PENTIUM ®II

P6I440LX/L6

Declaration of conformity

CE (EC conformity marking)

QUANTUM DESIGNS(HK) LTD.
5/F Somerset House, TaiKoo Place 979 Kings Road,
Quarry Bay, Hong Kong

declares that the product

Pentium® II Motherboard
P6I440LX/L6

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
☑	EN 50082-1	Generic immunity standard Part 1: Residential, commercial and light industry

European Representative:

QDI COMPUTER (UK) LTD	QDI COMPUTER (SCANDINAVIA) A/S
QDI SYSTEM HANDEL GMBH	QDI COMPUTER (NETHERLANDS) B. V.
QDI COMPUTER (FRANCE) SARL	QDI COMPUTER HANDELS GMBH
QDI COMPUTER (ESPANA) S.A.	QDI COMPUTER (SWEDEN) AB

Signature : _____ Place / Date : HONG KONG /1998

Printed Name : Anders Cheung Position/ Title : President

Declaration of conformity

Trade Name:	QDI Computer (U. S . A.) Inc.
Model Name:	P6I440LX/L6
Responsible Party:	QDI Computer (U. S. A.) Inc.
Address:	41456 Christy Street Fremont, CA 94538
Telephone:	(510) 668-4933
Facsimile:	(510) 668-4966
Equipment Classification:	FCC Class B Subassembly
Type of Product:	Pentium® II Motherboard
Manufacturer:	**Quantum Designs (HK) Inc.**
Address:	5/F, Somerset House, TaiKoo Place 979 Kings Road, Quarry Bay, HONG KONG

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

Notice

The information in this document is subject to change in order to improve reliability, design, or function without prior notice and does not represent a commitment on the part of this company. In no event will we be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or the possibility of such damages.

If you need any further information, please visit our web site: www.qdigrp.com".

CONTENTS

ENGLISH

SpeedEasy Quick Setup

Procedures :

1. Correctly insert the Pentium® II or Intel® Celeron™ Processor.
2. Plug in other configurations and restore the system.
3. Press the <Del> key and switch on power to the system to enter BIOS Setup.
4. Enter "SpeedEasy CPU SETUP" menu to set up the CPU speed.

Note: If you do not set the CPU speed, your system will run at the default setting (133MHz).

5. Save and exit BIOS Setup, your system will now boot successfully.

SpeedEasy CPU Setup Menu

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

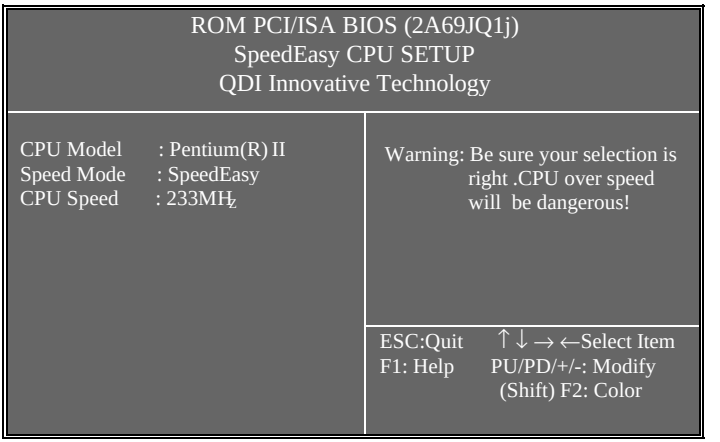


Figure -1 SpeedEasy CPU Setup Menu

BIOS provides you with a set of basic values for your processor selection instead of the jumper settings. Manually select processor speed on the "SpeedEasy CPU SETUP" menu screen.

Warning:
Do not set CPU frequency higher than its working frequency. If you do, we will not be responsible for any damage caused.

DEUTSCH

Schnell-Installation durch SpeedEasy

Vorgehensweise der Installation:

1. Legen Sie die Pentium® II/Intel® Celeron™ im Slot 1 mit Hilfe der mitgelieferten Halterung.
2. Vervollst dgen Sie das System mit den weiteren erforderlichen Computerkomponenten
3. Dr點ken Sie die aste < Entf > und schalten Sie das System an um in das BIOS-setup zu gelangen.
4. Steigen Sie in das Menü pSedEasy CPU SETUP" ein, um die Geschwindigkeit einzustellen.

ACHTUNG: Falls Sie die Taktfrequenz der CPU nicht setzen, arbeitet lhr System mit den Standardwerten f黵 die CPU. Bei der Pentium® II/Celeron™ ***sind das 133MH$_z$.***

5. Speichern Sie die Einstellungen und verlassen Sie das BIOS, um die zuvor eingestellte Taktfrequenz zu aktivieren.

SpeedEasy CPU Installationsmenü

W lhn Sie < SpeedEasy CPU SETTING> aus dem Hauptmenu und fnen Sie das untergeordnete Menü

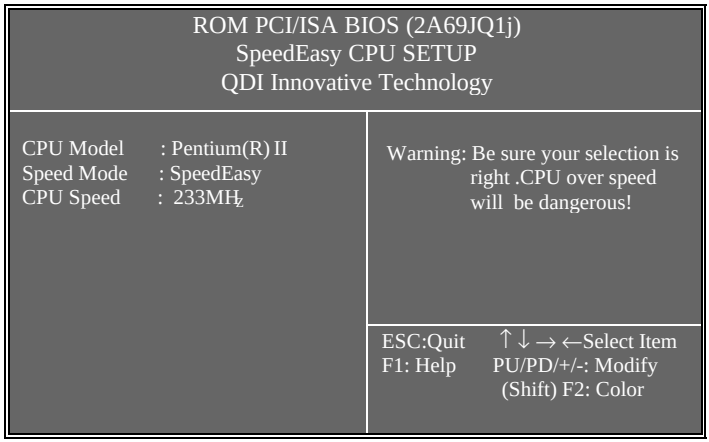


Abb.1 SpeedEasy CPU Installationsmenü

Das BIOS stellt lhnen eine Reihe von Grundeinstellungen fur lhren CPU zur Verf黦ung, anstelle von uhper Setting". Sie k nn manuell die Geschwindigkeit der CPU innerhalb des pSedEasy CPU SETUP" einstellen.

Warnung:
Bitte setzen Sie die Taktfrequenz der CPU nicht h eh als die tats hliche freigegebene Taktfrequenz, ansonten kann QDI 黦ine rechtliche Anspruche nicht herangezogen werden.

SpeedEasy Instalaci n r pida

Procedimiento:

1. Introduzca correctamente el Pentium® II/ Intel® Celeron™.

2. Finalize el proceso de ensamblaje de su equipo.

3. Presione la tecla <Supr> y encienda el sistema, para entrar en BIOS.

4. Entre al menu "SpeedEasy CPU SETUP" para establecer la velocidad de su
   CPU.

Nota: Si no establece la velocidad del CPU, su sistema funcionará a la velocidad minima por defecto (133MHz)

5. Salve y salga de BIOS, luego su sistema arrancará a la velocidad por Ud. seleccionada.

Menu del SpeedEasy CPU

Seleccione el item <SpeedEasy CPU SETUP> desde el menu principal , y entre en el submenu:

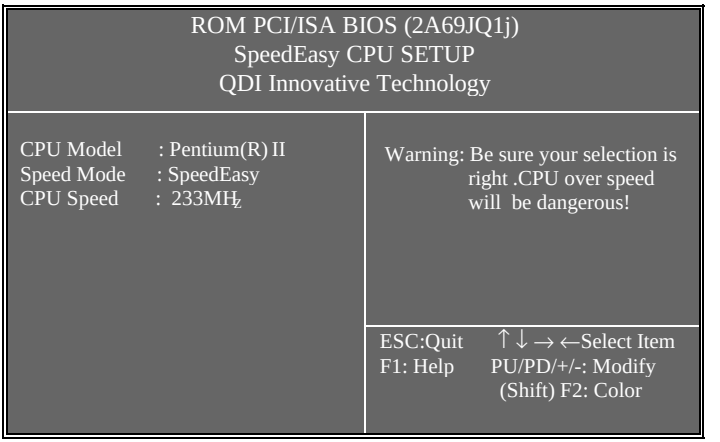


Figura-1 Menu del CPU SpeedEasy

BIOS le proporcionará unos valores b icos para la elecci de su CPU, en vez de tener que configurar jumpers. Ud. puede seleccionar manulmente la velocidad de CPU en el menu pEedEasy CPU SETUP".

Aviso

NO es recommendable selecclonar una frecuencia de trabajo super r a la cual esta dise da su CPU. De otra manera, no seremos responsables de los da s que esto pudiera ocasionar.

Facilité de vitesse Initialisation

Procédure:

1. Insérez le Pentium® II/Intel® Celeron™ correctement.
2. Connectez les autres configurations et restaurez le système.
3. Appuyez sur la touche <Del> et mettez le système sous tension pour entrer dans l'initialisation BIOS.
4. Entrez le menu "SpeedEasy CPU SETUP" (=initialisation de la facilité de vitesse dans l'unité centrale) pour déterminer la vitesse de l'unité centrale.

Note: Si vous ne déterminez pas la vitesse de votre unité centrale, votre système fonctionnera par défaut (133MHz).

5. Sauvegardez et sortez de la position BIOS. Le système pourra alors démarrer avec le succès auquel vous vous attendez.

FRANÇAIS

Menu d nitialisation de pSedEasy" dans l nité centrale.

Sélectionnez la rubrique <SpeedEasy CPU SETUP> dans le menu principal et entrez le sous-menu:

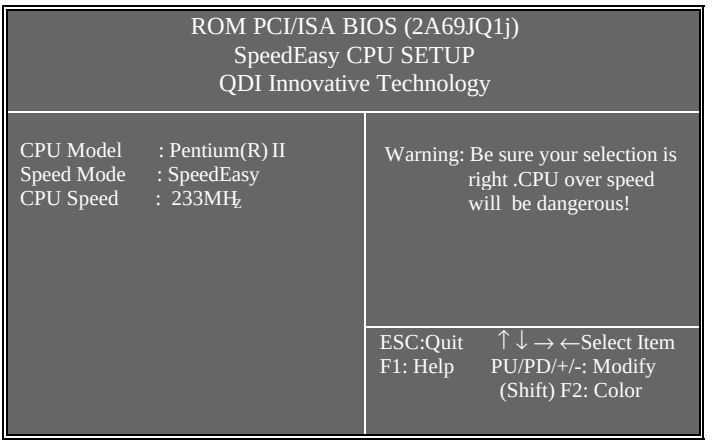


Figure-1 Menu d nitialisation de pSedEasy" dans l nité centrale

BIOS fournira un jeu de valeurs de base pour votre sélection de CPU au lieu de positions cavaliers. Vous pouvez sélectionner manuellement la vitesse de CPU dans l ffichage du menu pSedEasy CPU SETUP".

Avertissement:
Ne vous laissez pas aller à installer une fr uence à l' unité centrale sup ieure à sa fr uence de travail. Sinon nous d lierons toutes responsabilit en ce qui concerne les d gs qui en r ulteraient.

SETUP DELLA SCHEDA SPEEDEASY

Procedura di installazione:

1. Inserite il microprocessore Pentium® II/Intel® Celeron™ come da istruzioni.
2. Modificate la configurazione del computer e ripristinate il sistema.
3. Premete il tasto <Del> e accendete il computer per entrare nel setup BIOS.
4. Entrate nel menu "SpeedEasy CPU* SETUP" per regolare la velocità del microprocessore.

Nota: se non regolate la velocità del microprocessore, il sistema funzionerà con le regolazioni standard (133MHz).

5. Salvate e uscite dal Setup BIOS, e fate ripartire il computer.

ITALIANO

*CPU= microprocessore

Menu del Setup del Microprocessore SpeedEasy

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

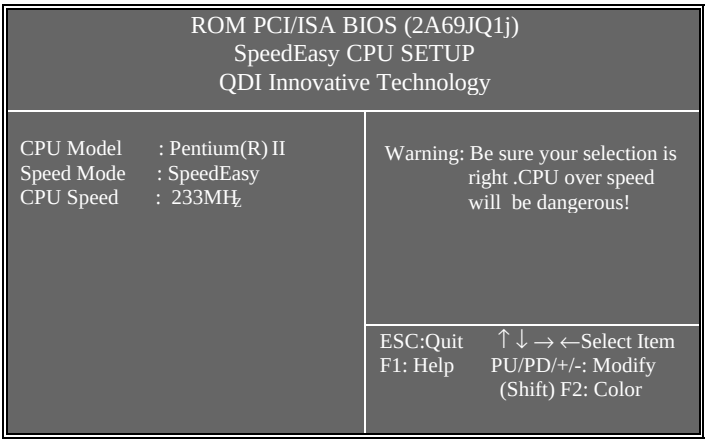


Figure -1 Menu del Setup del Microprocessore SpeedEasy

I1 sistema BIOS Vi fornirà una serie di valori base per la selezione del microprocessore CPU al posto della regolazione jumper (dell a ccoppiamento). Potete selezionare manualmente la velocià del CPU sulla schermata pSedEasy CPU SETUP".

Avvertenza:
non dovete regolare la frequenza del microprocessore più alta di quella predisposta, altrimenti la casa produttrice non si farà carico di eventuali danni al micorprocessore

SpeedEasy

:

1、 Pentium II Intel® Celeron™ 。

2、 , 。

3、 , <Del> , BIOS 。

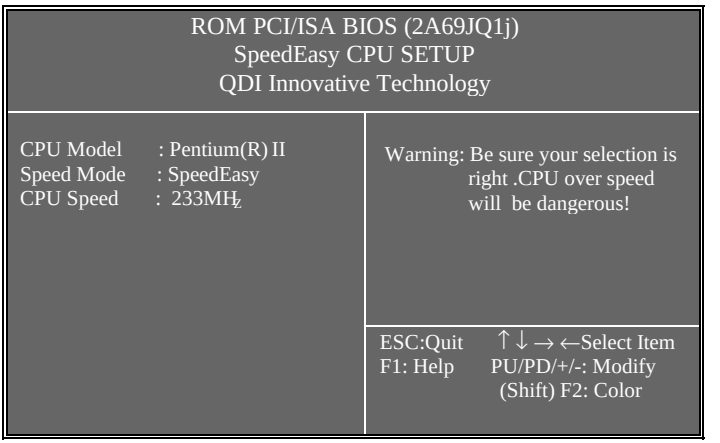
4、 pSedEasy CPU SETUP” , 。

: ,
133MHz。

5、 BIOS 。
。

SpeedEasy

<SpeedEasy CPU SETUP> , :



—1 SpeedEasy

BIOS ,
(Jumper) , pSedEasy CPU SETUP" ,
。

: ,

。

SpeedEasy

:

1、 Pentium II Intel® Celeron™ 。

2、 , 。

3、 , <Del> , BIOS 。

4、 pSedEasy CPU SETUP” , 。

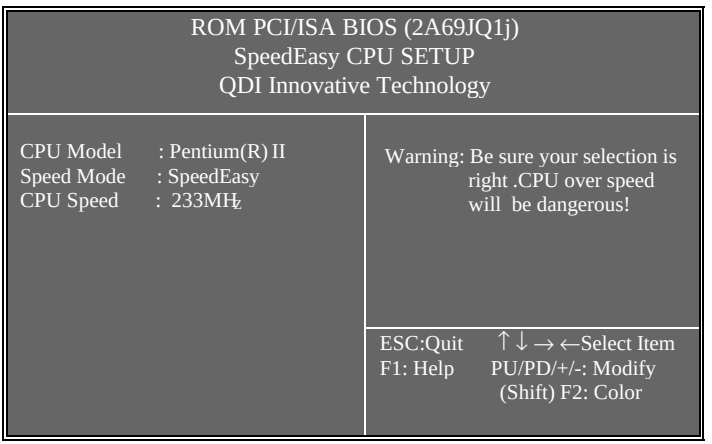
: ,
133MHz。

5、 BIOS 。

。

SpeedEasy

<SpeedEasy CPU SETUP> , :



—1 SpeedEasy

BIOS ,
(Jumper) , pSedEasy CPU SETUP”
, 。

: ,

。

Chapter 1
Introduction

Overview

P6I440LX/L6 green mainboard provides a highly integrated solution for fully compatible, high performance PC/AT platform, and supports Pentium®II and Intel®Celeron™ processors. Flexible main memory size can be installed from 8MB up to 256MB for SDRAM or 8MB up to 512MB for EDO DIMM, so as to provide full play to the advantages of Pentium®II processors. The mainboard offers a wide range of interfaces to support integrated on-board IDE and on-board I/O functions. It also supports the function of wake-up on LAN and wake-up on modem.

The current green function is compliant with ACPI specification and OS Directed Power Management.

Key Features

Form factor

- Baby AT form factor of 220mm x200mm.

Microprocessor

- Supports Pentium®II and Intel® Celeron™ processors at 233/266/ 300/333MHz.
- Supports 66MHz bus speed.
- CPU core frequency = System Clock x2.5, x3, x3.5, x4, x4.5, x5, x5.5
- On board switching voltage regulator with VID(Voltage ID), CPU core supply voltage can be selected from 1.3V to 3.5V automatically.

Chipset

- Intel® 440LX AGPset : 82443LX, 82371EB (PIIX4E).

System memory

- Two 168 pin 3.3V unbuffered DIMM sockets.
- Supports up to 256MB SDRAM or up to 512MB EDO.
- Supports memory ECC (Error Checking and Correction) function.

On-board IDE

- Supports two PCI PIO and bus Master IDE ports.
- supports up to Mode 4 Timing.
- Supports 2 Fast IDE interfaces supporting 4 IDE devices including IDE hard disks and CD ROMs.
- Supports Ultra DMA/33" Synchronous DMA mode, transfers up to 33 Mbytes/sec.
- Integrated 8x32bit buffer for IDE PCI Burst Transfers.

Green function

- Supports Advanced Configuration and Power Interface (ACPI) specifications also OS Directed Power Management.
- Supports three green modes: Doze, Standby and Suspend.
- Green LED will flash when the system is in the green status.

On-board I/O

- Use Winbond W83977 Super I/O chip.
- One floppy port supports up to two 3.5 or 5.25" floppy drives with 360K/720K/1.2M/1.44M/2.88M format.
- Supports LS-120 floppy disk drive.
- All I/O port can be enabled/disabled by the BIOS setup.
- Two high speed 16550 fast compatible UART (COM1/COM2/COM3 /COM4 selective) with 16-byte send/receive FIFOs and supported MIDI mode.
- One enabled parallel port at the I/O address 378H/278H/3BCH with additional bi-direction I/O capability and multi-mode (SPP/EPP/ECP) (IEEE1284 compliant).
- Circuit protection provided to prevent damage to the parallel port when a connected printer is powered up or operates at a higher voltage.

Advanced Features

- On board W83781D supports system monitoring(monitors system voltages, chassis intrusion and FAN speed) (Optional).
- Supports LDCM(LanDesk Client Manager) software (Optional).
- On board PS/2 mouse and PS/2 keyboard socket (Optional).
- Two USB ports.
- On board switching voltage regulator with VID (support from 1.3V to 3.5V).
- Provides Anti-Virus function.
- Provides Infrared interface.
- Supports Windows 95 Software Power-Down when using ATX power supply.
- Supports External Modem Ring Power-On when using ATX power supply.
- Supports Wake- up On LAN and Wake-up On Internal Modem function when using ATX power supply.
- Supports Auto Fan off when the system enters suspend mode.

BIOS

- Licensed advanced AWARD BIOS, Supports Flash ROM BIOS, Plug and play ready.
- Supports IDE CD-ROM or SCSI boot up.

Expansion slots

- 2 ISA slots and 3 PCI slots.
- 1 AGP Slot.

Chapter 2
Connector Configuration

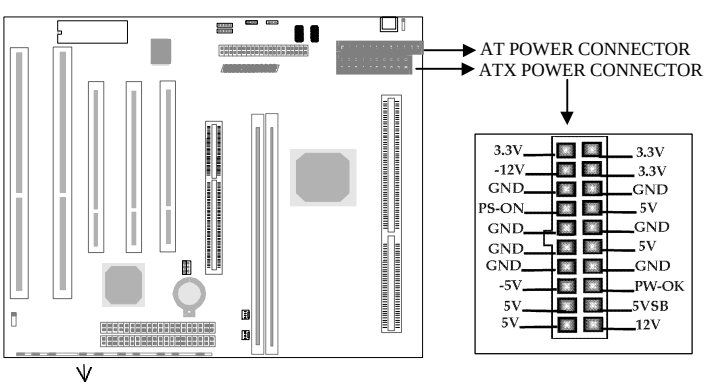
This section lists all connector pins assignment and port descriptions on the motherboard. The particular state of the connectors and ports are illustrated in the following figures. Before inserting these connectors, please pay attention to the directions.

AT Power Connector (J24)

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

ATX Power Connector(J20) & Power Switch (Power)
The power switch should be connected to a momentary switch only when ATX Power Supply is used.
1. When powering up your system, turn on the mechanical switch of the ATX power supply first, then push once the button of the momentary switch.

2. If you want to power off your system, you need not turn off the mechanical switch of the ATX power supply, ***push once**** again the button of the momentary switch(POWER). The location of connector is as shown in the figure below:



****Note: If you change "Soft-off by PWR-BTTN" from default "Instant-off" to "Delay 4 Secs", the power button should be pressed for more than 4 seconds before the system powers down. For details, please refer to Page 3-11.***

Hard Disk LED Connector(HD_LED)

PIN NUMBER	FUNCTION
1	LED ANODE
2	LED CATHODE

Reset Switch (RESET)

SETTING	FUNCTION
CLOSE ONCE	RESET THE SYSTEM
OPEN	NORMAL

Speaker Connector(SPEAKER)

PIN NUMBER	FUNCTION
1	SPKDATA (for speaker)
2	NC
3	GND
4	VCC (for speaker)

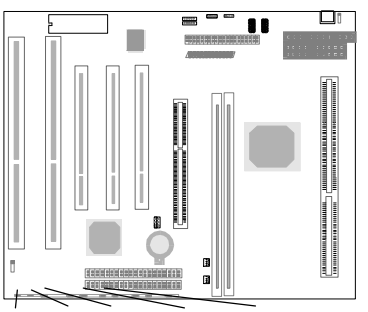
Power LED Connector (PWR_LED)

PIN NUMBER	FUNCTION
1	LED ANODE
2	LED CATHODE/GND
3	LED CATHODE/GND

The LED connected to "PWR_LED" will light slightly when the system is in the standby status.

KEY_LOCK Connector(KEY_L)

PIN NUMBER	FUNCTION
1	KEYLOCK
2	GND



Green LED Connector (GREEN_LED)

PIN NUMBER	FUNCTION
1	LED ANODE
2	LED CATHODE/GND
3	LED CAHODE/GND

Green LED will flash when the system enters the green mode.

Hardware Green Connector (SLEEP)

SETTING	FUNCTION
CLOSE ONCE	HARDWARE GREEN
OPEN	NORMAL

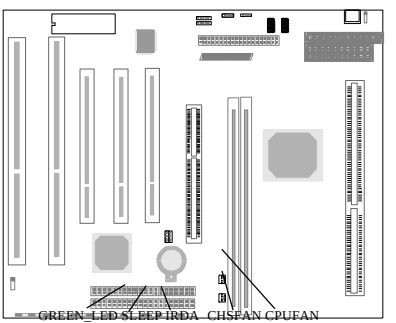
Infrared Header (IRDA)

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

Fan Connector(CPUFAN, CHSFAN)

PIN NAME	FUNCTION
-	GND
+	+12V
S	Signal

These two fans are controllable. They will be automatically turned off after the system enters the suspend mode.



Wake-Up On LAN (WOL)

PIN NUMBER	FUNCTION
1	+5V Standby
2	GND
3	Signal for waking up (active high)

If the Wake-Up On LAN function is to be used, please connect this header to a LAN adapter, set "Resume by LAN/Ring" to Enabled at the "POWER MANAGEMENT SETUP" in BIOS setup, then boot to operating system once, making sure this function takes effect.

Wake-Up On Internal Modem (WOM)

PIN NUMBER	FUNCTION
1	+5V Standby
2	Signal for waking up (active low)
3	GND

Chassis Security (CHSSEC):

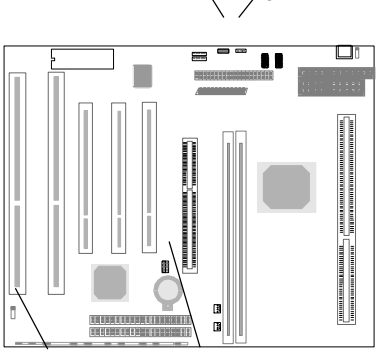
SETTING	FUNCTION
CLOSED	If chassis is opened
OPENED	If chassis is closed

This header is optional.

Sound Connector (PC-PCI)

PIN NUMBER	FUNCTION
1	PC/PCI DMA ACKNOWLEDGE
2	GND
3	KEY
4	PC/PCI DMA REQUEST
5	GND
6	SERIAL INTERRUPT REQUEST

This connector is for the usage of PCI sound card.



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
USB1	First USB Port
USB2	Second USB Port
AGP	Accelerated Graphics Port

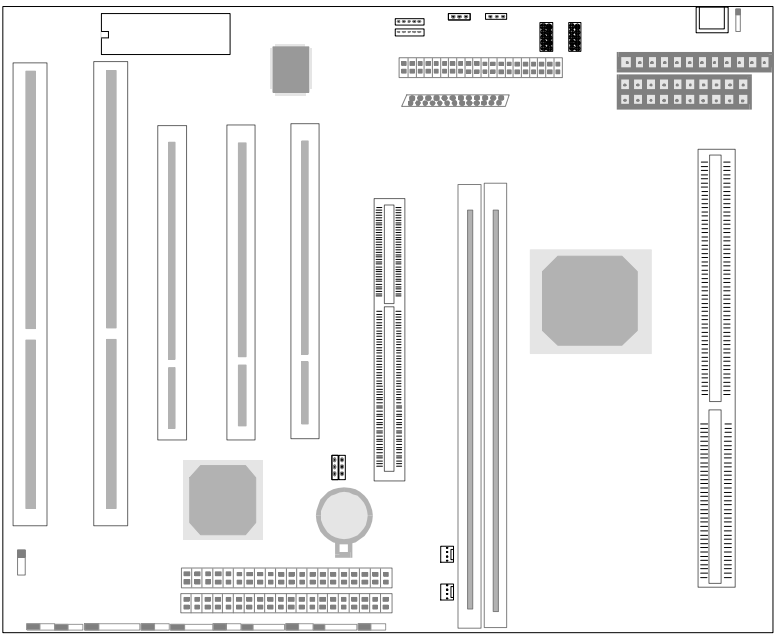


Figure 2-1 Location of All Connectors on Board

CHSSEC PC-PCI

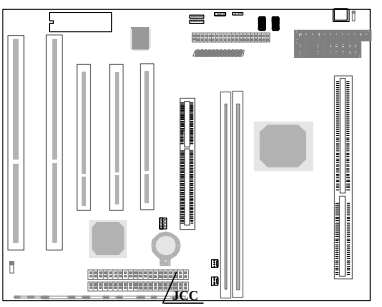
Memory Configuration

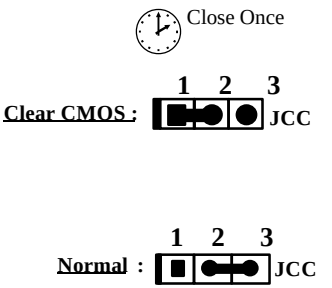
The P6I440LX/L6 motherboard provides two 168 pin 3.3V un-buffered DIMM sockets to support a flexible memory size ranging from 8MB to 256MB for SDRAM or from 8MB up to 512MB for EDO. The following set of rules allow optimum configurations.

Rules for populating a 440LX memory array:

- The DRAM Timing register, which provides the DRAM speed grade control for the entire memory array, must be programmed to use the timings of the slowest DRAMs installed.
- Possible EDO DIMM memory sizes are 8MB, 16MB, 32MB, 64MB, 128MB, 256MB in each DIMM socket.
- Possible SDRAM memory sizes are 8MB, 16MB, 32MB, 64MB, 128MB in each DIMM socket.

Clear CMOS





Note: The AC power supply(110/220V) must be unplugged when wanting to clear CMOS.

Chapter 3
BIOS Description

Utility Support:

FLASH.EXE

This is a flash memory write/read utility which can be used for the purpose of updating your BIOS when necessary. Before doing so, please note:

- **We strongly recommend you only upgrade BIOS when encountering problems.**
- **Before upgrading your BIOS, review the description below to avoid making mistakes, resulting in a destroyed BIOS and a non-working system.**

When you are encountering problems, for example, you find your system doesn't support the new CPU which is released after our current motherboard, you may therefore update the BIOS.

Follow the steps exactly for a successful upgrade.

1. Create a bootable system floppy diskette, type Format A:/s from the DOS prompt under DOS6.xx or Windows 9x environment.
2. Copy FLASH.EXE from the directory \Utility on the QDI Motherboard Utility CD onto your new bootable diskette.
3. Download the updated BIOS file from the Website (http://www.qdigrp.com). Please be sure to download the suitable BIOS file for your motherboard.
4. Uncompress the file download, copy the BIOS file (xx.bin) onto the bootable diskette, and write down the checksum of this BIOS which is included in readme file.
5. Reboot the system from the bootable diskette which you have created.
6. Then run the FLASH utility at the A:\prompt. During the process, the system will prompt: "Do you want to save the BIOS(Y/N)". If you type "Y" the system will prompt for the BIOS name. The system will also display the checksum which should be exactly the same as the checksum you copy from the readme file. Don't turn off power or reset the system until the BIOS upgrade has been completed.

Concerning how to run the FLASH utility, please refer to the following descriptions:

Usage: FLASH [BIOSfile] [/c]<command ..>][/n]
FLASH [BIOSfile] [/g]

/c: Flashing memory will clear previous settings. Default allows settings to remain.

<command> function definition:

c: clear CMOS;
p: clear PnP;
d: clear DMI.
/n: programs BIOS without prompting. If this option is chosen:
Be sure your new BIOS is compatible with your MB. If not, the system will be damaged.
/g: Retrieves BIOS file from BIOS ROM.

Examples:
A:\FLASH.EXE BIOSfile.bin
A:\FLASH.EXE BIOSfile.bin/cdpc/n
A:\FLASH.EXE BIOSfile.bin/g

Note: FLASH utility runs incorrectly at Windows DOS prompt.

AWARD BIOS Description:

Entering Setup

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

Press <Del> to enter SETUP

Once you have entered, the Main Menu (Figure 1) will appear on the screen. The main menu allows you to select from twelve setup functions and two exit choices. Use the arrow keys to select among the items and press the <Enter> key to accept or enter the sub-menu.

ROM PCI/ISA BIOS (2A69JQ1j) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
SpeedEasy CPU SETUP	SYSTEM MONITOR
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	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 ...	

Figure-1 Main Menu

**Note: The item of "SYSTEM MONITOR" will not be displayed if there is no W8378ID on the motherboard.*

Load Setup Defaults

The Setup Defaults are common and efficient.

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.

ROM PCI/ISA BIOS(2A69JQ1j)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC

Date (mm:dd:yy) : Thu, Apr 28 1998
Time (hh:mm:ss) : 17:27:52

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.
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

Figure-2 Standard CMOS Setup Menu

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

The categories identify the HDD types of the 2 IDE channels that have been installed in the computer. There are 45 predefined types and 4 user definable types which are used for Enhanced IDE BIOS. Type 1 to Type 45 are predefined. Type "User" is user-definable. If your hard disk drive type does not match with the drive table listed, you can use Type "User" to manually define your own drive type.

If you have selected Type "Auto", that means the system can auto-detect your hard disk when booting up. If you select Type "User", the

related information should be entered regarding the following items. Enter the information directly from the keyboard and press <E**nter**>:

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

Video

There are 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 **"EGA/VGA"** mode.

II. When monochrome is used as primary and VGA is used as secondary,

the selection of the video type is **"Mono"** 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.

Halt On

This category determines whether or not the computer will stop 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.

Memory

This category displays 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 how much extended memory is presented during the POST.
Other Memory	This is the memory that can be used for different applications. Shadow RAM is generally used in this field.
Total Memory	Total memory of the system equals the sum of the above memory.

SpeedEasy CPU Setup

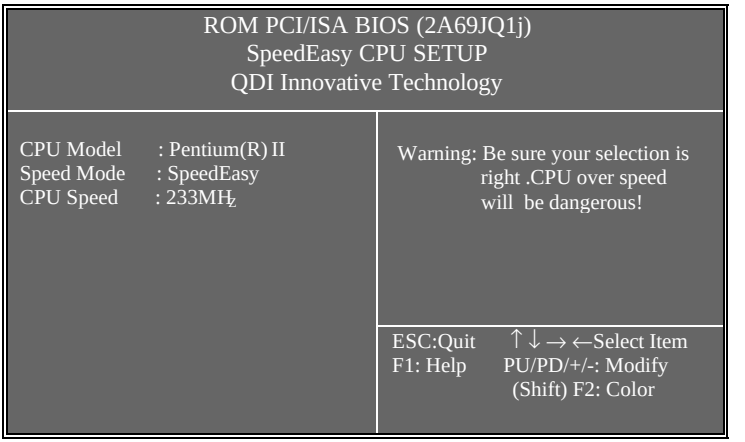


Figure-3 SpeedEasy CPU Setup

The following indicates the options of each item and describes their meaning.

Item	Option	Description
• CPU Model		BIOS can automatically detect the CPU model, so this item is shown only. It could be Pentium(R) II or Intel(R) Celeron(TM), depending on the processor chosen.
• Speed Mode	*SpeedEasy*	Select the CPU speed according to your CPU brand and type.
	Jumper Emulation	This item is only for the user who understands all the CPU parameters, i.e. System Bus frequency, "66MHz" and multiplication of Processor Core frequency to System Bus frequency "×2.5, ×3, ×3.5, ×4, ×4.5, ×5, ×5.5".

BIOS Features Setup

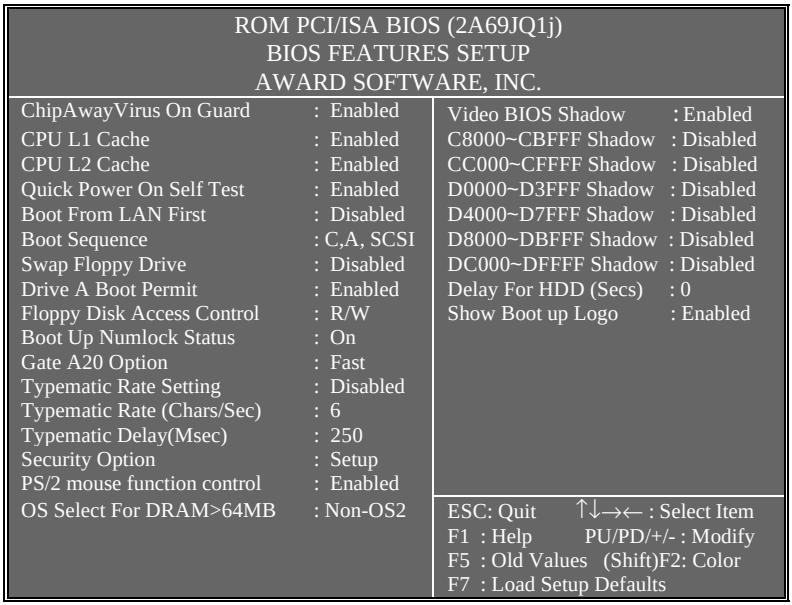


Figure-4 BIOS Features Setup Menu

The following indicates the options of each item and describes their meaning.

Item	Option	Description
• ChipAwayVirus On Guard	*Enabled*	Guards against boot virus threats early in the boot cycle, before they have a chance to load into your system, ensuring your computer boots to a clean operating system.
	Disabled	Invalidates this function.
• CPU L1/L2 Cache	*Enabled*	Enables CPU internal Level1/Level2 cache.
	Disabled	Disables CPU internal Level1/Level2 cache.
• Quick Power On Self Test	*Enabled*	Enables quick POST. BIOS will shorten or skip some items normally checked during POST to speed up POST after you power on the computer.
	Disabled	Normal POST.
• Boot From LAN First	*Enabled*	Boot from LAN is ahead of any boot sequence selection (LAN Adapter must support this function)
	Disabled	Does not boot from LAN first
• Boot Sequence	*A,C,SCSI, ... C, CDROM,A*	Any search sequence can be chosen for booting.
• Swap Floppy	*Enabled*	Exchanges the assignment of A&B floppy drives.

Drive		
	Disabled	The assignment of A&B floppy drives are normal.
• Drive A Boot Permit	*Enabled*	Boot from drive A function is enabled.
	Disabled	Boot from drive A function is disabled.
• Floppy Disk Access Control	*R/W*	Users can both read from and write to floppy disk.
	Read only	Users can read from floppy disk but can not write to floppy disk
• 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 the keyboard controller or chipset hardware.
	Fast	It is default. The A20 signal is controlled by Port 92 or the specific chipset method.
• Typematic Rate Setting	*Enabled*	Enables typematic rate and typematic delay programming.
	Disabled	Disables typematic rate and typematic delay programming. The system BIOS will use the default value of these two items.
• Typematic Rate Chars/Sec)	6~30	Sets the speed of the typematic rate (characters per second).
• Typematic Delay (Msec)	*250 ~ 1000*	Sets 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 prompted.
	Setup	The system will boot up, but access to Setup will be denied if the correct password is not entered when prompted.
• PS/2 mouse function control	*Enabled*	Without using PS/2 mouse, all PS/2 resource will be released.
	Disabled	
• OS Select For DRAM>64MB	*Non-OS2*	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.
• 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	Sets the pre-delay time for hard disk to be accessed by the system.
• Show Boot up Logo	Enabled	Enables the logo when system boots up.
	Disabled	Logo will not be shown when system boots up.

Chipset Features Setup

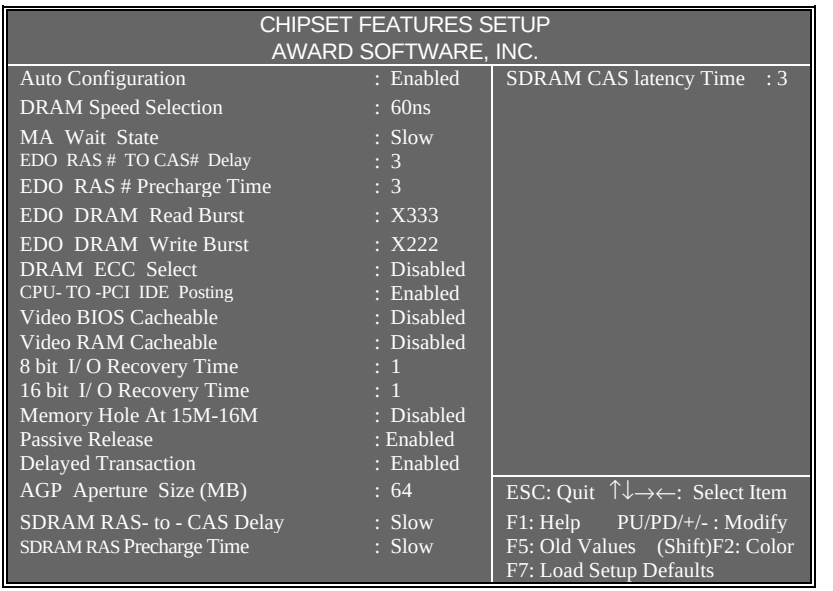


Figure-5 Chipset Features Setup Menu

The following indicates the options of each item and describes their meaning.

Item	Option	Description
• Auto Configuration	*Enabled*	Automatically configures DRAM Timing according to the value of "DRAM Speed Selection".
	Disabled	Manually configure. **Note: It is recommended that the "Enabled" option be chosen by common users.**
• DRAM Speed Selection	*50ns, 60ns*	This item is of selected EDO DRAM read/write timing. You must ensure that your DIMMs are as fast as 50ns, otherwise 60ns should be selected.
• MA Wait State	*Slow*	One additional wait state is inserted before the assertion of the first MA and CAS#/RAS# during DRAM read or write leadoff cycles. This affects page hit, row miss and page miss cases.
	Fast	Without additional wait state.
• EDO RAS# To CAS# Delay	*2*	Adds a delay time between the assertion of RAS# and CAS#
	3	Without additional delay time.
• EDO RAS# Precharge Time	*3*	DRAM RAS# time=3x system clocks.
	4	DRAM RAS# time=4x system clocks.

• EDO DRAM Read Burst	*3 3 3,* *2 2 2,*	The DRAM read burst timing depends on the type of DRAM on a per-row basis. Slower rates may be required to support slower DRAM.
• EDO DRAM Write Burst	*2 2 2,* *3 3 3,*	The DRAM write burst timing depends on the type of DRAM on a per-row basis. Slower rates may be required to support slower DRAM.
• DRAM ECC Select	*ECC*	Provides the ECC (Error Checking and Correction) function.
	Disabled	Disables the ECC / EC function.
• CPU-To-PCI IDE Posting	*Enabled*	Enables CPU-To-PCI write posting.
	Disabled	Disables CPU-To-PCI write cycles to IDE.
• Video BIOS Cacheable	*Enabled*	Beside conventional memory, video BIOS area is also cacheable.
	Disabled	Video BIOS area is not cacheable.
• Video RAM Cacheable	*Enabled*	Beside conventional memory, video RAM area is also cacheable.
	Disabled	Video BIOS area is not cacheable.
• 8 Bit I/ O Recovery Time	*1 8*	Defines the ISA Bus 8 bit I/O operating recovery time.
	NA	8 bit I/O recovery time does not exist.
• 16 Bit I / O Recovery Time	*1 4*	Defines the ISA Bus 16 bit I/O operating recovery time.
	NA	16 bit I/O recovery time does not exist.
• Memory Hole At 15M-16M	*Enabled*	Memory Hole at 15-16M is reserved for expanded PCI card.
	Disabled	Do not set this memory hole.
• Passive Release	*Enabled* *Disabled*	Default use is suggested.
• Delayed Transaction	*Disabled* *Enabled*	Default use is suggested.
• AGP Aperture Size (MB)	*4 256*	Sets the effective size of the Graphics Aperture to be used in the particular PAC Configuration.
• SDRAM RAS-To-CAS Delay	*Fast*	RAS-To-CAS Delay time=2 HCLK
	Slow	RAS-To-CAS Delay time=3 HCLK
• SDRAM RAS Precharge Time	*Fast*	RAS Time=2 HCLK
	Slow	RAS Time=3 HCLK
• SDRAM CAS Latency Time	*Fast*	Defines the CLT timing parameter of SDRAM expressed in 66 MHz clocks. Latency Time=2 clocks.
	Slow	Latency Time=3 clocks.

Power Management Setup

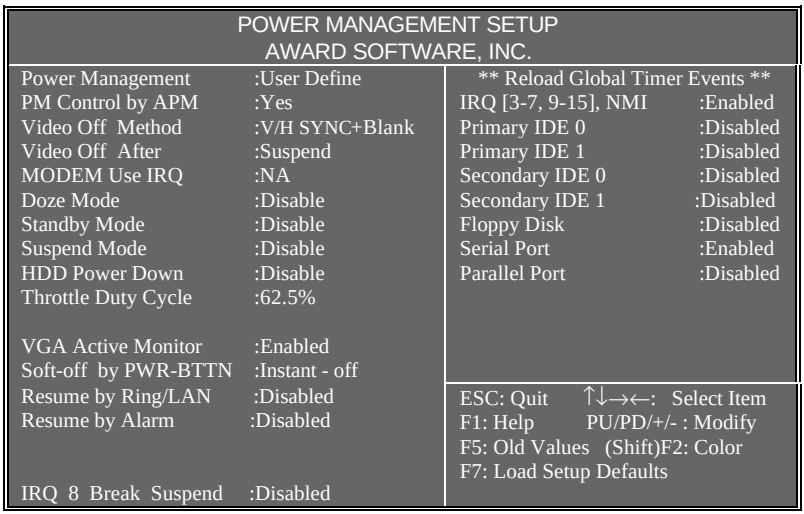


Figure-6 Power Management Setup Menu

The following indicates the options of each item and describes their meaning.

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 values are used so that all timers are in their MAX values.
	Max Saving	Pre - defined timer values are used so that all timers are in their MIN value.
• PM Control by APM	*No*	System BIOS will ignore APM when Power Management is enabled.
	Yes	System BIOS will wait for APM prompt before enters any PM mode e.g. Standby or Suspend. **Note: If APM is installed, and if there is a task running, when the timer state is time out, the APM will not prompt the BIOS to put the system into any power saving mode. But if APM is not installed, this option has no effect.**
• 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.

	DPMS	This function is enabled only for the VGA card supporting DPMS. **Note: When the Green monitor detects the V/H-SYNC signal, the electron gun will be turned off .**
• Video Off After	*N/A*	System BIOS will never turn off the screen.
	Suspend	Screen blanks after the system enters into the Suspend mode.
	Standby	Screen blanks after the system enters into the Standby mode.
	Doze	Screen blanks after the system enters into the Doze mode.
• MODEM Use IRQ	*3,4,5,7,9,10, 11*	Special wake-up event for the Modem.
	NA	Invalidates this feature.
• Doze mode	*Disabled*	The system will never enter Doze mode.
	1Min 1 Hr	Defines the continuous idle time before the system enters the Doze mode. If any item defined in aWe Up Events In Doze & Suspend' is On and activated, the system will be waken up.
• Standby Mode	*Disabled*	The system will never enter Standby mode.
	1 Min 1Hr	Defines the continuous idle time before the system enters the Standby mode. If any item defined in aWe 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 enters the Suspend mode. If any item defined in aWe Up Events In Suspend' is On and activated, the system will be waken up.
• HDD Power Down	*Disabled*	HDD motor will not be off.
	1 15 Min	Defines the continuous HDD idle time before the HDD enters the power saving mode (motor off).
• Throttle Duty Cycle	*12.5%, 25%, 37.5%, 50%, 62.5%, 75%, 87.5%*	Selects the duty cycle of the STPCLK# signal, slowing down the CPU speed when the system enters the green mode.
	Disabled	CPU speed doesn change.
• VGA Active Monitor	*Enabled*	VGA active reloads global timer.
	Disabled	VGA active has no influence to global timer.
• Soft-off by PWR-BTTN	*Instant -off*	The system will power off immediately once the power button is pressed.
	Delay 4 Sec.	The system will not power off until the power button is pressed continuously for more than 4 seconds.
• Resume by Ring/LAN	*Enabled*	Allows the system to be powered on when a Ring Indicator signal comes up to UART1 or UART2 from external modem or comes up to the WOM header from an internal modem card, or when a remote wake up signal comes up to the WOL header through th LAN adapter.
	Disabled	Does not allow Ring Power-On and wake-up on LAN. **Note: This function is supported only when ATX power supply is used.**

• Resume by Alarm	*Enabled*	RTC alarm can be used to generate a wake-up event to power up the system.
	Disabled	RTC has no alarm function.
		Note: This function is supported only when ATX power supply is used.
• IRQ 8 Break Suspend	*Enabled*	Generates a clock event.
	Disabled	Does not generate a clock event.
		Note: IRQ8 Clock Event must be enabled when using Resume By Ring and Alarm.
• IRQ [3-7, 9-15], NMI	*Enabled*	Reload global timer.
	Disabled	Does not influence the global timer.

PNP/PCI Configuration Setup

ROM PCI/ISA BIOS (2A69JQ1j)
PNP/PCI CONFIGURATION
AWARD SOFTWARE, INC.

PNP OS Installed	: No	PCI IDE IRQ Map To	: ISA
Resources Controlled By	: Manual		
Force Updating ESCD	: Disabled		
IRQ-3 assigned to	: Legacy ISA	Slot 1 Use IRQ No.	: AUTO
IRQ-4 assigned to	: Legacy ISA	Slot 2 Use IRQ No.	: AUTO
IRQ-5 assigned to	: PCI/ISA PnP	Slot 3 Use IRQ No.	: AUTO
IRQ-7 assigned to	: Legacy ISA		
IRQ-9 assigned to	: PCI/ISA PnP	Used MEM base addr	: N/A
IRQ-10 assigned to	: PCI/ISA PnP		
IRQ-11 assigned to	: PCI/ISA PnP	Assign IRQ For USB	: Enabled
IRQ-12 assigned to	: PCI/ISA PnP	Assign IRQ For VGA	: Enabled
IRQ-14 assigned to	: Legacy ISA		
IRQ-15 assigned to	: Legacy ISA		
DMA-0 assigned to	: PCI/ISA PnP		
DMA-1 assigned to	: PCI/ISA PnP		
DMA-3 assigned to	: PCI/ISA PnP	ESC: Quit ↑↓→← :Select Item	
DMA-5 assigned to	: PCI/ISA PnP	F1 : Help PU/PD/+/- : Modify	
DMA-6 assigned to	: PCI/ISA PnP	F5 : Old Values (Shift)F2 : Color	
DMA-7 assigned to	: PCI/ISA PnP	F7 : Load Setup Defaults	

Figure-7 PNP/PCI Configuration Setup Menu

The following indicates the options of each item and describes their meaning.

Item	**Option**	**Description**
• PNP OS Installed	*Yes*	Device resource assigned by PnP OS.
	No	Device resource assigned by BIOS.
• Resources Controlled By	*Manual*	Assigns the system resources (IRQ and DMA) manually by user.
	Auto	Assigns the system resources (IRQ and DMA) automatically by BIOS.

• Force Updating ESCD	*Enabled*	The system BIOS will force updating ESCD once, then automatically set this item as Disabled.
	Disabled	Disables the forced update ESCD function.
• IRQ-3~IRQ-15 assigned to	*Legacy ISA*	The specified IRQ-x will be assigned to the ISA only.
	PCI/ISA PnP	The specified IRQ-x will be assigned to the ISA or PCI.
• DMA-0~DMA-7 assigned to	*Legacy ISA*	The specified DMA-x will be assigned to the ISA only.
	PCI/ISA PnP	The specified DMA-x will be assigned to the ISA or PCI.
• PCI IDE IRQ Map To	*PCI-AUTO*	BIOS will scan the PCI IDE devices and determine the location of the PCI IDE device.
	PCI - SLOT4 1	BIOS will scan IRQ14 for primary IDE INT# and IRQ15 for secondary IDE INT# at the specified slot.
	ISA	The BIOS will not assign any IRQs even if the PCI IDE card is found. Because some IDE cards connect the IRQ14&15 directly from the ISA slot through a card.
• SLOT 1/2/3 Use IRQ No.	*AUTO, 3,4,5,7,9,10,11,12,14,15*	Assigns an IRQ for PCI slot 1/2/3 manually or automatically.
• Used MEM base address	*C800/8 64K*	Claims a memory space occupied by legacy ISA card.
	N/A	Invalidates this feature.
• Assign IRQ For USB	*Enabled*	Assigns an IRQ for USB when it is used.
	Disabled	This function is disabled (USB can be used at this moment).
• Assign IRQ For VGA	*Enabled*	Assigns the needed IRQ for the VGA Card.
	Disabled	Does not assign an IRQ for VGA Card.

Integrated Peripherals

ROM PCI/ISA BIOS (2A69JQ1j) INTEGRATED PERIPHERALS AWARD SOFTWARE, INC.			
IDE HDD Block Mode	: Enabled	Parallel Port Mode	: SPP
IDE Primary Master PIO	: Auto		
IDE Primary Slave PIO	: Auto		
IDE Secondary Master PIO	: Auto		

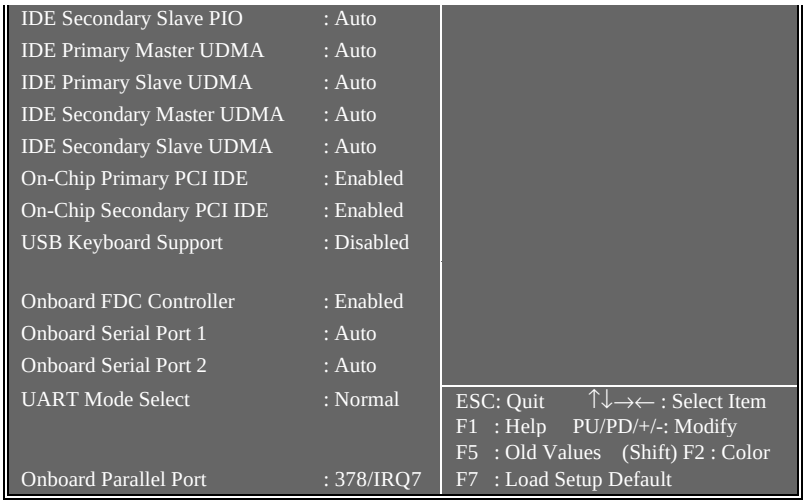


Figure-8 Integrated Peripherals Menu

The following indicates the options of each item and describes their meaning.

Item	Option	Description
• IDE HDD Block Mode	*Enabled*	Allows IDE HDD read/write several sectors at once.
	Disabled	IDE HDD only reads/writes a sector once.
• 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.
• On-chip Primary/Secondary PCI IDE	*Enabled*	On-chip primary/secondary PCI IDE port is enabled.
	Disabled	On-chip primary/secondary PCI IDE port is disabled.
• USB Keyboard Support	*Enabled*	USB Keyboard Support is Enabled.
	Disabled	USB Keyboard Support is Disabled.
• 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,*	Defines the onboard serial port address and required interrupt number.
	Disabled,	Onboard serial port is disabled.
	Auto	Sets the address and interrupt number automatically.
• UART Mode Select	*Normal*	Defines UART2 as the standard serial port.
	ASKIR	Supports SHARP ASK-IR protocol with

		maximum band rate up to 57600bps.
	IrDA	Supports IrDA version 1.0 SIR protocol with maximum band rate up to 115.2 kbps.
• Onboard Parallel Port	*378/IRQ7,* *278/IRQ5,*	Defines onboard parallel port address and IRQ channel.
• Parallel Port Mode	*SPP* *EPP* *ECP,* *ECP+EPP*	Defines the parallel port mode as Standard Parallel Port (SPP), Enhanced Parallel Port (EPP), or Extended Capabilities Port (ECP).

System Monitor

```
ROM PCI/ISA BIOS (2A69JQ1j)
SYSTEM MONITOR
AWARD SOFTWARE , INC.

Current CPU Temp.            : 35°C/95°F
Current System Temp.         : 35°C/95°F
Current CPUFAN Speed         : 0 RPM
Current CHSFAN Speed         : 0 RPM
VCCVID(CPU) Voltage          : 2.81V
VTT (+1.5)      Voltage      : 1.50V
+3.3V           Voltage      : 3.32V
+5V             Voltage      : 4.97V
+12V            Voltage      : 11.97V
-12V            Voltage      : -12.03V
-5V             Voltage      : -4.85V

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

Figure-9 System Monitor Setup Menu

The following indicates the options of each item and describes their meaning.

Item	**Option**	**Description**
• Current CPU Temp.		The temperature near the CPU.
• Current System Temp.		The temperature inside the chassis.
• Current CPUFAN Speed Current CHSFAN Speed		RPM (Revolution Per Minute) Speed of fan which is connected to the fan header CPUFAN or CHSFAN. Fan speed value is based on an assumption that tachometer signal is two pulses per revolution; In other cases, you should regard it relatively.
• VCCVID(CPU) Voltage, VTT (+1.5) Voltage, + 3.3V, + 5V, +12 V,		Displays current Voltage value including all the most important voltages of the motherboard. +3.3V, +5V, +12V, -12V, -5V are voltages from the ATX power supply, VTT (+1.5) Voltage is GTL Termination Voltage from the on board

- 12 V, - 5 V.		regulator, and VCCVID (CPU) Voltage is the CPU Core Voltage from the on board switching Power Supply.

Supervisor/User Password

If this function is selected, 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.

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 will be able to enter Setup freely.

PASSWORD DISABLED

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

Supervisor Password has higher priority than *User Password*. You can *use Supervisor Password* when booting the system or entering "CMOS Setup" to modify all settings. Also you can use *User Password* when booting the system or entering "CMOS Setup" but can not modify any setting if the *Supervisor Password* is enabled.

IDE HDD Auto Detection

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

ROM PCI/ISA BIOS (2A69JQ1j)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

HARD DISKS TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE
Primary Master:

Select Primary Master Option (N=Skip): N

OPTIONS	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	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-10 IDE HDD Auto Detection Menu

1. Setup Changes

With auto-detection

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

ESC : Skip

With Standard CMOS Setup

	CYLS	HEADS	PRECOMP	LAND ZONE	SECTOR	MODE
Drive C: User(516MB)	1120	16	65535	1119	59	Normal
Drive D: None(203MB)	684	16	65535	685	38	---------

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

2. HDD Modes

The Award BIOS supports 3 HDD modes: NORMAL, LBA and LARGE, also 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 the 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 the sector, head and cylinder number into its own physical address inside the HDD. The maximum HDD size supported by LBA mode is 8.4 Gigabytes.

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

BIOS tricks DOS (or other OS) so 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 the IDE hard disk mode and set as one of the three HDD modes.

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

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 the< Ctrl >, < Alt > and < Del > keys.

Appendix A.
QDI Motherboard Utility CD-ROM

A QDI Motherboard Utility CD-ROM is supplied with each motherboard. The contents used for this motherboard are:

Contents:

1. Chipset Dispatches
   Intel chipset drivers included in the directory \ChipDrv\Intel can be used for this motherboard.
2. PC-cillin Anti-Virus software
   Windows 95 English version is located in the directory \Pccillin\Win95.
   Windows NT English version is located in the directory \Pccillin\WinNT4.0.
   S/N is PNEF-9991-6558-5857-5535.
3. QDI ManageEasy V1.2
   Running Setup.exe from the directory \QME to install the ManageEasy. Please note, the hardware is manufacturing option.
4. QDI Motherboard Utility
   The utilities located in the directory \Utility are:
   FLASH.EXE
   CBLOGO.EXE
   LF.EXE
5. Documents for QDI Motherboard
   The files included in the directory \Doc are:
   Adobe Acrobat Reader V3.0 - ar32e301.exe
   ManageEasy Manuals - QMEV12.PDF

Installation Guide:

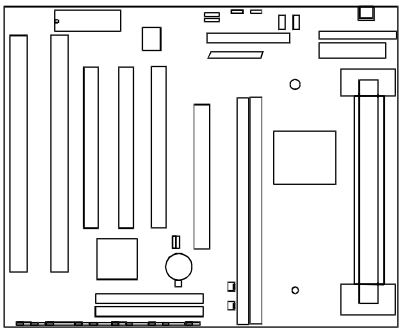
A. Installing Intel PIIX4 Driver:
   Running\ChipDrv\Intel\PIIX4\Setup.exe.
   This is the driver for Windows95/OSR2 to support new Intel PCI devices such as the PCI IDE hard disk controller, PCI USB device etc. It can remove the yellow question mark in the Device Manager of Windows95 after installation.

B. Installing Intel busmaster driver:
   Running\ChipDrv\Intel\BMIDE\Setup.exe.
   It is Intel Bus Master IDE driver for Windows95, which can enhance the capability of IDE data transaction and up to Ultra DMA/33MB supported by 440LX chipset or other ultimate chipset.

Appendix B.

Rendition Mechanism & Pentium®II/Celeron ™ Processor Installation Procedures

1. Place Plastic Guide with plastic caps on mainboard, and secure all four caps.

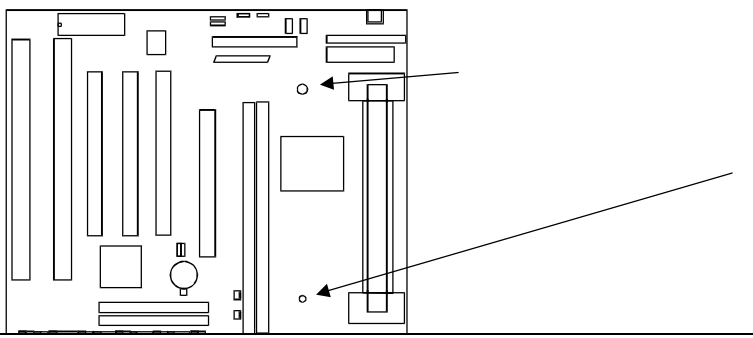


Plastic Guide with four nuts

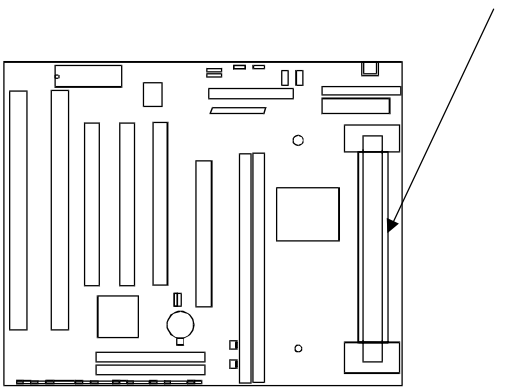
Windows Celeron fittings

Note: 1. Please choose four caps which match the motherboard.
2. If choosing to use Celeron ™ Processor, snap-on Celeron fittings onto the Plastic Guide.
3. Please note the Platic Guide has one orientation. If one way doesn fit, change the direction to the other way. Do not forcefully press the Plastic Guide onto the motherboard.

2. Install HSSBASE (Heatsink Support Base) on mainboard, then insert the two plastic pins through the HSSBASE to secure it to the mainboard.



3. Insert Pentium®II Processor in Slot1.



4. Clip Plastic Bar onto the HSSBASE through the fins on the processors' heatsink.

5. The Retention Mechanism installation procedure is completed as shown below.

S.E.C Cartridge, Retention Mechanism, Heatsink support, and ATX Form Factor Headsink Isometric View Not to Scale

Remark:
Please skip step3 and step5 for Boxed Pentium®II Processor and refer to relevant details of this kind of processor for your installation.

website : *http://www.qdigrp.com* ”

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Manual P6I440LX/L6 Ver 1.0