

If standby Power supply or ATX Power supply is used, the Power Switch supports the function as figure in next page.

1. If you want to power up your system, you should turn on the mechanical switch of Standby Power supply first, then push once the button connected to Power Switch connector.
2. If you want to power off your system, you needn't to turn off the mechanical switch of Standby Power supply, just push the button connected to Power Switch connector for four seconds or longer.

2.5 Keyboard Connector (CN1)

PIN NUMBER	FUNCTION
1	CLOCK
2	DATA
3	NC
4	GND
5	+5V

2.6 Hard Disk LED Connector (HDLED1)

PIN NUMBER	FUNCTION
1	VCC
2	IDE ACT

2.7 Reset Switch (RESET)

SETTING	FUNCTION
Close once	Reset the system
Open	NORMAL

2.8 Speaker Connector (SPEAKER)

PIN NUMBER	FUNCTION
1	SPKDATA
2	NC
3	GND
4	VCC

2.9 Power LED & Keylock (PWR-LED+KEY-L)

PIN NUMBER	FUNCTION
1	5VSB&VCC
2	GND
3	GND
4	KEYLOCK
5	GND

2.10 Green-LED

PIN NUMBER	FUNCTION
1	GREEN
2	GND
3	GND

2.11 SLEEP

PIN NUMBER	FUNCTION
1	SLEEP
2	GND

2.12 USB1/USB2 Connector (USB)

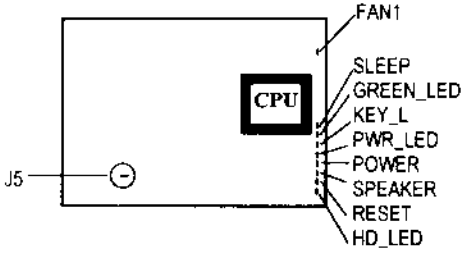
PIN NUMBER		FUNCTION
1	2	VCC
3	4	Key
5	6	DATA -
7	8	DATA +
9	10	GND

2.13 FAN Connector (FAN1)

PIN NUMBER	FUNCTION
1	GND
2	+12V
3	GND

2.14 Wake up on LAN (J5)

PIN NUMBER	FUNCTION
1	5VSB
2	GND
3	WOL



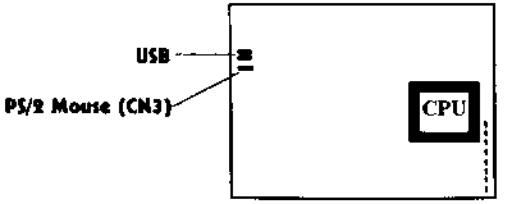
2.15 PS/2 Mouse (CN3)

PIN NUMBER	FUNCTION
1	DATA
2	CLOCK
3	GND
4	NC
5	+5V

Note: If you want to use PS/2 Mouse, please contact your vendor for optional PS/2 Mouse cable.

2.16 IrDA Connector (CN4)

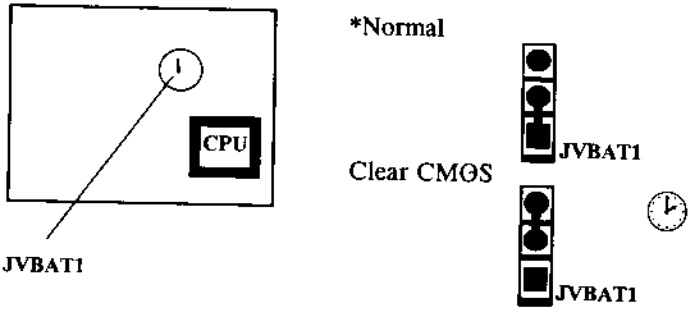
PIN NUMBER	FUNCTION
1	VCC
2	NC
3	IRRX
4	GND
5	IRTX
6	VCC



2.17 I/O Port Description

CONNECTOR	FUNCTION
IDE1	Primary IDE Port
IDE2	Secondary IDE Port
FLOPPY	Floppy Drive Port
PRINTER	Parallel Port
UART1	COM1/COM2/COM3/COM4
UART2	COM2/COM3/COM4/COM1

2.18 Clear CMOS



	CLEAR CMOS	NORMAL
JVBAT1	Close (2 - 3) once	Close (1- 2)

Note: You must power down the AC supply (110/220V) when you want to clear CMOS, the jumper (JVBAT1) should be set back to normal (open) before you turn on the system.

"*": Represent for default jumper setting.

2.19 Memory Configuration

P5V580 VP3 Advance II mainboard provides 2 SIMM slots and 2 DIMM slots for providing a flexible memory size from 8MB up to 256MB DIMM + 128MB SIMM main memory. Please do not plug two different brand of SIMM on a bank simultaneously.

Total Memory	SIMM1&2	DIMM1	DIMM2
8MB	4MB x 2	----	----
	----	8MB	----
16MB	8MB x 2	----	----
	4MB x 2	8MB	----
	----	16MB	----
	----	8MB	8MB
24MB	8MB x 2	----	8MB
32MB	8MB x 2	16MB	----
	16MB x 2	----	----
	----	16MB	16MB
	----	32MB	----
48MB	16MB x 2	----	16MB
	----	32MB	16MB
64MB	16MB x 2	----	32MB
	32MB x 2	----	----
	----	32MB	32MB
72MB	32MB x 2	8MB	----
80MB	32MB x 2	----	16MB
96MB	32MB x 2	16MB	16MB
128MB	32MB x 2	32MB	32MB
128MB	-----	64MB	64MB
256MB	64MB x 2	64MB	64MB

Remark :
DRAM and SDRAM modules can be installed in a variety or configurations. Please understand that not all possible combinations of installation are list here.

Illustration of Connector on board

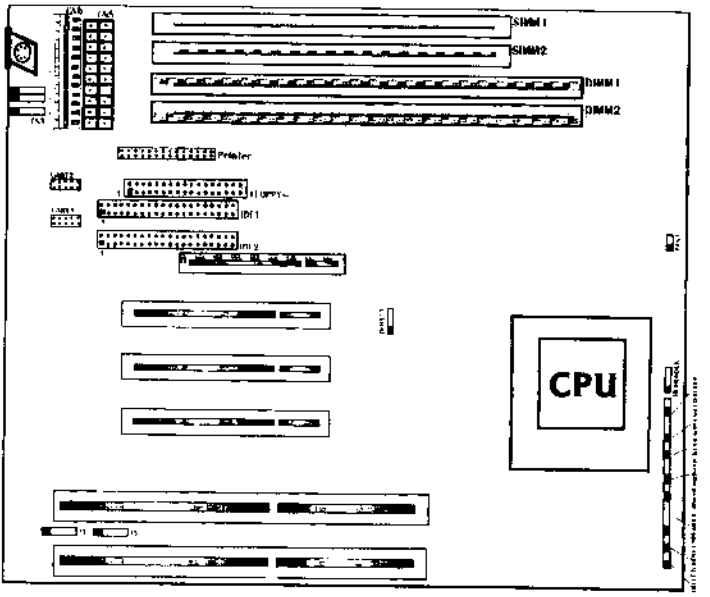


Figure 2-1 Illustration of All Connectors on Board

Chapter 3
AWARD BIOS Description

3.1 Entering BIOS Setup

Power on the computer, when the following message appears briefly at the bottom of the screen during the POST (Power On Self Test), press <Del> key or simultaneously press <Ctrl> + <Alt> + <Esc> keys.

Press <Del> to enter SETUP

Once you enter Award BIOS CMOS Setup Utility, the Main Menu (Figure 1) will be appeared on the screen. The Main Menu allows you to select from ten setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

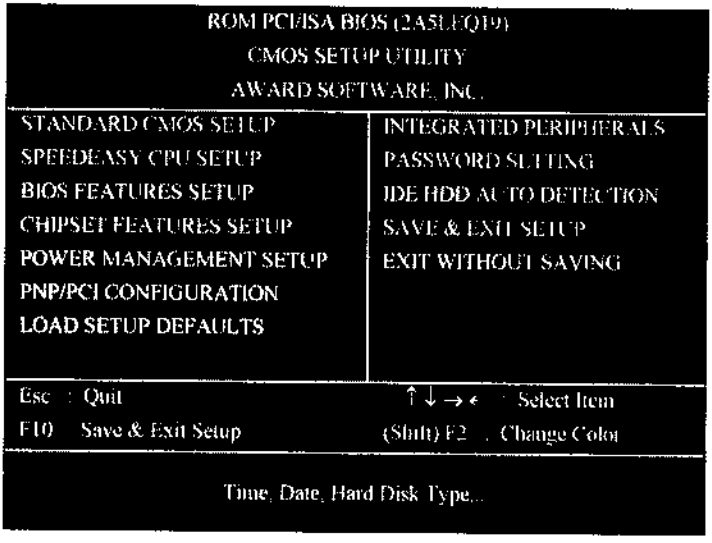


Figure 3-1. Main Menu

3.2 Standard CMOS Setup

Use the arrow keys to highlight the item, then use the < PgUp> or <PgDn> keys to select the value you want in each item.

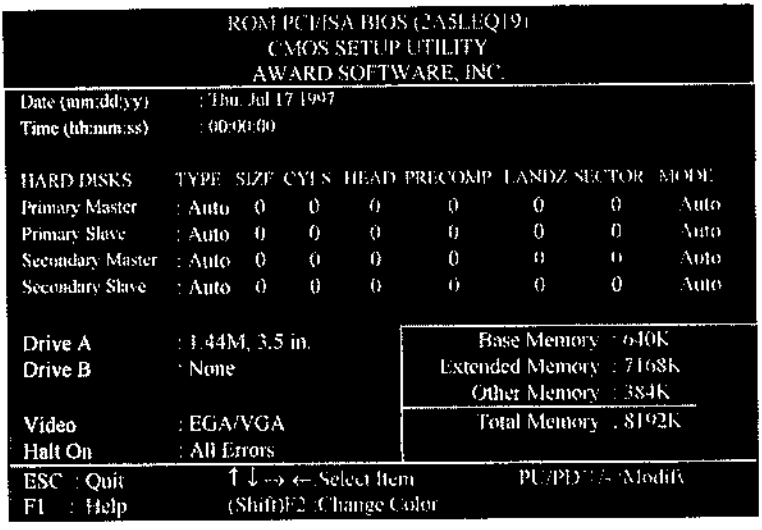


Figure 3-2. Standard CMOS Setup Menu

3.2.1 Hard Disk
Primary Master / Primary Slave / Secondary Master / Secondary Slave

The categories identify the types of 2 IDE channels that have been installed in the computer. Type "User" is user-definable. If your hard disk drive type is not matched with drive table or listed in it, you can use Type "User" to define your own drive type manually.

If you select Type **"Auto"**, BIOS will Auto-Detect the HDD & CD-ROM drive at the POST stage and show the IDE for HDD & CD-ROM drive. If you select Type **"User"**, related information is asked to be entered into the following items. Enter the information directly from the keyboard and press **<Enter>**.

If an additional ESDI HDD Controller interface is ESDI, on-chip Primary and/or Secondary has to be disabled. If the controller of HDD interface is SCSI, the type shall be set to "Auto".

CYLS	number of cylinders	HEAD	number of heads
PRECOMP	write precom	LANDZ	landing zone
SECTOR	number of sectors	MODE	HDD access mode

3.2.2 Video

You have two ways to boot up the system:

I. When VGA is used as primary and monochrome is used as secondary, the selection of the video type is **"VGA Mode"**.

II. When monochrome is used as primary and VGA is used as secondary, the selection of the video type is **"Monochrome Mode"**.

EGA/ VGA	Enhanced Graphics Adapter / Video Graphic Array. For EGA, VGA, SEGA, SVGA, or PGA monitor adapters.
CGA 40	Color Graphic Adapter, powering up in 40 column mode.
CGA 80	Color Graphic Adapter, powering up in 80 column mode.
MONO	Monochrome adapter, including high resolution monochrome adapters.

3.2.3 Halt on

The category determines that whether the computer will stop or not if an error is detected during powering up.

No errors	The system boot will not stop for any error that may be detected.
All errors	Whenever the BIOS detects a non-fatal error, the system will stop and you will be prompted.
All, But Keyboard	The system boot will not stop for a keyboard error, but it will stop for all the other errors.
All, But Diskette	The system boot will not stop for a disk error; but it will stop for all the other errors.
All, But Disk/Key	The system boot will not stop for a keyboard or disk error, but it will stop for all the other errors.

3.2.4 Memory

The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

Base Memory	The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.
Extended Memory	The BIOS determines that how much extended memory is presented during the POST.
Other Memory	This is the memory that can be used for different applications. Most use for this area is Shadow RAM.
Total Memory	Total memory of the system is the sum of the above memory.

3.3 SpeedEasy CPU Setup

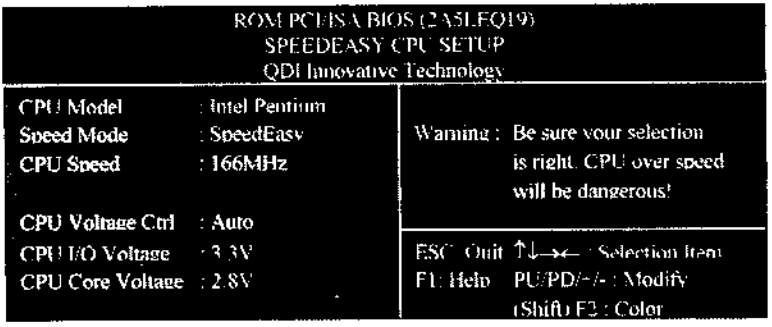


Figure 3-3. SpeedEasy CPU Setup

The following pages tell you the options of each item and describe the meaning of each option.

Item	Option	Description
• CPU Model		BIOS can automatically detect known CPU model, so this item is shown only.
• Speed Model	*SpeedEasy*	You should select CPU speed according to your CPU brand and type.
	Jumper Emulation	This item is only for the user who understand all the CPU parameter. (Such as CPU voltage, clock frequency and clock multiplier.)
• Bus Clock	*50MHz*	
	55MHz	
	60MHz	
	66MHz	
	66+MHz	
	75MHz	
	83MHz	
• Multiplier	*x1.5,BF1/BF0=1/1*	Left table is only for Pentium CPU. The other CPU Manufacturers' definitions of BF1/BF0 (or BF2/BF1/BF0) should be referred to your CPU Vendor.
	x2,BF1/BF0=1/0	
	x2.5,BF1/BF0=0/0	
	x3, BF1/BF0=0/1	
• CPU Speed	*75MHz~233MHz*	It is for Intel Pentium CPU.
	P120+~P200+	It is for Cyrix CPU.
	PR75~PR200	It is for AMD K5 CPU.
	166MHz~266MHz	It is for AMD K6 CPU.
• CPU Voltage Ctrl	*Auto*	BIOS can automatically set CPU voltage.
	Manual	User can set CPU voltage according to CPU brand and type.

Warning: System may hang up or your CPU may be damaged if you wrongly set CPU voltage. It is strongly recommended that you should not change "Auto" to "Manual".

3.4 BIOS Features Setup

```
ROM PCI/ISA BIOS (2A5LEQ19)
BIOS FEATURES SETUP
AWARD SOFTWARE, INC.

Virus Warning                : Disabled
CPU Internal Cache           : Enabled
External Cache               : Enabled
Quick Power On Self Test     : Enabled
Boot Sequence                : A,C, SCSI
Swap Floppy Drive            : Disabled
Boot Up Floppy Seek          : Disabled
Boot Up Numlock Status       : On
Gate A20 Option              : Fast
Typematic Rate Setting       : Disabled
Typematic Rate (Chars/Sec)   : 6
Typematic Delay(Msec)        : 250
Security Option              : Setup

OS Select For DRAM>64MB      : Non-OS2
Report No FDD For WIN95      : Yes

Video BIOS Shadow            : Enabled
C8000-CBFFF Shadow           : Disabled
CC000-CFFFF Shadow           : Disabled
D0000-D3FFF Shadow           : Disabled
D4000-D7FFF Shadow           : Disabled
D8000-DBFFF Shadow           : Disabled
DC000-DFFFF Shadow           : Disabled
Delay For HDD (Secs)         : 0

ESC: Quit      ↑↓→←: Select Item
F1 : Help      PU/PD/+/-: Modify
F5 : Old Values (Shift) F2: Color
F7 : Load Setup Defaults
```

Figure 3-4 BIOS Features Setup Menu

The following pages tell you the options of each item and describe the meaning of each option.

Item	Option	Description
• Virus Warning	***Enabled***	Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.
	Disabled	No warning message appears when anything attempts to access the boot sector or hard disk partition table. **Note:** This function is available only for DOS and other OS that do not trap INT13.
• CPU Internal Cache	***Enabled***	This item speeds up memory access. However, it depends on CPU/chipset design. The default value is enabled.
	Disabled	
• External Cache	***Enabled***	Enable external cache.
	Disabled	Disable external cache.

• Quick Power On Self Test	***Enabled***	Enable quick POST. BIOS will shorten or skip some check items during POST to speed up POST after you power on the computer.
	Disabled	Normal POST.
• Boot Sequence	***A,C,SCSI...***	You can choose any search sequence for bootup.
	C, CDROM,A	
• Swap Floppy Drive	[illegible]	It will exchange the assignment of A&B floppy drives.
	[illegible]	The assignment of A&B floppy drives are normal.
• Boot Up Floppy Seek	[illegible]	BIOS searches for floppy disk drive to determine if drive is ready for diskette read/write during booting.
	Disabled	skip drive seeking to speed up system booting.
• Boot Up Numlock Status	***On***	Keypad is used as number keys.
	Off	Keypad is used as arrow keys.
• Gate A20 Option	***Normal***	The A20 signal is controlled by keyboard controller or chipset hardware.
	Fast	It is default. The A20 signal is controlled by Port 92 or chipset specific method.
•Typematic Rate Setting	***Enabled***	Enable typematic rate and typematic delay programming.
	Disabled	Disable typematic rate and typematic delay programming. The system BIOS will use default value of these two items.
• Typematic Rate Chars/Sec)	**6~30**	Set the speed of the typematic rate (characters per second).
• Typematic Delay (Msec)	***250~1000***	Set the time of the typematic delay.
• Security Option	***System***	The system will not boot and access to Setup will be denied if the correct password is not entered when prompting.
	Setup	The system will boot up, but access to Setup will be denied if the correct password is not entered when prompting.
		Note: To disable security, select Password Setting (refer to page 3-14) at Main Menu and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter Setup freely.
• OS Select For DRAM>64MB	[illegible]	If your operating system is not OS/2, please select this item.

	OS2	If system DRAM is more than 64MB and operating system is OS/2, please select this item.
• Report No FDD For WIN95	*Yes*	Release IRQ6 to WIN95 if no FDD in connection
	No	Not release IRQ6 to WIN95
• Video BIOS Shadow	*Enabled*	Video BIOS will be copied to RAM. Video Shadow will increase the video speed.
	Disabled	Video shadow is disabled.
• C8000-CBFFF Shadow ... DC000-DFFFF Shadow:	*Enabled*	Optional ROM will be copied to RAM by 16K bytes per unit.
	Disabled	The shadow function is disabled.
• Delay For HDD (Secs)	*0 ~ 15*	Set the predelay time for hard disk to be ready to be accessed by the system.

3.5 Chipset Features Setup

ROM PCI/ISA BIOS (2A5LEQ19)
CMOS SETUP UTILITY
CHIPSET FEATURES SETUP

Bank 0/1 DRAM Timing	: 70ns	On Chip USB	: Disabled
Bank 2/3 DRAM Timing	: 70ns		
Bank 4/5 DRAM Timing	: 70ns		
SDRAM Latency length	: 3		
DRAM Read Pipeline	: Enabled		
Sustained 3T Write	: Enabled		
L2 Cache Pipeline	: Enabled		
Read Around write	: Disabled		
Cache Timing	: Fast		
Video BIOS Cacheable	: Enabled	ESC: Quit	↑↓→← : Select Item
System BIOS Cacheable	: Enabled	F1 : Help	PU/PD/+/- : Modify
Memory Hole At 15Mb Addr	: Disabled	F5 : Old Values	(Shift)F2 : Color
AGP Aperture Size (4~256)	: 64M	F7 : Load Setup Defaults	
AGP-2X mode	: Disabled		

Figure 3-5 Chipset Feature Setup

The following pages tell you the options of each item and describe the meaning of each option.

Item	Option	Description
• Bank 0/1, 2/3, 4/5 DRAM Timing	*60ns* *70ns*	These items are of selected EDO DRAM read/write timing. You must ensure that your DIMMs are as fast as 60ns, otherwise you have to select 70ns.

• SDRAM Latency length	*3* *2*	Define the CLT timing parameter of SDRAM expressed in 66MHz clocks, Latency Time = 2 clocks Latency Time = 3 clocks
• DRAM Read Pipeline	***Enabled*** ***Disabled***	Enable DRAM Read Pipeline Disable DRAM Read Pipeline
• Sustained 3T Write	***Enabled*** ***Disabled***	Enable Sustained 3T Write Disable Sustained 3T Write
• L2 Cache Pipeline	***Enabled*** ***Disabled***	Enable L2 Cache Pipeline Disable L2 Cache Pipeline
• Read Around Write	***Enabled*** ***Disabled***	Enable Read Around Write Disable Read Around Write
• Cache Timing	***Fast*** ***Fastest***	This item is used to select Cache Read / Write speed, "Fast" is the optimize selection
• Video BIOS Cacheable	***Enabled*** ***Disabled***	Besides conventional memory, video BIOS area is also cacheable. Video BIOS area is not cacheable.
• System BIOS Cacheable	***Enabled*** ***Disabled***	Beside conventional memory, the system BIOS area is also cacheable. The system BIOS area is not cacheable.
• Memory Hole At 15Mb Addr	***Enabled*** ***Disabled***	Memory Hole at 15-16M is reserved for expanded PCI card. Do not set this memory hole.
• AGP Aperture Size (4~256)	***64M***	Set the effective size of the Graphics Aperture to be used in the particular PAC configuration.
• AGP-2X mode	***Enabled*** ***Disabled***	Enable this item only when AGP Card supports 2X mode
• On Chip USB	***Enabled*** ***Disabled***	This item is used to enable or disable on chip USB controller.

3.6 Power Management Setup

ROM PCI/ISA BIOS (2A5LEQ19) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC			
Power Management	: Disabled	Primary INTR	: ON
PC Control by APM	: Yes	IRQ3 (COM2)	: Primary
Video Off Option	: Suspend→Off	IRQ4 (COM2)	: Primary
Video Off Method	: V/H SYNC+Blank	IRQ5 (COM2)	: Primary
Modem Use IRQ	: NA	IRQ6 (COM2)	: Primary
Soft-Off by PWRBTN	: Instant-off	IRQ7 (COM2)	: Primary
** PM Timers **		IRQ8 (COM2)	: Primary
HDD Power Down	: 10 Min	IRQ9 (COM2)	: Primary
Doze Mode	: Disabled	IRQ10 (COM2)	: Primary
Suspend Mode	: Disabled	IRQ11 (COM2)	: Primary
** PM Events **		IRQ12 (COM2)	: Primary
VGA	: OFF	IRQ13 (COM2)	: Primary
LPT & COM	: LPT/COM	IRQ14 (COM2)	: Primary
HDD & FDD	: ON	IRQ15 (COM2)	: Primary
DMA/master	: OFF		
Modem Ring Resume	: Disabled	ESC: Quit	↑↓→←, Select Item
RTC Alarm Resume	: Disabled	F1 : Help	PU/PD/+/-: Modify
		F5 : Old Values	(Shift)F2: Color
		F7 : Load Setup Defaults	

Figure 3-6 Power Management Setup Menu

The following pages tell you the options of each item and describe the meanings of each option.

Item	Option	Description
• Power Management	***Disabled***	Global Power Management (PM) will be disabled.
	User Define	Users can configure their own Power Management Timer.
	Min Saving	Pre - defined timer value are used such that all timers are in their MAX values
	Max Saving	Pre - defined timer value are used such that all timers are in their MIN value
• PC Control by APM	***No***	System BIOS will ignore APM when Power Management is enabled.
	Yes	System BIOS will wait for APM's prompt before it enter any PM mode e.g. Standby or Suspend.
• Video Off Option	***Suspend→Off***	Select "Video off" status.
	All modes→ Off	
	Always On	
• Video Off Method	***Blank Screen***	The system BIOS will only blank off the screen when disabling video.

	V / H SYNC + Blank	In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA cards to monitor.
	Disable	This function is enabled only for the VGA card supporting DPMS.
• Modem Use IRQ		Select IRQ "X" used by modem
• Soft-Off by PWRBTN		The system will power off immediately once the power button is pressed
		The system will not power off immediately when the power button is pressed
• HDD Power Down	***Disabled***	HDD's motor will not be off.
	1 ~15 Min	Defines the continuous HDD idle time before the HDD entering power saving mode (motor off).
• Doze mode	***Disabled***	The system will never enter Doze mode.
	1Min ~1 Hr	Defines the continuous idle time before the system entering Doze mode. If any item defined in "Wake Up Events In Doze & Suspend" is On and activated, the system will be waken up.
• Suspend Mode	***Disabled***	The system will never enter Suspend mode.
	1 Min ~1Hr	Defines the continuous idle time before the system entering Suspend mode. If any item defined in "Wake Up Events In Suspend" is On and activated, the system will be waken up.
• VGA	***ON***	VGA active reloads global timer
	OFF	VGA active has no influence to global timer
• LPT & COM HDD & FDD DMA/ master	***ON***	Any operation of the items Reload global timer.
	OFF	The operation of the items have no influence to global timer
• Modem Ring Resume	***Enabled***	Allow the system to be powered on when a Ring indicator signal comes up to UART1 or UART2 from external modem (to LAN Wake-up Header from LAN adapter or to modem Ring on Header from internal modem card)
	Disabled	Do not allow Ring Power-on.
• RTC Alarm Resume	***Enabled***	RTC alarm can be used to generate a wake event when the system is in sleeping
	Disabled	Do not allow Ring Power-on
• IRQ(3~15),	***Primary***	Reload global timer
	Secondary	No influence to global timer, only finish an operation that IRQ "X" requests
	Disabled	No influence to global timer

3.7 PNP/PCI Configuration Setup

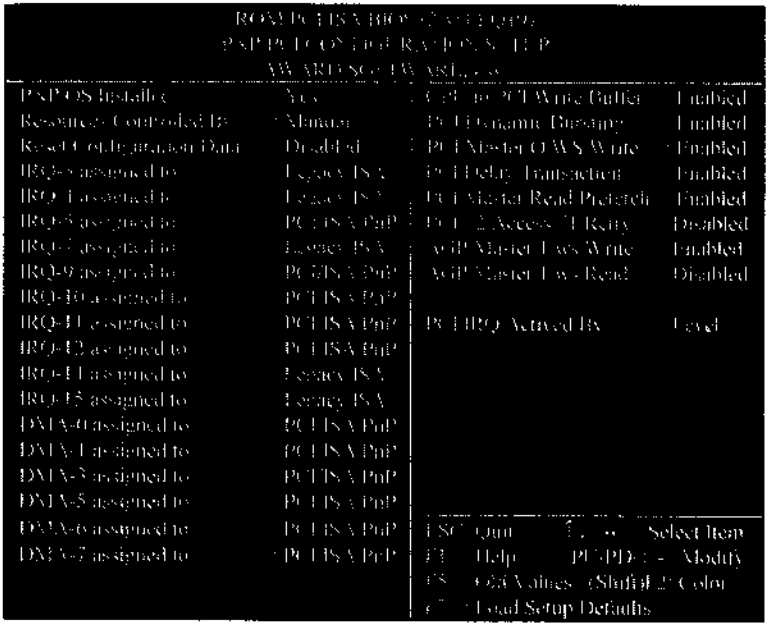


Figure 3-7 PNP/PCI Configuration Setup Menu

The following pages will tell you the options of each item and describe the meaning of each option.

Item	Option	Description
• PNP OS Installed	***Yes***	Device resource assigned by PnP OS.
	No	Device resource assigned by BIOS. **Remark: It is strongly recommended that you choose "Yes" when using PnP OS, i.e. Windows 95.**
• Resources Controlled By	***Manual***	Assigns system resources (IRQ and DMA) manually by user.
	Auto	Assigns system resources (IRQ and DMA) automatically by BIOS.
• Reset Configuration Data	***Enabled***	The configuration data will be reset to default setting
	Disabled	The configuration data will not be reset

• IRQ-3 ~ IRQ-15 assigned to	*Legacy ISA*	The specified IRQ-x will be assigned to ISA only.
	PCI/ISA PnP	The specified IRQ-x will be assigned to ISA or PCI.
• DMA-0 ~ DMA-7 assigned to	*Legacy ISA*	The specified DMA-x will be assigned to ISA only.
	PCI/ISA PnP	The specified DMA-x will be assigned to ISA or PCI.
• CPU to PCI Write Buffer	*Enabled*	Enable CPU to PCI Write Buffer
	Disabled	Disable CPU to PCI Write Buffer
• PCI Dynamic Bursting	*Enabled*	Enable PCI Dynamic Bursting
	Disabled	Disable PCI Dynamic Bursting
• PCI Master 0 ws Write	*Enabled*	Enable PCI Master 0 ws Write
	Disabled	Disable PCI Master 0 ws Write
• PCI Delay Transaction	*Enabled*	Enable PCI Delay Transaction
	Disabled	Disable PCI Delay Transaction
• PCI Master Read Prefetch	*Enabled*	Enable PCI Master Read Prefetch
	Disabled	Disable PCI Master Read Prefetch
• PCI #2 Access #1 Retry	*Enabled*	Enable PCI #2 Access #1 Retry
	Disabled	Disable PCI #2 Access #1 Retry
• AGP Master 1 ws Write	*Enabled*	Enable AGP Master 1 ws Write
	Disabled	Disable AGP Master 1 ws Write
• AGP Master 1 ws Read	*Enabled*	Enable AGP Master 1 ws Read
	Disabled	Disable AGP Master 1 ws Read
• PCI IRQ Actived By	*Level*	Select PCI IRQ Active mode
	Edge	

3.8 Load Setup Defaults

The Setup Defaults is common and efficient setting.

3.9 Integrated Peripherals

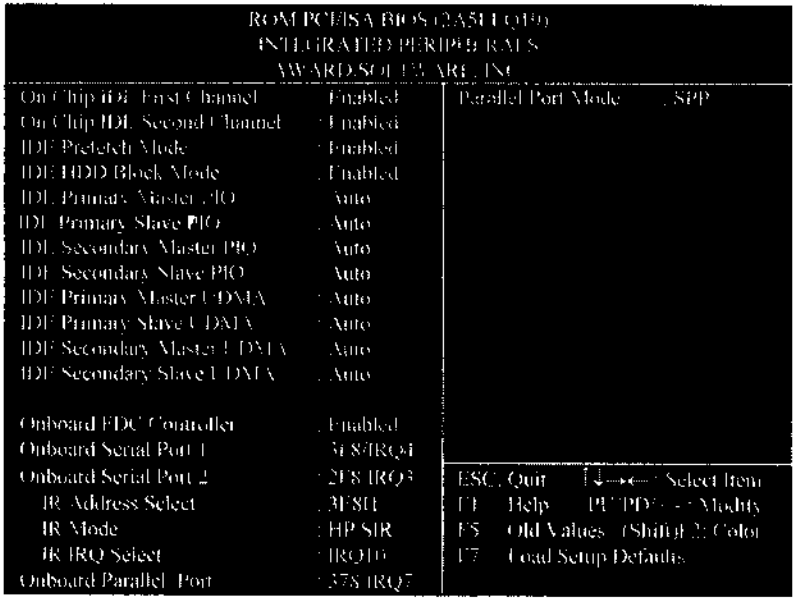


Figure 3-8 Integrated Peripherals Menu

The following pages tell you the options of each item and describe the meaning of each option.

Item	Option	Description
• On Chip IDE First / Second Channel	***Enabled***	Enable on chip IDE First/Second Channel
	Disabled	Disable on chip IDE First/Second Channel
• IDE Prefetch Mode	***Enabled***	Enable IDE Prefetch Mode
	Disabled	Disable IDE Prefetch Mode
• IDE HDD Block Mode	***Enabled***	Allows IDE HDD read/write several sectors one time.
	Disabled	IDE HDD only reads/writes a sector one time.
• IDE Primary/Secondary Master/Slave PIO/UDMA	***Mode 0 - 4***	Defines the IDE primary/secondary master/ slave PIO mode.
	Auto	The IDE PIO mode is defined according to auto - detect
• Onboard FDC Controller	***Enabled***	Onboard floppy disk controller is enabled.
	Disabled	Onboard floppy disk controller is disabled.

• Onboard Serial Port 1/2	*3F8/IRQ4,* *2F8/IRQ3,* *3E8/IRQ4,* *2E8/IRQ3,* *Disabled*	Defines onboard serial port address and required interrupt number. Onboard serial port is disabled.
• IR Address Select	*Disabled*	This item is used to configure IR Address
• IR Mode	*HP SIR* *ASKIR*	This item is used to configure IR Mode
• IR IRQ Select	*IRQ3* *IRQ4* *IRQ10* *IRQ11*	This item is used to configure IR IRQ
• Onboard Parallel Port	*1.7* *1.9*	Defines EPP version.
• Parallel Port Mode	*SPP* *ECP*	Select parallel port mode

3.10 Password Setting

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

ENTER PASSWORD

Type the password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable password, just press <Enter> when you are prompted to enter password. A message will confirm the password being disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

PASSWORD DISABLED

If you select "**System**" at "Security Option" of "BIOS Features Setup" Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter "CMOS Setup".

If you select "**Setup**" at "Security Option" of "BIOS Features Setup" Menu, you will be prompted for the password only when you try to enter "CMOS Setup".

3.11 IDE HDD Auto Detection

The Enhanced IDE features was included in all Award BIOS. Below is a brief description of this features.

ROM/PCI/ISA BIOS (2A59IQ1G)
IDE HDD AUTO DETECTION
AWARD SOFTWARE, INC.

HARD DISKS TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE

Primary Master:

Select Primary Master Option (N=Skip): N

OPTION	SIZE	CYLS	HEADS	PRECOMP	LANDZ	SECTORS	MODE
2(Y)	541	525	32	0	1049	67	LBA
1	541	1050	16	65535	1049	63	NORMAL
3	541	525	32	65535	1049	63	LARGE

Note: Some OSes (like SCO-UNIX) must use "NORMAL" for installation

Figure 3-9 IDE HDD Auto Detection Menu

3.11.1 Setup Changes With auto-detection

- BIOS setup will display all possible modes that is supported by the HDD including NORMAL, LBA and LARGE.
- If HDD does not support LBA modes, no "LBA" option will be shown.
- If number of physical cylinders is less than or equal to 1024, "LARGE" option may not be shown.
- Users can select a mode which is appropriate for them.

With Standard CMOS Setup

	CYLS	HEADS	PRECOMP	LAND ZONE	SECTOR	MODE
Drive C:User (516MB)	1120	16	65535	1119	59	Normal
Drive D:User (203MB)	684	16	65535	685	38	-------

When HDD type is in "user" type, the "MODE" option will be opened for user to select their own HDD mode.

3.11.2 HDD Modes

The Award BIOS supports 3 HDD modes: NORMAL, LBA and LARGE, and Auto detect.

NORMAL

Generic access mode in which neither the BIOS nor the IDE controller will make any transformation during accessing. The maximum number of cylinders, heads and sectors for NORMAL mode are 1024,16 and 63.

If user sets his HDD to NORMAL mode, the maximum accessible HDD size will be 528 megabytes even though its physical size may be greater than that.

LBA (Logical Block Addressing) mode

A new HDD accessing method to overcome the 528 Megabyte bottleneck. 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 sector, head and cylinder number into its own physical address inside the HDD. The maximum HDD size supported by LBA mode is 8.4 Gegabits.

LARGE mode

Some IDE HDDs contain more than 1024 cylinder without LBA support (in some cases, user do not want LBA). The Award BIOS provides another alternative to support these kinds of HDD.

BIOS tricks DOS (or other OS) that the number of cylinders is less than 1024 by dividing it by 2. At the same time, the number of heads is multiplied by 2. A reverse transformation process will be made inside INT13h in order to access the right HDD address.

Auto detect

If using Auto detect, the BIOS will automatically detect IDE hard disk mode and set it to one kind of HDD modes.

3.11.3 Remark

To support LBA or LARGE mode of HDDs, there must be some software involved which are located in Award HDD Service Routine(INT13h).It maybe fail to access a HDD with LBA (LARGE) mode selected if you are running under an Operating System which replaces the whole INT 13h.

3.12 Power - On Boot

If you have made all the changes to CMOS values and the system can not boot with the CMOS values selected in Setup, restart the system by turning it OFF then ON or press the "RESET" button on the system case. You may also restart the system by simultaneously pressing < Ctrl >, < Alt > and < Del > keys.

Appendix A.
Utility Diskette

You may use this diskette to update your BIOS when necessary.

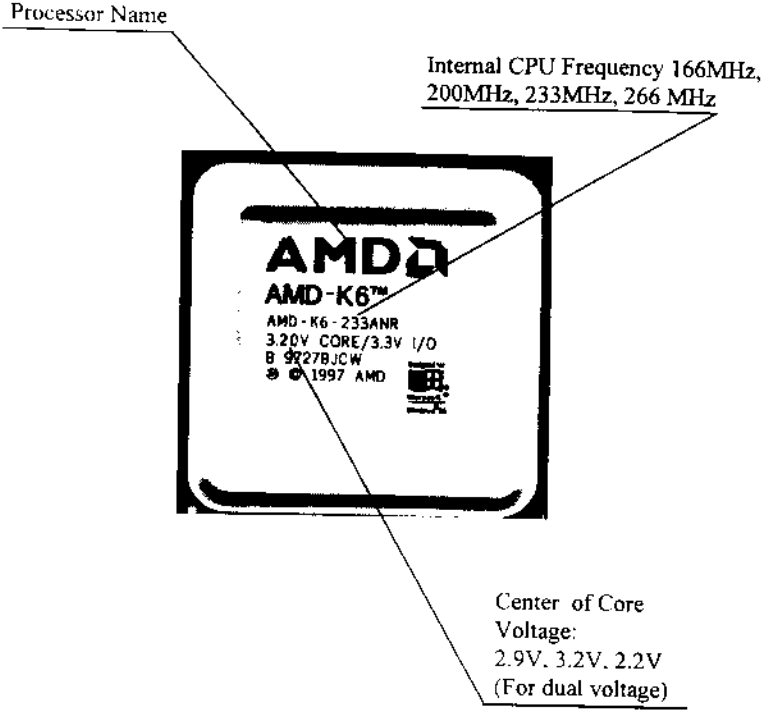
For the most update and additional information about BIOS upgrade, please refer to "README" in the "Utility Diskette "

Warning:

- We strongly recommend that you only upgrade BIOS when in trouble.
- Before you update your BIOS, you should look over the "README" file to avoid making mistake.

Appendix C.

Introduce AMD-K6 CPU mark:



Appendix D.

Introduce Cyrix 6x86 CPU mark:

Name of the
processor
6x86, 6x86L

P-Rating
90+, 120+, 133+
150+, 166+, 200+

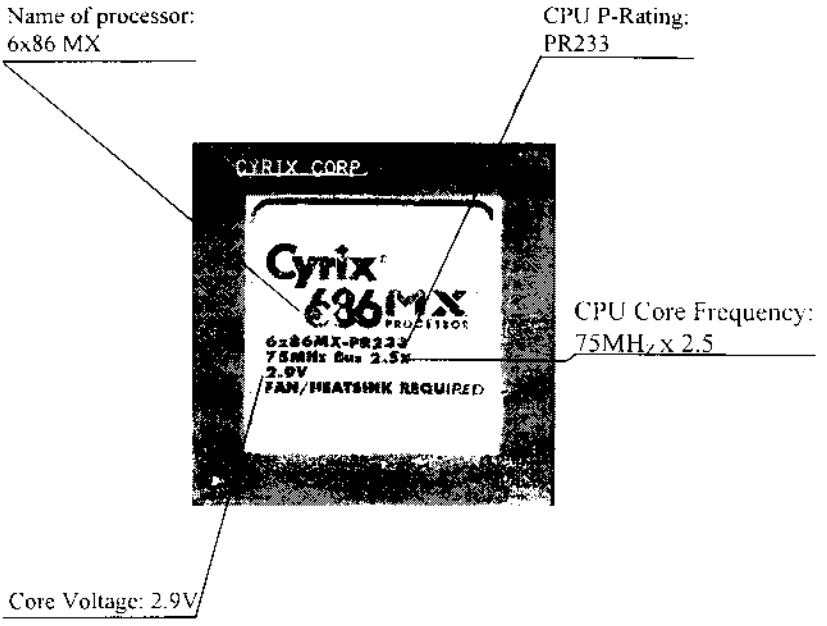
CPU Core
Frequency
100, 110, 120,
133, 150MHz

Center of Core
Voltage:
3.3V, 3.52V
(For single voltage)
2.8V, 2.9V
(For dual voltage)

CPU Voltage:
Full spec.: 3.15V~3.70V
C-spec.(016):3.15V~3.45V-->3.3V
C-spec.(028):3.40V~3.70V-->3.5V

Appendix E.

Introduce Cyrix 6x86MX CPU mark:



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