

# CP11 CP11Z CP11B

---

## MAINBOARD MANUAL

DOC No.: M98C09

Rev. : A2

Date : 5, 1999

Part No. : 25-10943-22

## Handling Precautions

**Warning:**

1. Static electricity may cause damage to the integrated circuits on the motherboard. Before handling any motherboard outside of its protective packaging, ensure that there is no static electric charge in your body.
2. There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or an equivalent type recommended by the manufacturer.
3. Discard used batteries according to the manufacturer's instructions.

Observe the following basic precautions when handling the motherboard or other computer components:

- Wear a static wrist strap which fits around your wrist and is connected to a natural earth ground.
- Touch a grounded or anti-static surface or a metal fixture such as a water pipe.
- Avoid contacting the components on add-on cards, motherboards, and modules with the *golden fingers* connectors plugged into the expansion slot. It is best to handle system components by their mounting brackets.

The above methods prevent static build-up and cause it to be discharged properly.

## Trademark

*All trademarks mentioned in this manual are registered properly of the respective owners.*

## Handling Precautions

*This manual may not, in whole or in part, be photocopied, reproduced, transcribed, translated, or transmitted in whatever form without the written consent of the manufacturer, except for copies retained by the purchaser for personal archival purposes.*

---

**Chapter 1 Overview**

Package Checklist ..... 1-1  
The CP11/CP11Z/CP11B Mainboard ..... 1-3  
Main Features ..... 1-4  
Intelligent Properties ..... 1-6  
ACPI Ready ..... 1-7

**Chapter 2 Installation Procedures**

1). Set System Switches/Jumpers ..... 2-2  
Quick Reference ..... 2-3  
Mainboard Layout ..... 2-7  
Clear CMOS: SW1-5 ..... 2-9  
Clear Password: SW1\_6 ..... 2-9  
Keyboard and Mouse Power-On Feature: KB\_PWN ..... 2-10  
System Bus Frequency Select: FS1, FS2 ..... 2-10  
2). Install RAM Modules ..... 2-11  
RAM Module Configuration ..... 2-11  
Install and Remove DIMMs ..... 2-12  
3). Install the CPU ..... 2-13  
CPU Internal Frequency Select: SW-1/-2/-3/-4 ..... 2-14  
4). Install Expansion Cards ..... 2-14  
5). Connect Devices ..... 2-15  
Floppy Diskette Drive Connector: FLOPPY ..... 2-16  
IDE HDD Device Connectors: PRIMARY, SECONDARY .. 2-16  
ATX Power Connector: POWER ..... 2-17  
PCI Audio Card Connector: SB\_LINK ..... 2-17  
CPU Fan Connector: CPU\_FAN ..... 2-18  
System Case Fan Connector: CHS\_FAN ..... 2-18  
Wake-On-LAN Connector: WOL ..... 2-19  
Infrared Connector: IR ..... 2-19  
Front Panel Block Connector ..... 2-20  
Serial Port Connectors: COM1, COM2 ..... 2-21  
Printer Connector: LPT ..... 2-21  
PS/2 Keyboard and Mouse Connector: KB, MS ..... 2-22  
Universal Serial Bus Connectors: USB0, USB1, USB3 ..... 2-22

### Chapter 3 BIOS Setup

CP11 BIOS Setup .....	3-1
CMOS Setup Utility .....	3-1
Standard CMOS Setup .....	3-2
Hard Disk Configurations .....	3-2
Software Turbo Speed .....	3-3
BIOS Features Setup .....	3-3
Chipset Features Setup .....	3-6
Power Management Setup .....	3-10
PNP/PCI Configuration .....	3-14
Load BIOS Defaults .....	3-16
Load Setup Defaults .....	3-16
Integrated Peripherals .....	3-17
Supervisor/User Password .....	3-22
IDE HDD Auto Detection .....	3-22
Save and Exit Setup .....	3-22
Exit without Saving .....	3-22
CP11B/CP11Z BIOS Setup .....	3-23
Main Setup .....	3-23
Advanced Setup .....	3-24
Security Setup .....	3-25
Exit Setup .....	3-26
Award BIOS Setup .....	3-27
CMOS Setup Utility .....	3-27
Standard CMOS Setup .....	3-27
Hard Disk Configurations .....	3-28
Software Turbo Speed .....	3-28
BIOS Features Setup .....	3-29
Chipset Features Setup .....	3-32
Power Management Setup .....	3-35
PNP/PCI Configuration .....	3-39
Load BIOS Defaults .....	3-40
Load Setup Defaults .....	3-41
Integrated Peripherals .....	3-41
Supervisor/User Password .....	3-46

IDE HDD Auto Detection .....	3-46
Save and Exit Setup .....	3-46
Exit without Saving .....	3-46

**Chapter 4 FAQs**

General FAQs .....	4-1
BIOS FAQs .....	4-5
Windows 98 FAQs .....	4-7
Windows 95 FAQs .....	4-8
Intel CPU FAQs .....	4-9

**This Page Left Blank for Note**

## Overview

The 1stMainboard CP11/CP11Z/CP11B is an ATX sized Socket 370 solution supporting the Intel® Celeron™ PPGA 300-500 MHz processor, with 66 MHz Front Side Bus support. The CP11/CP11Z/CP11B is based around the VIA Apollo Pro Plus /Intel® 440ZX/ Intel® 440BXchipset and its advanced Mobile South architecture, which incorporates the very latest in cutting edge core logic technologies.

The CP11/CP11Z/CP11B supports the new Ultra DMA/33 protocol (CP11 also supports Ultra DMA/66) and its high-speed interface, which significantly improves hard drive performance and data transfer speeds. This is especially the case for long sequential data transfers typically associated with audio/visual applications. With 4 DIMM (CP11 allows 2 DIMMs), there is up to 1GB (256MB for CP11Z) of SDRAM onboard, while ECC memory support is also provided (CP11Z does not support ECC). With 1 AGP, 5 PCI and 2 ISA slots, there is plenty of room for expansion.

The CP11/CP11Z/CP11B comes equipped with numerous other advanced features, such as Auto Power Failure Recovery, Keyboard/Mouse Power on and 1stMainboard CD Pro, which provides users with easy access to enhanced drivers. Improved power consumption and efficiency are ensured through the ACPI function, while the Hardware monitoring facility provides effective system monitoring and control. The CP11/CP11Z/CP11B integrates a full set of standard I/O features onboard, including 2 serial ports, 1 parallel port, 1 PS/2 keyboard/mouse connector, 2 USB connectors and 1 optional USB pin header. Furthermore, the CP11/CP11Z/CP11B is fully PC98 and Y2K compliant and also provides CD-in, IrDA and Wake-on-LAN connections.

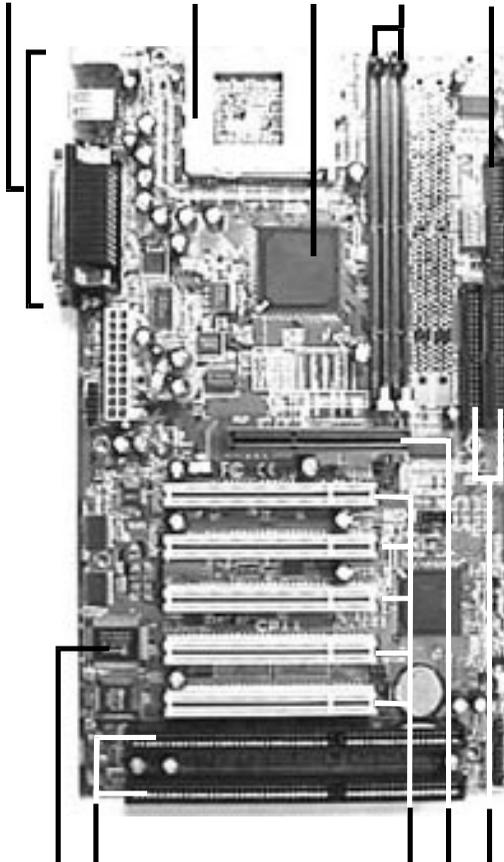
## Package Checklist

If you discover any item below was damaged or lost, please contact your vendor.

- The CP11/CP11Z/CP11B mainboard
- This user manual
- One floppy disk drive cable
- One HDD cable
- CD-Pro software utilities

## The CP11/CP11Z/CP11B Mainboard

Integrated I/O Connectors    CPU Socket 370    Intel ZX/BX/ VIA Apollo Pro Plus    2 DIMM Sockets    Floppy Connector



Super I/O  
2 ISA Slots

5 PCI Slots    AGP Slot    Primary/Secondary IDE Connector

Chapter 1  
Overview



**NOTE:** CP11/CP11B mainboards have four DIMM sockets, PCI5 on CP11Z is for slave devices only, and core chipset is VIA Apollo Pro Plus/ Intel 440BX.

## Main Features

### ■ Easy Installation

BIOS with support for Plug and Play, auto detection of IDE hard drives, LS-120 drives, IDE ZIP drives, Windows 95, Windows 98, Windows NT, and OS/2.

### ■ Leading Edge Chipset

VIA Apollo Pro Plus (of CP11)/Intel 440ZX (of CP11Z)/Intel 440BX (of CP11B) chipset includes a CPU interface controller, integrated memory controller, integrated power management unit, concurrent PCI (PCI v.2.0 and 2.1), 3D video, IDE and ISA bus controller.

### ■ Flexible Processor Support

Onboard Socket 370 supports leading-edge processors:  
Celeron™ PPGA processors 300/333/366/400/433/466/500 MHz and up.

### ■ Various External Bus and CPU/Bus Frequency Ratio Support

The board supports the Bus frequency of 66 / 75\* / 83\* / 100 / 105\* / 110\* / 112\* / 115\* / 120\* / 124\* / 133\* / 140\* / 150\*MHz and the CPU/Bus frequency ratio of 3.5x / 4x / 4.5x / 5x / 5.5x / 6.0x / 6.5x / 7.0x / 7.5x. (Please read **Install the CPU** in Chapter 2 for more information).

### ■ Versatile Main Memory Support (of CP11/CP11B)

Accepts up to 1GB RAM using four DIMMs of 8, 16, 32, 64, 128, 256MB with support for lightning-fast SDRAM (66/100MHz).

### ■ Versatile Main Memory Support (of CP11Z)

Accepts up to 256MB RAM using two DIMMs of 8, 16, 32, 64, 128MB with support for lightning-fast SDRAM (66/100MHz).

### ■ Onboard IrDA Connector

An IrDA connector for wireless infrared connections is available.

- **Enhanced PCI Bus Master IDE Controller with Ultra DMA/33 Support**  
Integrated Enhanced PCI Bus Master IDE controller features two dual-channel connectors that accept up to four Enhanced IDE devices, including CD-ROM and Tape Backup Drives, as well as Hard Disk Drives supporting the Ultra DMA/33 protocol. Standard PIO Mode 3, PIO Mode 4, DMA Mode 2, DMA Mode 4 devices are also supported.

- **USB Support**

The integrated I/O connector on the edge of the board for allowing convenient, high-speed Plug and Play connections (up to four USB ports) to the growing number of USB compliant external peripheral devices on the market.



**NOTE:** USB3 connector is manufacturing optional.

- **Remote Wake-Up Support**

One LAN wake-up connector, WOL, supports LAN cards equipped for remote wake-up functionality; also, an additional Wake-On-Ring connector awakes the system while the ring signal via modem.

- **Super Multi Input/Output (I/O) Support**

Integrated Plug and Play multi-I/O chipset features two high-speed UART 16550 compatible serial ports, one IR connector, one EPP/ECP capable parallel port, and one FDD connector.

- **SB-LINK<sup>®</sup> for the Audio Card with PCI Bus**

The 2x3 pin SB-LINK<sup>®</sup> header accepts the Creative CT4600 series PCI audio cards with PCI solution to connect the Legacy Sound Blaster<sup>®</sup> compatible audio to the PCI bus.

- **ISA and PCI Expansion Slots**

Two 16-bit ISA Bus and five 32-bit PCI Bus expansion slots provide the room to install a full range of add-on cards.

- **Onboard Accelerated Graphics Port (AGP)**

One 32-bit AGP slot supports 1x/2x AGP VGA cards for superior 3D video performance with transfer speeds up to 264MB/second under 1x AGP transfer mode and up to 528MB/second under 2x AGP transfer mode.

## Intelligent Properties

This mainboard comes equipped with the most advanced new features that not only optimize the performance of the latest processors but also enhance the manageability, power management capabilities, and user-friendliness of your system. This section provides detailed information on these features, and how they are implemented on the mainboard.

- Optimized Celeron® PPGA Processor Performance

The mainboard utilizes the advanced features of the core chipset to optimize the unrivaled performance of the [Celeron® PPGA](#) processor with MMX® technology, allowing you to enjoy a richer video, audio, digital imaging and communications experience from the latest generation of multimedia software.

- Intel LANDesk® Client Manager (optional)

The mainboard comes with optional Intel LANDesk® Client Manager, a Desktop Management Interface (DMI) compliant application that simplifies local and network management of desktop client systems by monitoring PC health, and by alerting local and designated remote users of potential problems. For example, the application will indicate when memory usage is high or hardware components are likely to fail. This capability provides new levels of manageability to deliver a lower cost of PC ownership by maximizing system uptime, increasing user productivity and reducing the number of help desk calls. Because it is industry-standard DMI compliant, Intel LANDesk® Client Manager can be used with other DMI-based network management tools.

## ACPI Ready

This mainboard fully implements the new ACPI (Advanced Configuration and Power Interface) 1.0 Hardware and BIOS requirement. If you install ACPI aware operating system, such as Windows 98, you fully utilized the power saving under ACPI.

It is compatible with all other none ACPI operating systems. If you want to setup ACPI feature under Windows 98, please follow the description below: Run Windows 98 setup by using **setup/p j** on the command line for installing Windows 98 with the ACPI control feature.

If you type **setup** without the parameter **/p j**, Windows 98 will be installed as APM, PnP mode, no ACPI will be used.

For more detail information, please visit the web site of Microsoft. Its address is: [www.microsoft.com/hwtest/](http://www.microsoft.com/hwtest/).

The major features of ACPI were listed as follows:

### ■ Soft-Off Support

The mainboard's Soft-Off feature allows you to turn off your computer using the operating system. This feature requires a power supply with a soft-off power controller.

### ■ Remote Ring-On

The Remote Ring-On function allows your computer to be turned on remotely via a modem while it is in sleep mode. This feature is particularly usefully when you are expecting a fax late night and leave only your modem on to minimize power consumption. As soon as possible the phone rings, the modem automatically turn on the system, which answers the phone and downloads the fax. Then the computer shuts off again, thereby minimizing its consumption of power. The Remote Ring-On function requires a power supply with a soft-off power controller.

### ■ RTC Alarm

The RTC alarm feature allows you to preset the computer to wake-up at a certain time allowing you to implement a number of useful functions, such as automatically sending out a fax late at night.

**This Page Left Blank for Note**

# Installation Procedures

The mainboard has several user-adjustable jumpers on the board that allow you to configure your system to suit your requirements. This chapter contains information on the various jumper settings on your mainboard.

To set up your computer, you must complete the following steps:

- Step 1 - Set system jumpers
- Step 2 - Install system RAM modules
- Step 3 - Install the Central Processing Unit (CPU)
- Step 4 - Install expansion cards
- Step 5 - Connect ribbon cables, cabinet wires, and power supply
- Step 6 - Set up BIOS software (see Chapter Three)
- Step 7 - Set up supporting software tools



**WARNING:** Excessive torque may damage the mainboard. When using an electric screwdriver on the mainboard, make sure that the torque is set to the allowable range of 5.0 ~ 8.0kg/cm.

Mainboard components contain very delicate Integrated Circuit (IC) chips. To prevent static electricity from harming any of the mainboard's sensitive components, you should follow some precautions whenever working on the computer:

1. Unplug the computer when working on the inside.
2. Hold components by the edges and try not to touch the IC chips, leads, or circuitry.
3. Wear an anti-static wrist strap which fits around the wrist.
4. Place components on a grounded anti-static pad or on the bag that came with the component whenever the components are separated from the system.

## 1). Set System Switches/Jumpers

Jumpers are used to select the operation modes for your system. Some jumpers on the board have three metal pins with each pin representing a different function. A "1" is written besides pin 1 on jumpers with three pins. To **set** a jumper, a black cap containing metal contacts is placed over the jumper pin/s according to the required configuration. A jumper is said to be **shorted** when the black cap has been placed on one or two of its pins. The types of jumpers used in this manual are shown below:



Jumper Cap



3-pin Jumper



2-pin Jumper



Jumper Block



"□" stands for pin 1

Jumper are shown like above



Jumper cap like above



Jumpers in a Block



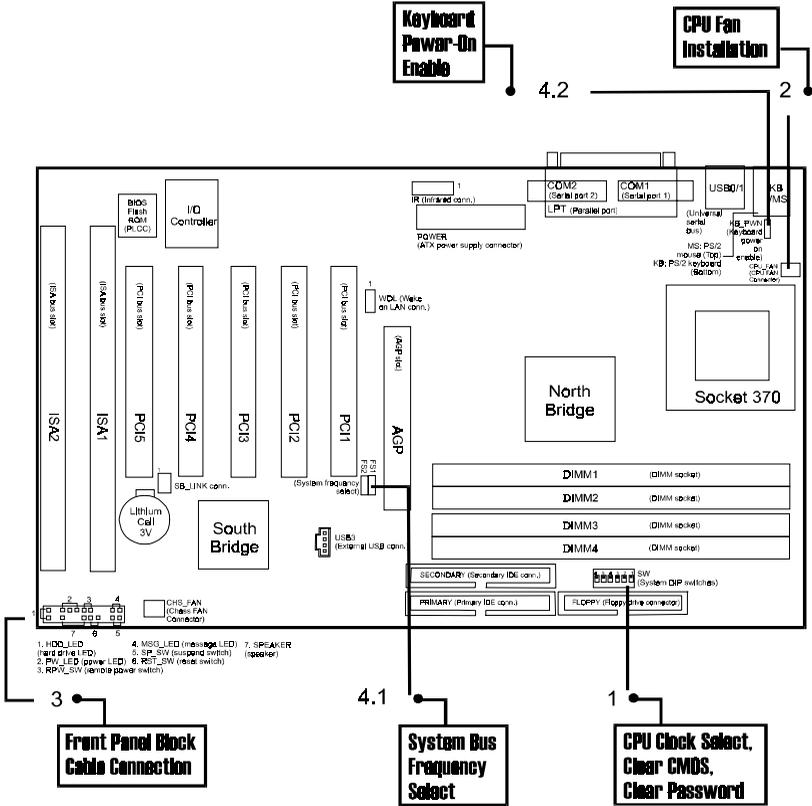
**NOTE:** Users are not encouraged to change the jumper settings not listed in this manual. Changing the jumper settings improperly may adversely affect system performance.



 **QUICK REFERENCE**

*This Chapter is intended to aid quick and easy installation.  
In the event that more detailed information is required, please  
consult the Installation Procedures Chapter.*

**Chapter 2**  
**Installation**  
**Procedures**



**NOTE:** The PCI5 slot on CP11Z allows slave devices only.

## 1). CPU Frequency Select, CPU Ratio Select, Clear CMOS, Clear Password

### SW1-1/2/3/4 (System Frequency Select)

CPU Speed		SW1-1	SW1-2	SW1-3	SW1-4
100MHz	66MHz				
350MHz	233MHz	ON	OFF	ON	OFF
400MHz	288MHz	ON	ON	OFF	ON
450MHz	300MHz	ON	ON	OFF	OFF
500MHz	333MHz	ON	OFF	OFF	ON
550MHz	366MHz	ON	OFF	OFF	OFF
600MHz	400MHz	OFF	ON	ON	ON
650MHz	433MHz	OFF	ON	ON	OFF
700MHz	466MHz	OFF	OFF	ON	ON
750MHz	500MHz	OFF	OFF	ON	OFF

### SW1-5 (Clear CMOS)



Enable (Clear CMOS)



Disable (Default)

### SW1-6 (Clear Password)



Enable (Clear Password)



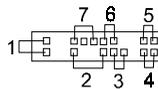
Disable (Default)

## 2). CPU Fan Installation

This connector is linked to the CPU fan. When the system is in suspend mode, the CPU fan will turn off; when it reverts back to full on mode, the fan will turn back on. Without sufficient air circulation, the CPU may overheat and cause damage to both the CPU and the mainboard.

*Damage may occur to the mainboard and/or the CPU fan if these pins are incorrectly used. These are not jumpers, do not place jumper caps over these pins.*

## 3). Front Panel Block Cable Connection



1. HDD LED
2. Speaker
3. Reset Switch
4. Suspend Switch
5. Message LED
6. Remote Power Switch
7. Power LED

## 5). Load BIOS Setup Default

### Load Fail Safe Setting

BIOS defaults contain the most appropriate values of the system parameters that allow minimum system performance. The OEM manufacturer may change the defaults through AMIBCP before the binary image burns into the ROM.

### Load Optimal Setting

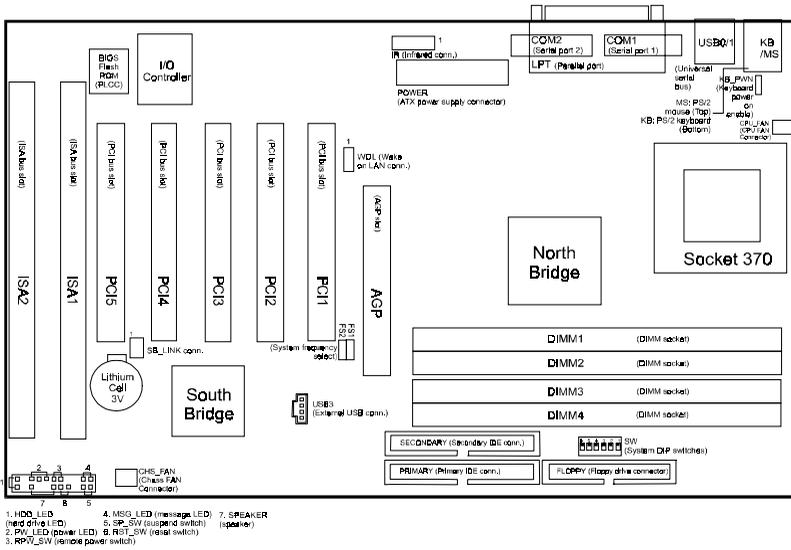
Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.

## 6). How to Upgrade BIOS

1. Format a bootable system floppy diskette by typing the command **format a:/s** in command mode.
2. Visit the the web site of the vendor and visit the BIOS Update page in the related Technical Support section.
3. Select the BIOS file you need and download it to your bootable floppy diskette.
4. Insert the bootable diskette containing the BIOS file into the floppy diskette drive.
5. Assuming that the floppy diskette drive is A, reboot the system by using the A: drive. At the A: > prompt, run the BIOS upgraded file by executing the Flash BIOS utility and the BIOS file with its appropriate extension.

*Do not turn off or reset the computer during the flash process or if there is a problem.*

# Mainboard Layout



**Chapter 2  
Installation  
Procedures**



**NOTE:** 1. USB3 connector is manufacturing optional.  
2. The PCI5 slot on CP11Z allows slave devices only.

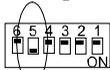
<b>ONBOARD MARK</b>	<b>MEANING</b>	<b>PAGE</b>
<b><i>Jumpers</i></b>		
SW1-5	Clear CMOS Data	2 - 9
SW1-6	Clear Password	2 - 9
FS1, FS2	System Bus Frequency Select	2 - 10
KB_PWN	Keyboard Power-on Select	2 - 10
<b><i>Slots</i></b>		
DIMM1/2/3/4	DIMM Memory Module Support	2 - 11
AGP	Accelerated Graphic Port Slot	2 - 15
PCI1/2/3/4/5	PCI Bus Expansion Slot (32-bit)	2 - 15
ISA1, ISA2	ISA Bus Expansion Slot (16-bit)	2 - 15
<b><i>Connectors</i></b>		
FLOPPY	Floppy Diskette Drive Connector	2 - 16
PRIMARY, SECONDARY	IDE HDD Device Connectors	2 - 16
POWER	ATX Power Connector	2 - 17
SB_LINK	PCI Add-On Audio Card Connector	2 - 17
CPU_FAN	CPU Fan Connector	2 - 18
CHS_FAN	System Case Fan Connectors	2 - 18
WOL	Wake on LAN Connector	2 - 19
IR	Infrared Port Module Connector	2 - 19
Front Panel Block	Connectors for LEDs and	
Connector	Switches on Front Panel	2 - 20
COM1, COM2	Serial Port Connectors	2 - 21
LPT	(Parallel Port) Printer Connector	2 - 21
KB, MS	PS/2 Keyboard and Mouse Connector	2 - 22
USB0/1/3	Universal Serial Bus Connector	2 - 22



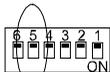
**NOTE:** 1. USB3 connector is manufacturing optional.  
2. The PCI5 slot on CP11Z allows slave devices only.

**Clear CMOS: SW1-5**

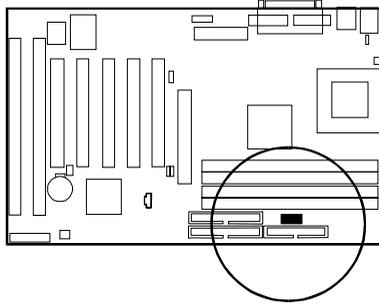
The CMOS RAM is powered by the onboard button cell battery. To clear the RTC data: (1). Turn off your computer, (2). Enable this feature by setting the SW1-5 to On position, (3). Turn on your computer to boot the system, (4). Turn off the computer, (5). Disable the Clear CMOS feature, (6). Turn on the computer. (7). Hold down the Delete key when boots and enter BIOS Setup to re-enter user preferences.



Enable (Clear CMOS)

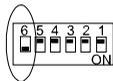


Disable (Default)

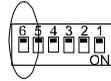


**Clear Password: SW1-6**

This switch allows you to enable or to disable both the keyboard and system password settings. You may need to adjust it if you forget your password. To clear the password setting: (1). Turn off your computer, (2). Enable this feature by setting the SW1-6 to On position, (3). Turn on your computer to boot screen, (4). Turn off your computer, (5). Disable the Clear Password feature by setting the SW1-6 to Off position, (6). Turn on your computer.



Enable (Clear Password)



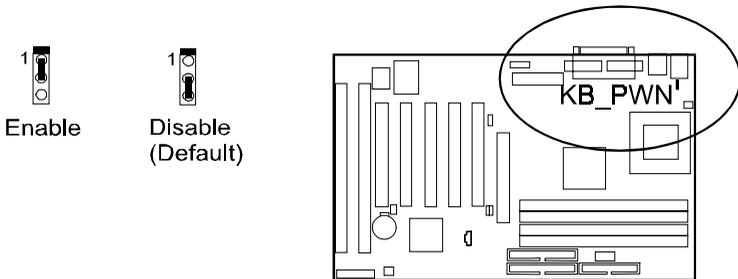
Disable (Default)



**NOTE:** When SW1-6 set at Enabled, the keyboard password (K/B Wake-up function, BIOS Setup) will be cleared too. Users can power on the system by pushing power button.

### **Keyboard and Mouse Power-On Feature: KB\_PWN**

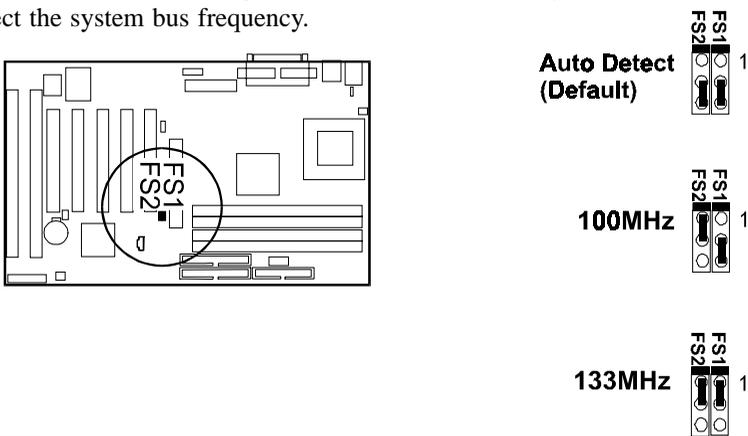
The 3-pin jumper provides you with the capability to power on the system by simply touching your keyboard or mouse. To enable this feature, you have to set this jumper and the related BIOS feature, **K/B Wake-up function** and **Mouse Wake-up function**, that introduced in **Integrated Peripherals** section.



**NOTE:** To use this function and WOL connector together, your power supply should have a current of above 1A at 5 V Stand-by.

### **System Bus Frequency Select: FS1, FS2**

These two 3-pin jumpers allows users to select the system bus frequency or stay with the default setting, Auto Detection to let the system automatically detect the system bus frequency.



**NOTE:** These two 3-pin jumpers are only on CP11. CP11Z and CP11B always set at Auto Detect .

---

## 2). Install RAM Modules

### RAM Module Configuration

#### *CP11/CP11B Mainboard*

This mainboard provides four onboard DIMM sockets for allowing 3.3V (unbuffered) SDRAM DIMM modules. Either 8, 16, 32, 64, 128MB, or 256MB DIMM can be installed on these four sockets. The maximum total memory supported is up to 1GB.

#### *CP11Z Mainboard*

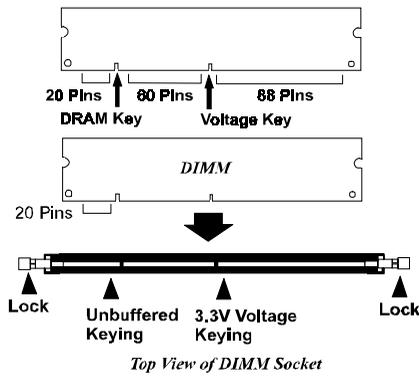
This mainboard provides two onboard DIMM sockets for allowing 3.3V (unbuffered) SDRAM DIMM modules. Either 8, 16, 32, 64, 128MB DIMM can be installed on these two sockets. The maximum total memory supported is up to 256MB.



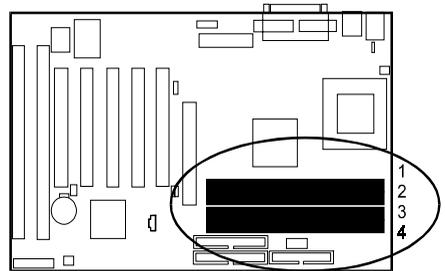
**NOTE:** This mainboard supports DIMMs with access speeds of 12ns, 10ns, or faster. ECC memory and parity check is also supported. (CP11Z does not support ECC memory.)

## Install and Remove DIMMs

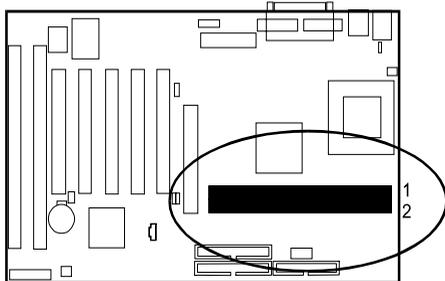
1. Locate the DIMM slots on the mainboard.
2. Install the DIMM straight down into the DIMM slot with both hands.
3. The clip on both ends of the DIMM slot will close up to hold the DIMM in place when the DIMM touches the slot's bottom.



**CP11/CP11B**



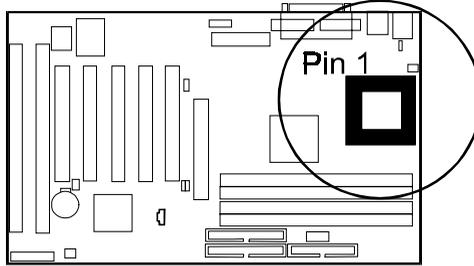
**CP11Z**



Press the clips with both hands to remove the DIMM.

### 3). Install the CPU

The CPU module resides in the ZIF PGA370 socket on the motherboard.

**CAUTION:**

1. Always turn the system power off before installing or removing any device.
2. Always observe static electricity precautions. See “Handling Precautions” at the start of this manual.
3. Inserting the chip incorrectly may damage the chip.

To install the CPU, do the following:

1. Lift the lever on the side of the CPU socket.
2. Handle the chip by its edges and try not to touch any of the pins.
3. Place the CPU in the socket. The chip has a notch to correctly locate the chip. Align the notch with pin one of the socket. Pin one is located in the blank triangular area. Do not force the chip. The CPU should slide easily into the socket.
4. Swing the lever to the down position to lock the CPU in place.
5. See the following sections for information on the CPU jumpers settings.

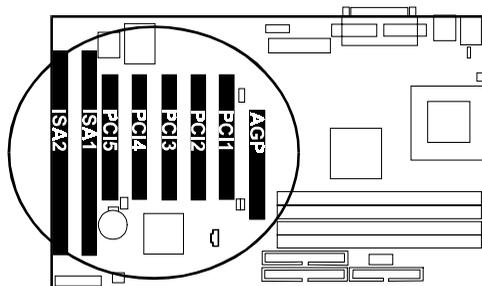
**CPU Internal Frequency Select: SW1-1/2/3/4**

CPU Speed		SW1-1	SW1-2	SW1-3	SW1-4
100MHz	66MHz				
350MHz	233MHz	ON	OFF	ON	OFF
400MHz	266MHz	ON	ON	OFF	ON
450MHz	300MHz	ON	ON	OFF	OFF
500MHz	333MHz	ON	OFF	OFF	ON
550MHz	366MHz	ON	OFF	OFF	OFF
600MHz	400MHz	OFF	ON	ON	ON
650MHz	433MHz	OFF	ON	ON	OFF
700MHz	466MHz	OFF	OFF	ON	ON
750MHz	500MHz	OFF	OFF	ON	OFF

**Chapter 2  
Installation  
Procedures**

### 4). Install Expansion Cards

This section describes how to connect an expansion card to one of your system’s expansion slots. Expansion cards are printed circuit boards that, when connected to the mainboard, increase the capabilities of your system. For example, expansion cards can provide video and sound capabilities. The mainboard features **one 32-bit AGP bus, two 16-bit ISA bus and five 32-bit PCI bus** expansion slots.





**CAUTION:** Make sure to unplug the power supply when adding or removing expansion cards or other system components. Failure to do so may cause severe damage to both the mainboard and expansioncards.

Always observe static electricity precautions.

Please read “Handling Precautions” at the start of this manual.



**NOTE:** The PCI5 slot on CP11Z allows slave devices only.

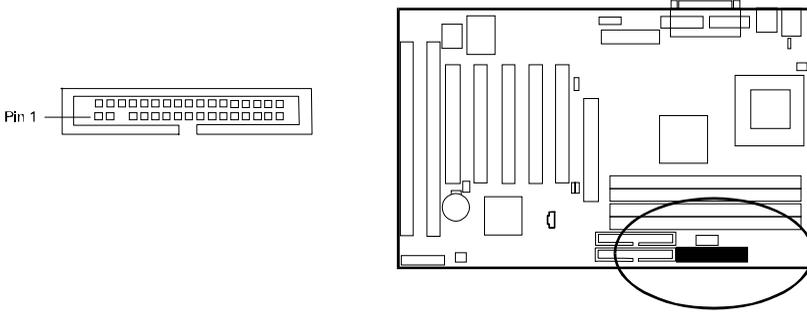
To install an expansion card, follow the steps below:

1. Remove the computer chassis cover and select an empty expansion slot.
2. Remove the corresponding slot cover from the computer chassis. Unscrew the mounting screw that secures the slot cover and pull the slot cover out from the computer chassis. Keep the slot cover mounting screw nearby.
3. Holding the edge of the peripheral card, carefully align the edge connector with the expansion slot.
4. Push the card firmly into the slot. Push down on one end of the expansion card, then the other. Use this “rocking” motion until the add-on card is firmly seated inside the expansion slot.
5. Secure the board with the mounting screw removed in Step 2. Make sure that the card has been placed evenly and completely into the expansion slot.
6. Replace the computer system’s cover.
7. Setup the BIOS if necessary.
8. Install the necessary software drivers for the expansion card.

## 5). Connect Devices

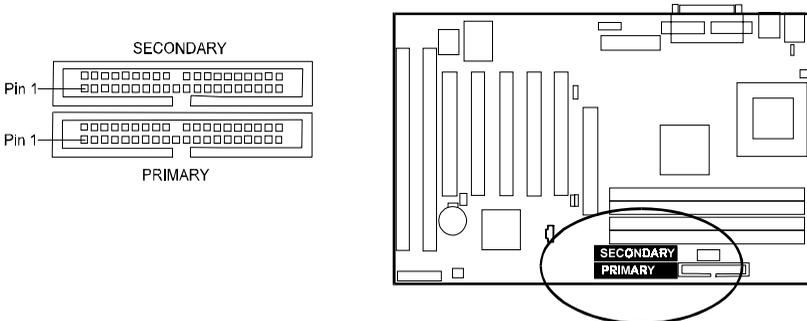
### *Floppy Diskette Drive Connector: FLOPPY*

This connector provides the connection with your floppy disk drive. The red stripe of the ribbon cable must be the same side with the Pin 1.



### *IDE HDD Device Connectors: PRIMARY, SECONDARY*

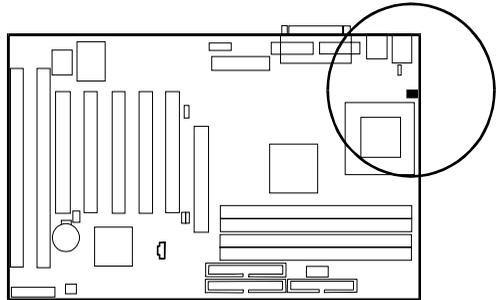
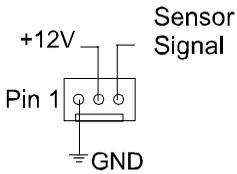
These two connectors are used for your IDE hard disk drives, CD drives, LS-120 drives, or IDE ZIP drives. The red stripe of the ribbon cable must be the same side with the Pin 1.





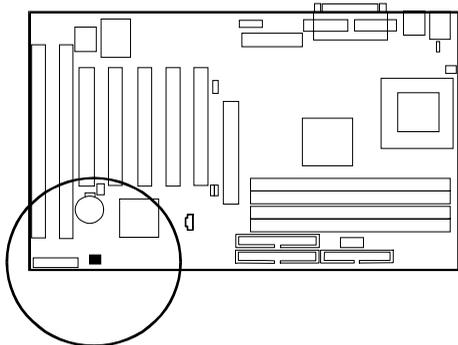
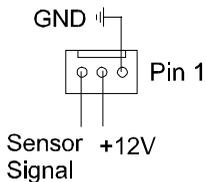
### ***CPU Fan Connector: CPU\_FAN***

This connector is linked to the CPU fan. When the system is in suspend mode, the CPU fan will turn off; when it reverts back to full-on mode, the fan will turn back on. Please refer to the CPU fan installation manual for more information.



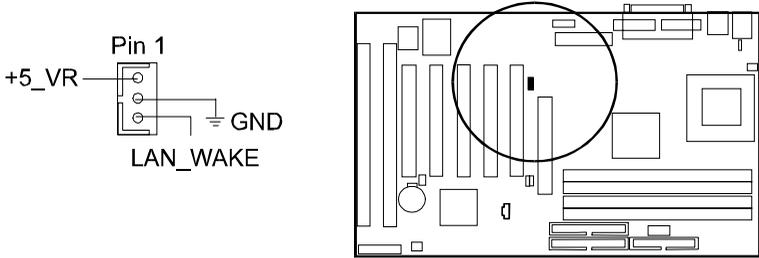
### ***System Case Fan Connector: CHS\_FAN***

This 3-pin connector links to your cooling fan on the system case to lower the system temperature.



**Wake-On-LAN Connector: WOL**

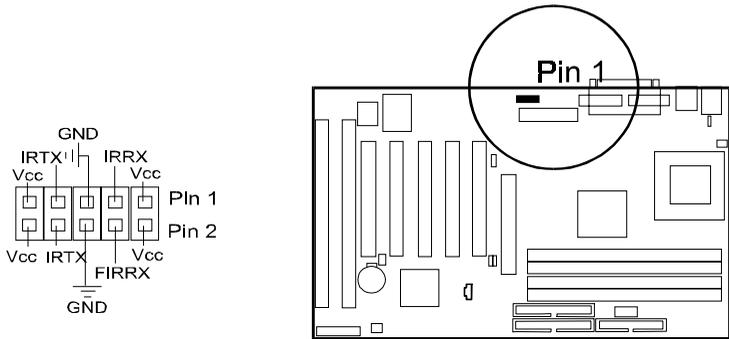
This 3-pin connector allows the remote LAN server to wake up the system with a LAN card installed. Please also refer to the LAN card installation guide for related information.



**Chapter 2  
Installation  
Procedures**

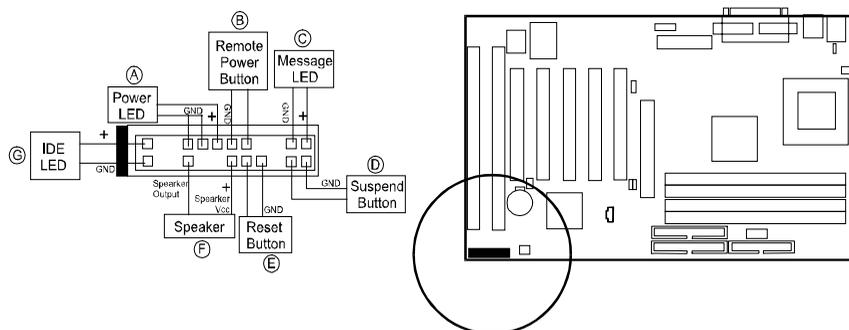
**Infrared Connector: IR**

This connector is linked with your IR device via a cable with one 9-pin D-Sub female connector on it.



## Front Panel Block Connector

This block connector concludes the connectors for linking with IDE LED, power LED, remote power button, message LED, suspend button, reset button and speaker on the front panel of the system case. Please identify polarities of plug wires for the case speaker and LEDs. Please ask vendor about this information when you buy them and install the system by yourself. The plug wires' polarities of this buttons will not affect the function.



**Power LED (A)** is connected with the system power indicator to indicate whether the system is on/off. When the system enter the suspend mode, it blinks.

**Remote Power Button (B)** is connected with remote power (soft power) switch. Push this switch will turn off and on the system instead of turning the power switch on the power supply.

**Message LED (C)** is connected with the message LED. When the system is running normally, the indicator is off. It is controlled by the operating system or application software.

**Suspend Button (D)** is connected with suspend mode switch.

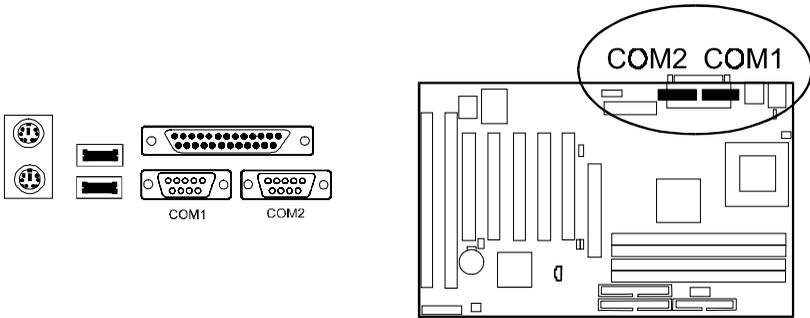
**Reset Button (E)** is connected to the reset switch. Push this switch to reboot the system instead of turning power switch off and on.

**Speaker (F)** is connected with the case speaker.

**IDE LED (G)** is connected IDE device indicator. This LED will blink when the hard disk drives are activated.

### ***Serial Port Connectors: COM1, COM2***

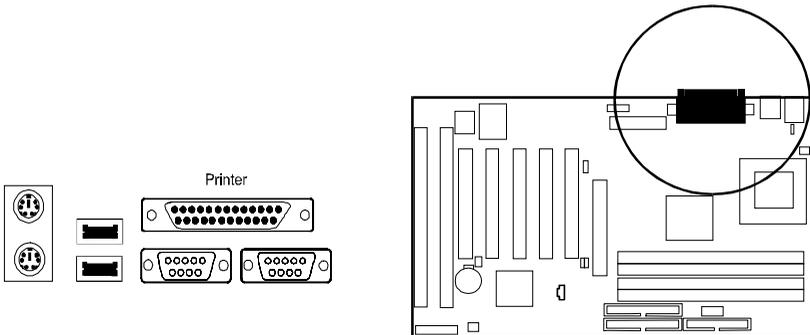
These two 9-pin D-Sub male connectors allow you to connect devices that use serial ports, such as a serial mouse or a modem.



**Chapter 2  
Installation  
Procedures**

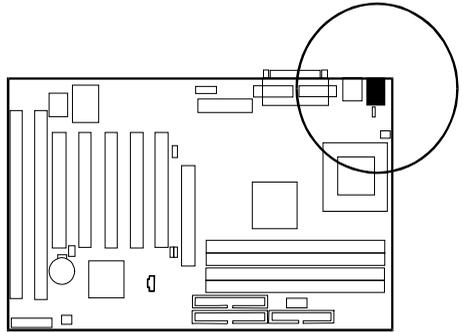
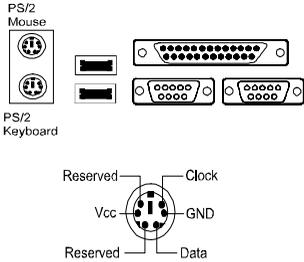
### ***Printer Connector: LPT***

This 25-pin D-Sub female connector is attached to your printer.



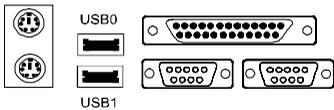
### PS/2 Keyboard and Mouse Connector: KB, MS

These two 6-pin female connectors are used for your PS/2 keyboard and PS/2 mouse.

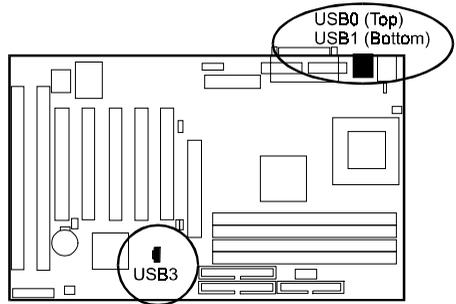
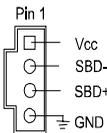


### Universal Serial Bus Connectors: USB0, USB1, USB3

These two connectors that integrated on the edge of the board are used for linking with USB peripheral devices. Also, this board provides an connector USB3 for linking with the USB socket on the front panel of some system cases. If this connector is onboard and when it is used, the USB3 connector is disabled. Your operating system must support USB features, such as MS Windows 98, MS Windows 95 OSR2.5 with USB Supplement.



The figure below is the pin assignments of the USB3 connector.



**NOTE:** USB3 connector is manufacturing optional.

# BIOS Setup

## CP11 BIOS Setup

The mainboard CP11 comes with the Award BIOS chip (the introductions of BIOS setup for CP11B/CP11Z were listed from Page 3-23) that contains the ROM Setup information of your system. This chip serves as an interface between the processor and the rest of the mainboard's components. This section explains the information contained in the Setup program and tells you how to modify the settings according to your system configuration.

## CMOS Setup Utility

ROM PCI/ISA BIOS (2A8LGF0H) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
Esc : Quit	+ ← → : Select Item
F10 : Save & Exit Setup	(Shift)F2 : Change Color

A Setup program, built into the system BIOS, is stored in the CMOS RAM. This Setup utility program allows changes to the mainboard configuration settings. It is executed when the user changes system configuration; user changes system backup battery; or the system detects a configuration error and asks the user to run the Setup program. Use the arrow keys to select and press Enter to run the selected program.

## Standard CMOS Setup

ROM PCI/ISA BIOS (2A6LGF0H)							
STANDARD CMOS SETUP							
AWARD SOFTWARE, INC.							
Date (mm:dd:yy): TuU, May 20 1999							
Time (hh:mm:ss): 15:37:55							
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 : 1.44MB, 3.5 in							
Drive B : None							
Floppy 3 Mode Support : Disabled							
Video : EGA/VGA				Base Memory: 640K			
Halt On : All Errors				Extended Meory: 31744K			
				Other Memory: 384K			
				Total Memory: 32768K			
Esc : Quit		↑ ↓ → ← : Select Item			PU/PD/+/- : Modify		
F1 : Help		(Shift)F2 : Change Color					

The Standard CMOS Setup screen is displayed above. Each item may have one or more option settings. The system BIOS automatically detects memory size, thus no changes are necessary. Use the arrow keys to highlight the item and then use the PgUp or PgDn keys to select the value you want in each item.

### Hard Disk Configurations

**TYPE:** Select User to fill the remaining fields. Select Auto to detect the HDD type automatically (recommended).

**SIZE:** The hard disk size. The unit is Mega Bytes.

**CYLS:** The cylinder number of the hard disk.

**HEAD:** The read/write head number of hard disk.

**PRECOMP:** The cylinder number at which the disk drive changes the write current.

**LANDZ:** The cylinder number that the disk drive heads (read/write) are seated when the disk drive is parked.

**SECTOR:** The sector number of each track defined on the hard disk.

**MODE:** Select Auto to detect the mode type automatically. If your hard disk supports the LBA mode, select LBA or Large. However, if your hard disk cylinder is more than 1024 and does not support the LBA function, set at Large. Select Normal if your hard disk supporting cylinders is below 1024.

## Software Turbo Speed

The BIOS supports Software Turbo Speed feature. Instead of pressing the Turbo Speed Button on the front panel, simply press the **Alt, Ctrl, and +** keys at the same time to enable the Turbo Speed feature; and press the **Alt, Ctrl, and -** keys at the same time to disable the feature.

## BIOS Features Setup

ROM PCI/ISA BIOS (2A6LGF0H) BIOS FEATURES SETUP AWARD SOFTWARE, INC.			
Anti-Virus Protection	: Enabled	Report No FDD For WIN 95	: Yes
CPU Internal Cache	: Enabled	Video BIOS Shadow	: Enabled
External Cache	: Enabled		
CPU L2 Cache ECC Checking	: Enabled		
Quick Power On Self Test	: Enabled		
Boot From LAN First	: Enabled		
Boot Sequence	: A, C, SCSI		
Swap Floppy Drive	: Disabled		
Boot Up Num.Lock Status	: On		
Gate A20 Option	: Fast		
Memory Parity Check	: Enabled		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250		
Security Option	: Setup		
PCI/VGA Palette Snoop	: Disabled		
OS Select For DRAM > 64MB	: Non-OS2		
HDD S.M.A.R.T. Capability	: Disabled		
		Esc: Quit	↑↓←→ : Select Item
		F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values	(Shift)F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

Chapter 3  
BIOS Setup

### Anti-Virus Protection

This feature starts the virus scan tool to detect if boot virus in boot sector of the first hard disk drive when booting up.

The options are: Enabled (Default), Disabled.

### CPU Internal Cache

When enabled, improves the system performance. Disable this item when testing or trouble-shooting. The options are: Enabled (Default), Disabled.

### External Cache

When enabled, supports an optional cache SRAM. This feature allows you to disable the cache function when the system performance is unstable to run some software. The options are: Enabled (Default), Disabled.

### CPU L2 Cache ECC Checking

This feature allows users to activate the CPU's Level 2 cache's error check and correction function. The options are: Enabled (Default), Disabled.

### Quick Power On Self Test

When enabled, allows the BIOS to bypass the extensive memory test. The options are: Enabled (Default), Disabled.

### Boot From LAN First

This feature makes the system bootable by the remote server via LAN. The options are: Enabled (Default), Disabled.

### Boot Sequence

Allows the system BIOS to first try to boot the operating system from the selected disk drive. The options are: A, C, SCSI (Default); C, A, SCSI; C, CDROM, A; CDROM, C, A; D, A, SCSI; E, A, SCSI; F, A, SCSI; SCSI, A, C; SCSI, C, A; C Only; LS/ZIP, C.

### Swap Floppy Drive

Allows you to switch the order in which the operating system accesses the floppy drives during boot up. The options are: Enabled, Disabled (Default).

### Boot Up Numlock Status

When set to On, allows the BIOS to automatically enable the Num Lock Function when the system boots up. The options are: On (Default), Off.

### Gate A20 Option

When set at Fast, allows a faster access response under Protected mode. The options are: Fast (Default), Normal.

### Memory Parity Check

This feature enables BIOS to perform automatic memory checking upon detection of ECC or parity DRAM. The options are: Enabled (Default), Disabled.

---

### Typematic Rate Setting

The term typematic means that when a keyboard key is held down, the character is repeatedly entered until the key is released.

The options are: Disabled (Default), Enabled.

### Typematic Rate (Chars/Sec)

This feature is available only if the above item, Typematic Rate Setting, is set at Enabled. Sets the rate of a character repeat when the key is held down.

The options are: 6 (Default), 8, 10, 12, 15, 20, 24, 30.

### Typematic Delay (Msec)

This feature is available only if the item, Typematic Rate Setting, is set at Enabled. Sets the delay time before a character is repeated.

The options are: 250 (Default), 500, 750, 1000 millisecond.

### Security Option

Allows you to set the security level of the system.

The options are: Setup (Default), System.

### PCI/VGA Palette Snoop

Set this feature to be enabled if any ISA adapter card installed in the system requires the VGA palette snoop function.

The options are: Disabled (Default), Enabled.

### OS Select For DRAM > 64MB

If your operating system (OS) is OS/2, select the option OS2. Otherwise, stay with the default setting Non-OS2.

The options are: Non-OS2 (Default), OS2.

### HDD S.M.A.R.T. Capability

S.M.A.R.T. stands for Self-Monitoring and Analysis Reporting Technology which allows your hard disk drive to report any read/write errors and issues a warning with LDCM installed.

The options are: Disabled (Default); Enabled.

### Report No FDD For WIN 95

When the field under the Standard CMOS Setup Menu for Drive A and/or Drive B is set at None, users must set this field is set at Yes for it to function properly. Otherwise, set at No, even if field for Drive A and/or Drive B is set at None, system will still detect and recognize of a floppy drive(s).

The options are: Yes (Default), No.

### Video BIOS Shadow

Allows the BIOS to copy the video ROM code of the add-on video card to the system memory for faster access.

The options are: Enabled (Default), Disabled.

## Chipset Features Setup

ROM PCI/ISA BIOS (2A6LGH)	
CHIPSET FEATURES SETUP	
AWARD SOFTWARE, INC.	
Bank 0/1 DRAM Timing : SDRAM 10ns	Auto Detect DIMM/PCI Clk : Enabled
Bank 2/3 DRAM Timing : SDRAM 10ns	CPU Clock/Spread Spectrum : Default
Bank 4/5 DRAM Timing : SDRAM 10ns	CPU Warning Temperature : Disabled
Bank 6/7 DRAM Timing : SDRAM 10ns	Current System Temp. :
SDRAM Cycle Length : 3	Current CPU Temperature :
DRAM Clock : Host CLK	Current CPU . FAN Speed :
Memory Hole : Disabled	Current CHS. FAN Speed :
Read Around write : Disabled	IN0 (V) : IN2 (V) :
Concurrent PCI/Host : Disabled	+ 5 V : +12 V :
System BIOS Cacheable : Enabled	-12 V : - 5 V :
Video RAM Cacheable : Disabled	VBAT(V) : 5VSB(V) :
AGP Aperture Size : 64M	Shutdown Temperature : 60°C/140°F
AGP-2X Mode : Enable	
Onchip USB : Enabled	Esc: Quit      ++---: Select Item
USB Keyboard Support : Disabled	F1 : Help      PU/PD/+- : Modify
Wake Up On LAN : Enable	F5 : Old Values (Shift)F2 : Color
	F6 : Load BIOS Defaults
	F7 : Load Setup Defaults

### Bank 0/1 DRAM Timing; Bank 2/3 DRAM Timing; Bank 4/5 DRAM Timing; Bank 6/7 DRAM Timing

This feature allows you to select the DRAM read/write speed.

The options are: SDRAM 10ns (Default), SDRAM 8ns, Normal, Medium, Fast, Turbo.

### SDRAM Cycle Length

This item will function only when SDRAM DIMM/s are installed on the mainboard (BIOS auto detection). If the CAS latency of your SDRAM DIMM is 2, set it at 2 to enhance your system performance. If the CAS latency of your SDRAM DIMM is 3, stay with the default setting, 3.

The options are: 3 (Default), 2.

### DRAM Clock

The feature allows users to select the DRAM clock.

The options are: Host CLK (Default), 66 MHz.

### Memory Hole

When you install a Legacy ISA card, this feature allows you to select the memory hole's address range of the ISA cycle when the processor accesses the selected address area. Please read your card manual for detail information. When disabled, the memory hole at the 14MB (or 15MB) address will be treated as a DRAM cycle when the processor accesses the 14~16MB (or 15~16MB) address area.

The options are: 15M - 16M, Disabled (Default).

### Read Around write

This feature speeds up data read performance when it stays Enabled.

The options are: Enabled, Disabled (Default).

### Concurrent PCI/Host

If each bus master cycle does not take the same path, it allows the multiple bus master cycles to be activated at the same time.

The options are: Enabled, Disabled (Default).

### System BIOS Cacheable

When enabled, allows the ROM area F000H-FFFFH to be cacheable when cache controller is activated. The options are: Enabled (Default), Disabled.

### Video RAM Cacheable

When enabled, allows the system to use the video RAM from cache RAM, instead of the slower DRAMs or ROMs.

The options are: Enabled, Disabled (Default).

### AGP Aperture Size

It allows you to select the main memory frame size for AGP use.  
The options are 4, 8, 16, 32, 64 (Default), 128MB.

### AGP-2X Mode

This feature allows user to select the AGP mode be to 1x or 2x when an AGP add-in card installed. However, when set at Enabled and the AGP card only support 1x mode, the system will fall back 1x mode automatically.  
The options are: Enabled (Default), Disabled.

### OnChip USB

When enabled, this feature allows you to use the onboard USB feature.  
The options are: Enabled (Default), Disabled.

### USB Keyboard Support

This feature will appear only if the above item Onchip USB is set at Enabled. Set this feature to Enabled to use a USB keyboard with your system.  
The options are: Disabled (Default), Enabled.

### Wake Up On LAN

When set at Enabled, an input signal comes from the other client/server on the LAN awakes the system from a soft off state if connected over LAN.  
The options are Disabled or Enabled (Default).

### Auto Detect DIMM/PCI Clk

Set this field at Enabled to allow auto detection of DIMM and PCI. If none detected, it will stop the clock of each DIMM and PCI.  
The options are: Enabled (Default), Disabled.

### CPU Clock/Spread Spectrum

This feature is used to set the CPU clock with the Spread Spectrum which is either On (for less EMI issue) or Off. The options are: Default (Default), 66 MHz/Off, 66 MHz/On, 75 MHz/On, 83 MHz/On, 95 MHz/On, 100 MHz/On, 100 MHz/Off, 112 MHz/On, 117 MHz/Off, 124 MHz/On, 133 MHz/On, 133 MHz/Off, 138 MHz/Off, 140 MHz/On, 150 MHz/On.

### CPU Warning Temperature

This item allows you to set the maximum allowable CPU temperature for system to perform normally. When CPU temperature exceeds this temperature, system will proceed to enter Standby Mode of operation causing system to slowdown.

The options are: Disabled (Default), 50°C/122°F, 53°C/127°F, 56°C/133°F, 60°C/140°F, 63°C/145°F, 66°C/151°F, 70°C/158°F, 75°C/167°F, 80°C/176°F, 85°C/185°F, 90°C/194°F, 95°C/205°F.

### Current System Temp.

This field displays the current system temperature, if your computer contains a monitoring system.

### Current CPU Temperature

This feature allows you and technicians to monitor data provided by the BIOS on the mainboard. It is not user-configurable.

### Current CPU\_FAN Speed

These fields display the current speed of the CPU fan, if your computer contains a monitoring system.

### Current CHS\_FAN Speed

These fields display the current speed of the chassis fan, if your computer contains a monitoring system.

### IN0-IN2 (V)

The IN0 is Vcore, the CPU Core Voltage. The IN2 is 3.3V

These fields display the current voltage of up to seven voltage input lines, if your computer contains a monitoring system.

### +5V;+12V; -12V; -5V; VBAT(V); 5VSB(V)

This fields display the power supply voltages.

### Shutdown Temperature

When Windows 98 ACPI mode installed, this feature helps to shutdown the system when the system temperature is as high as the selected temperature to prevent from the overheat problem.

The options are: 60°C/140°F (Default), 65°C/149°F, 70°C/158°F, 75°C/167°F.

## Power Management Setup

ROM PCI/ISA BIOS (2A6LGF0H) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.			
Power Management	: User Define	Primary INTR	: ON
PM Control by APM	: Yes	IRQ3 (COM2)	: Primary
Video Off After	: Suspend	IRQ4 (COM1)	: Primary
Video Off Method	: DPMS Support	IRQ5 (LPT2)	: Primary
MODEM Use IRQ	: 3	IRQ6 (Floppy Disk)	: Primary
Soft-Off by PWRBTN	: Delay 4 Sec	IRQ7 (LPT1)	: Primary
CPU Fan In Suspend	: OFF	IRQ8 (RTC Alarm)	: Disabled
HDD Power Down	: Disable	IRQ9 (IRQ2 Redir)	: Secondary
Doze Mode	: Disable	IRQ10 (Reserved)	: Secondary
Suspend Mode	: Disable	IRQ11 (Reserved)	: Secondary
	** PM Events **	IRQ12 (PS/2 Mouse)	: Primary
VGA	: OFF	IRQ13 (Coprocessor)	: Primary
LPT & COM	: LPT/COM	IRQ14 (Hard Disk)	: Primary
HDD & FDD	: ON	IRQ15 (Reserved)	: Disabled
DMA/ master	: OFF		
Modem Ring Resume	: Enable	Esc: Quit	F1-> : Select Item
RTC Alarm Resume	: Disabled	F1 : Help	PU/PD+/- : Modify
		F5 : Old Values (Shift)F2 : Color	
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

### Power Management

This item allows you to adjust the power management features. Select Disable for disabling global power management features. Select User Define for configuring your own power management features. Min Saving initiates all predefined timers in their minimum values. Max Saving, on the other hand, initiates maximum values. The options are: User Define (Default), Min Saving, Max Saving.

### PM Control by APM

The option No allows the APM (Advanced Power Management) specification be ignored. Selecting Yes will allow the BIOS wait for APM's prompt before it enters Doze mode, Standby mode, or Suspend mode. If the APM is installed, it will prompt the BIOS to set the system into power saving mode when all tasks are done. The options are: No, Yes (Default).

### Video Off After

It allows you to activate the video off feature for the display monitor power management. The options are Suspend (Default), Doze, NA.

---

### Video Off Method

The option *V/H SYNC+Blank* allows the BIOS to blank off screen display by turning off the V-Sync and H-Sync signals sent from add-on VGA card. *DPMS Support* allows the BIOS to blank off screen display by your add-on VGA card which supports DPMS (Display Power Management Signaling function). *Blank Screen* allows the BIOS to blank off screen display by turning off the red-green-blue signals.

The options are: V/H SYNC+Blank, DPMS Support (Default), Blank Screen.

### MODEM Use IRQ

The feature allows users to select the IRQ# of the system that is the same IRQ# as the modem use. The settings are: NA, 3 (Default), 4, 5, 7, 9, 10, 11.

### Soft-Off by PWR-BTTN

The selection Delay 4 Sec. will allow the system shut down after 4 seconds after the power button is pressed. The selection Instant-Off will allow the system shut down immediately once the power button is pressed.

The settings are: Delay 4 Sec (Default), Instant-Off.

### CPU Fan In Suspend

Enabling this feature will allow the CPU fan stop running when the system enters Suspend mode. The options are: Off (Default), On.

### HDD Power Down

The option lets the BIOS turn the HDD motor off when system is in Suspend mode. Selecting 1 Min..15 Min allows you define the HDD idle time before the HDD enters the Power Saving Mode.

The options 1 Min..15 Min will not work concurrently. When HDD is in the Power Saving Mode, any access to the HDD will wake the HDD up.

The options are: Disable (Default), 1 Min..15 Min.

### Doze Mode

When disabled, the system will not enter Doze mode. The specified time option defines the idle time the system takes before it enters Doze mode.

The options are: Disable (Default), 10, 20, 30, 40 Sec, 1, 2, 4, 6, 8, 10, 20, 30, 40 Min, 1 Hour.

### Suspend Mode

When disabled, the system will not enter Suspend mode. The specified time option defines the idle time the system takes before it enters Suspend mode. The options are: Disable (Default), 10, 20, 30, 40 Sec, 1, 2, 4, 6, 8, 10, 20, 30, 40 Min, 1 Hour.

### VGA

*ON* enables the power management timers when a no activity events is detected in the VGA. *OFF* disables the PM timer even if a no activity event is detected. The options are: OFF (Default), ON.

### LPT & COM

*LPT/COM* enables the power management timers when a no activity event is detected in the LPT and COM ports. *LPT (COM)* enables the power management timers when a no activity event is detected in the LPT (COM) ports. *NONE* to disable the PM timer even if a no activity event is detected. The options are: LPT/COM (Default), LPT, COM, NONE.

### HDD & FDD

*ON* will enable the power management timers when no activity event is detected in the hard drive and floppy drive. *OFF* disables the PM timer even if no activity event is detected. The options are: OFF, ON (Default).

### DMA/master

To set this feature at ON activates that Power Management feautre (PM) wake-up event for the DMA or bus master (of the LAN card or/and SCSI card). The options are: OFF (Default), ON.

### Modem Ring Resume

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state. The options are: Enabled (Default), Disabled.

### RTC Alarm Resume

*Enabled* allows you to set the time the system will be turned on from the system power-off status. The options are: Enabled, Disabled (Default).

---

### Date (of Month)

This feature allows you to set the day of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled. The options are: 0, 1..31.

### Timer (hh:mm:ss)

If an ATX power supply is installed and when RTC Alarm Resume is Enabled, this feature allows you to set the time of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled.

The options are: 7: 0: 0 (Default). hh (*hour*) - 0, 1, 2,..., 23; mm (*minute*) - 0, 1, 2,...,59; ss (*second*) - 0, 1, 2,...,59.

### Primary INTR

When the Primary interrupt (the Primary option in the feature of IRQ# Activity) generates will make the Power Management feature (PM) wake-up event on. If set at OFF, all the primary interrupt will not wake-up the system. The options are: OFF, ON (Default).

### IRQ# Activity

After the time period which you set at in Suspend Mode Feature, the system advances from Doze Mode to Suspend Mode in which the CPU clock stops and the screen display is off. At this moment, if the IRQ activity which is defined as Primary occurs, the system goes back to Full-on Mode directly.

If the IRQ activity which is defined as Secondary takes place, the system enters another low power state, Dream Mode, in which the system will act as Full-on Mode except that the screen display remains off until the corresponding IRQ handler finishes, then back to Suspend Mode.

The options of IRQ 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 are: Primary, Secondary, Disabled.

The default values of IRQ 8, 15 are: Disabled.

The default value of IRQ 3, 4, 5, 6, 7, 12, 13, 14 are: Primary.

The default value of IRQ 9, 10, 11 are: Secondary.

## PNP/PCI Configuration

ROM PCI/ISA BIOS (2A6L60H) PNP/PCI CONFIGURATION AWARD SOFTWARE, INC.	
PNP OS Installed : No	CPU to PCI Write Buffer : Enabled
Resources Controlled By : Auto	PCI Dynamic Bursting : Enabled
Reset Configuration Data : Disabled	PCI Master 0 WS Write : Enabled
	PCI Delay Transaction : Disabled
	PCI#2 Access #1 Retry : Disabled
	AGP Master 1 WS Write : Enabled
	AGP Master 1 WS Read : Disabled
	Assign IRQ For VGA : Enabled
	Slot 1 Use IRQ No. : Auto
	Slot 2 Use IRQ No. : Auto
	Slot 3 Use IRQ No. : Auto
	Slot 4 Use IRQ No. : Auto
	Esc : Quit      ↑↓←→ : Select Item
	F1 : Help      PU/PD/+/- : Modify
	F5 : Old Values (Shift)F2 : Color
	F6 : Load BIOS Defaults
	F7 : Load Setup Defaults

### PNP OS Installed

If your operating system is a Plug-and-Play one, such as Windows NT, Windows 95, select Yes. The options are: No (Default), Yes.

### Resources Controlled By

If set at Auto, the BIOS arranges all system resources. If there exists conflict, select Manual. The options are: Auto (Default), Manual.

The manual options of **IRQ- / DMA- assigned to** are: Legacy ISA, PCI/ISA PnP (Default).

### Reset Configuration Data

When enabled, allows the system to clear the last BIOS configuration data and reset with the default data.

The options are: Enabled, Disabled (Default).

### CPU to PCI Write Buffer

When enabled, allows data and address access to the internal buffer of the system controller; so the processor can be released from the waiting state. The options are: Enabled (Default), Disabled.

### PCI Dynamic Bursting

When enabled, the PCI controller allows Bursting PCI transfer if the consecutive PCI cycles come with the address falling in same 1KB space. This improves the PCI bus throughput.

The options are: Enabled (Default), Disabled.

### PCI Master 0 WS Write

When enabled, allows a zero-wait-state-cycle delay when the PCI master drive writes data to DRAM. The options are: Enabled (Default), Disabled.

### PCI Delay Transaction

Enable this feature to abort the current CPI master cycle and to accept the new PCI master request, it reaccepts the original PCI master and returns the PCI data phase to the original PCI master.

The options are: Disabled (Default), Enabled.

### PCI#2 Access #1 Retry

When enabled, the AGP (PCI#2) access to PCI (PCI#1) will be retried until the maximum count. The options are: Disabled (Default); Enabled.

### AGP Master 1 WS Write

When enabled, the AGP bus master write access to DRAMs will add one wait-state cycle. The options are: Enabled (Default); Disabled.

### AGP Master 1 WS Read

When enabled, the AGP bus master read access to the DRAMs will add one wait-state cycle. The options are: Disabled (Default); Enabled.

### Assign IRQ For VGA

If your PCI VGA card does not need an IRQ, select Disabled; therefore, an IRQ can be released for the system use.

The options are: Enabled (Default), Disabled.

### Slot 1/2/3/4 Use IRQ No.

Some PCI devices would need to use an IRQ on the PCI bus. Selecting Auto allows the PCI controller to automatically allocate an IRQ.

The options are: Auto (Default); 3, 4, 5; 7; 9, 10, 11, 12; 14; 15.



## Integrated Peripherals

ROM PCI/ISA BIOS (2A6L60H) INTEGRATED PERIPHERALS AWARD SOFTWARE, INC.			
OnChip IDE Channel0	: Enabled	Onboard Serial Port 2	: 2F8/IRQ3
OnChip IDE Channel1	: Enabled	UART Mode Select	: Normal
IDE Prefetch Mode	: Enabled	UART2 Duplex Mode	: Half
IDE HDD Block Mode	: Enabled	RxD, TxD Active	: Hi, Lo
IDE Primary Master PIO	: Auto	IR Transmission delay	: Enabled
IDE Primary Slave PIO	: Auto	Onboard Parallel Port	: 378/IRQ7
IDE Secondary Master PIO	: Auto	Parallel Port Mode	: SPP
IDE Secondary Slave PIO	: Auto	ECP Mode Use DMA	: 3
IDE Primary Master UDMA	: Auto	EPP Mode Select	: EPP1.7
IDE Primary Slave UDMA	: Auto	PWRON After PWR-Fail	: Former-Sts
IDE Secondary Master UDMA	: Auto		
IDE Secondary Slave UDMA	: Auto		
Init Display First	: PCI Slot		
POWER ON Function	: Button Only	Esc: Quit	↑↓←→: Select Item
KB Power ON Password	: Enter	F1 : Help	PU/PD/+- : Modify
Hot Key Power ON	: Ctrl-F1	F5 : Old Values	(Shift)F2 : Color
KBC Input clock	: 8 MHz	F6 : Load BIOS Defaults	
Onboard FDC Controller	: Enabled	F7 : Load Setup Defaults	
Onboard Serial Port 1	: 3F8/IRQ4		

### OnChip IDE Channel0

When enabled, allows you to use the onboard primary PCI IDE. If a hard disk controller card is used, set at Disabled.

The options are: Enabled (Default), Disabled.

### OnChip IDE Channel1

When enabled, allows you to use the onboard secondary PCI IDE. If a hard disk controller card is used, set at Disabled.

The options are: Enabled (Default), Disabled.

### IDE Prefetch Mode

When set at Enabled, it allows data to be posted to and prefetched from the primary IDE data ports. Data prefetching is initiated when a data port read occurs. The read prefetch eliminates latency to the IDE data ports and allows them to be performed back to back for the highest possible PIO data transfer rates. The first data port read of a sector is called the demand read. Subsequent data port reads from the sector are called prefetch reads. The demand read and all prefetch reads must be of the same size (16 or 32 bits). The options are: Enabled (Default), Disabled.

### IDE HDD Block Mode

When enabled, the system executes read/write requests to hard disk in block mode. The options are: Enabled (Default), Disabled.

### IDE Primary Master PIO

Allows an automatic or a manual configuration of the PCI primary IDE hard disk (master) mode. The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

### IDE Primary Slave PIO

Allows an automatic or a manual configuration of the PCI primary IDE hard disk (slave) mode. The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

### IDE Secondary Master PIO

Allows an automatic or a manual configuration of the PCI secondary IDE hard disk (master) mode. The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

### IDE Secondary Slave PIO

Allows an automatic or a manual configuration of the PCI secondary IDE hard disk (slave) mode. The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

### IDE Primary Master UDMA

Allows you to select the first PCI IDE channel of the first master hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disable.

### IDE Primary Slave UDMA

Allows you to select the first PCI IDE channel of the first slave hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disable.

### IDE Secondary Master UDMA

Allows you to select the second PCI IDE channel of the secondary master hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disable.

---

### IDE Secondary Slave UDMA

Allows you to select the second PCI IDE channel of the secondary slave hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disable.

### Init Display First

When you install an AGP VGA card and a PCI VGA card on the board, this feature allows you to select the first initiation of the monitor display from which card. The options are: PCI Slot (Default), AGP.

### POWER ON Function

Allows you to set the method for powering-on the system. The default option of *BUTTON-ONLY* allows system power-on using the standard system case mounted ON/OFF switch. The option *Password* allows you to set up to 5 alphanumeric characters to power-on the system. The option *Hot KEY* allows you to set which of the 12 keyboard function keys (<F1> to <F12>) in combination with the <Ctrl> key to power-on the system. The option *Mouse Click* allows you to use the PS/2 mouse to power-on the system by double-clicking on the mouse button. The options are: Button Only (Default); Password; Hot KEY; Mouse Right, Mouse Left.

### KB Power ON Password

Allows you to set up to 5 alphanumeric characters use in powering-on the system. To set password, set the above item POWER ON Function to *Password*, then using the keyboard's down arrow key to move cursor to this item KB Power ON Password and press the <Enter> key. A box will appear asking you to input the password desired to power-on the system.

### Hot Key power ON

Allows you to set which of the 12 keyboard function keys (<F1> to <F12>) in combination with the <Ctrl> key will be used to power-on the system. The options are: *Ctrl-F1* (default) up to *Ctrl-F12*.



**NOTE:** When using Password, Hot KEY, or Mouse Click options for the item POWER ON Function will render the power button on the system case ineffective. In case user forgets password or hot key setting, use the clear password switch or jumper to clear RTC data (refer to section about clear password on Chapter 2). Another method is to unplug system power from the AC power outlet and then re-insert the power cord. Previous password and hot key settings will be disabled allowing user to set a new one.

### KBC input clock

This feature allows you to select different KBC input clocks which your keyboard actually supported. Please read your keyboard manual also for more information. The options are: 6, 8 (Default), 12, 16 MHz.

### Onboard FDC Controller

When enabled, the floppy diskette drive (FDD) controller is activated. The options are: Enabled (Default), Disabled.

### Onboard Serial Port 1

If the serial port 1 uses the onboard I/O controller, you can modify your serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed. The options are: 3F8/IRQ4 (Default), 3E8/IRQ4, 2F8/IRQ3, 2E8/IRQ3, Disabled.

### Onboard Serial Port 2

If the serial port 2 uses the onboard I/O controller, you can modify your serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed. The options are: 2F8/IRQ3 (Default), 3E8/IRQ4, 2E8/IRQ3, 3F8/IRQ4, Disabled.

### UART Mode Select

Allows you to select the IR modes if the serial port 2 is used as an IR port. Set at Standard, if you use COM2 as the serial port as the serial port, instead as an IR port. The options are: HPSIR, ASKIR, Normal (Default).

### UART2 Duplex Mode

Allows you to select the IR modes. The options are: Half (Default), Full.

---

### RxD , TxD Active

This feature is available only if the item, UART 2 Mode, is set at ASKIR or HPSIR. The feature allows you to select the active signals of the reception end and the transmission end. This is for technician use only.

The options are: Hi, Lo (Default); Hi, Hi; Lo, Hi; Lo, Lo.

### IR Transmission Delay

When Enabled, the transmission delays 4 characters-time (40 bit-time) if SIR is changed from RX mode to TX mode. When Disabled, no transmission delay if SIR is changed from RX mode to TX mode.

The options are: Enabled (Default), Disabled.

### Onboard Parallel Port

Allows you to select from a given set of parameters if the parallel port uses the onboard I/O controller.

The options are: 378/IRQ7 (Default), 278/IRQ5, 3BC/IRQ7, Disabled.

### Parallel Port Mode

Allows you to connect with an advanced printer via the port mode it supports.

The options are: SPP (Default), EPP, ECP, ECP+EPP.

### ECP Mode Use DMA

This feature allows you to select Direct Memory Access (DMA) channel if the ECP mode selected. The options are: 3 (Default), 1.

### EPP Mode Select

This feature allows you to select the EPP type version.

The options are: EPP1.7 (Default), EPP1.9.

### PWRON After PWR-Fail

When the system is shut down owing to the power failure, the system will not be back to power on by itself. This feature allows you to set the system back to which power status of the system when the system power is resumed. The options are Former-Sts (Default), On, or Off.

## Supervisor/User Password

To enable the Supervisor/User passwords, select the item from the Standard CMOS Setup. You will be prompted to create your own password. Type your password up to eight characters and press Enter. You will be asked to confirm the password. Type the password again and press Enter. To disable password, press Enter twice when you are prompted to enter a password. A message appears, confirming the password is disabled.

Under the BIOS Feature Setup, if *Setup* is selected under the Security Option field and the Supervisor/User Password is enabled, you will be prompted password every time you try to enter the CMOS Setup Utility. If *System* is selected and the Supervisor/User Password is enabled, you will be requested to enter the Password every time when you reboot the system or enter the CMOS Setup utility.

## IDE HDD Auto Detection

The IDE Hard Disk Drive Auto Detection feature automatically configures your new hard disk. Use it for a quick configuration of new hard drives. This feature allows you to set the parameters of up to four IDE HDDs. The option with (Y) are recommended by the system BIOS. You may also keys in your own parameters instead of setting by the system BIOS. After all settings, press Esc key to return the main menu. For confirmation, enter the Standard CMOS Setup feature.

## Save and Exit Setup

After you have made changes under Setup, press Esc to return to the main menu. Move cursor to Save and Exit Setup or press F10 and then press Y to change the CMOS Setup. If you did not change anything, press Esc again or move cursor to Exit Without Saving and press Y to retain the Setup settings. The following message will appear at the center of the screen to allow you to save data to CMOS and exit the setup utility: **SAVE to CMOS and EXIT (Y/N)?**

## Exit without Saving

If you select this feature, the following message will appear at the center of the screen to allow you to exit the setup utility without saving CMOS modifications: **Quit Without Saving (Y/N)?**

## CP11B/CP11Z BIOS Setup

The mainboard comes with an AMI BIOS chip that contains the ROM Setup information of your system. (If your system uses Award BIOS, please refer to Page 3-27.) This chip serves as an interface between the processor and the rest of the mainboard's components. This chapter explains the information contained in the Setup program and tells you how to modify the settings according to your system configuration.

### Main Setup



The Main Setup screen is displayed above. Each item may have one or more option settings. It allows you to change the system Date and Time, IDE hard disk, floppy disk drive types for drive A: and B:.

#### Auto-Detect Hard Disks

Allows the system BIOS to detect all hard disk parameters automatically.

### Boot Sector Virus Protection

When Enabled, a warning will be given when any program or virus sends a Disk Format command or tries to write to the boot sector of a hard disk drive.

## Advanced Setup



Advanced Setup options are displayed by choosing item from the AMI BIOS Setup main menu. All Advanced Setup options are described in their corresponding operating menus by brief Setup Helps.

## Security Setup



**Set Supervisor and User Passwords:** You can set either a Supervisor password or a User password. If you do not use a password, just press **Enter** when the password prompt appears. The password check option is enabled in Advanced Setup by choosing either Always (the password prompt appears every time the system is powered on) or Setup (the password prompt appears only when AMI BIOS is run). You can enter a password by typing the password on the keyboard. When you select Supervisor or User, AMI BIOS prompts for a password. You must set the Supervisor password before you can set the User password. Enter a 1 to 6 character password. The password does not appear when typed.

**Change a Password:** Enter the password and press **Enter**. After the new password is entered, retype the new password as prompted and press **Enter**. If the password confirmation is incorrect, an error message appears. If the new password is entered without error, press to return to the AMI BIOS Main Menu.

## Exit Setup



**Exit Saving Changes** allows you to write the current settings to CMOS and exit.

**Exit Discarding Changes** allows you to exit without writing the current settings to CMOS.

**Load Optimal Settings** is selected for settings which provide the best system performance.

**Load Fail Safe Settings** is for settings that provide a more efficient computer. If the computer will not boot, select this option and try to diagnose the problem after the computer boots. These settings do not give optimal performance.

**Load Original Values** recalls your last set of previous settings. This option is convenient if you change settings and decide you wish to return to the previous settings.

## Award BIOS Setup

The mainboard CP11B/CP11Z may also come with Award BIOS chip that contains the ROM Setup information of your system. This chip serves as an interface between the processor and the rest of the mainboard's components. This section explains the information contained in the Setup program and tells you how to modify the settings according to your system configuration.

## CMOS Setup Utility

ROM PCI/ISA BIOS (2A69KF09) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
Esc : Quit    F5 : Menu in BIOS	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	(Shift)F2 : Change Color

Chapter 3  
BIOS Setup

A Setup program, built into the system BIOS, is stored in the CMOS RAM. This Setup utility program allows changes to the mainboard configuration settings. It is executed when the user changes system configuration; user changes system backup battery; or the system detects a configuration error and asks the user to run the Setup program. Use the arrow keys to select and press Enter to run the selected program.

## Standard CMOS Setup

The Standard CMOS Setup screen is displayed above. Each item may have one or more option settings. The system BIOS automatically detects memory size, thus no changes are necessary. Use the arrow keys to highlight the item and then use the PgUp or PgDn keys to select the value you want in each item.

ROM PCI/ISA BIOS (2A69KF0J)  
STANDARD CMOS SETUP  
AWARD SOFTWARE, INC.

Date (mm:dd:yy) : Tue, Jun 1 1999  
Time (hh:mm:ss) : 15:37:55

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 : 1.44MB, 3.5 in

Drive B : None

Floppy 3 Mode Support : Disabled

Video : EGA/VGA

Halt On : All Errors

Base Memory: 640K

Extended Memory: 31744K

Other Memory: 384K

Total Memory: 32768K

Esc : Quit

↑ ↓ → ← : Select Item

PU/PD/+/- : Modify

F1 : Help

(Shift)F2 : Change Color

## Hard Disk Configurations

**TYPE:** Select User to fill the remaining fields. Select Auto to detect the HDD type automatically (recommended).

**SIZE:** The hard disk size. The unit is Mega Bytes.

**CYLS:** The cylinder number of the hard disk.

**HEAD:** The read/write head number of hard disk.

**PRECOMP:** The cylinder number at which the disk drive changes the write current.

**LANDZ:** The cylinder number that the disk drive heads (read/write) are seated when the disk drive is parked.

**SECTOR:** The sector number of each track defined on the hard disk.

**MODE:** Select Auto to detect the mode type automatically. If your hard disk supports the LBA mode, select LBA or Large. However, if your hard disk cylinder is more than 1024 and does not support the LBA function, set at Large. Select Normal if your hard disk supporting cylinders is below 1024.

## Software Turbo Speed

The BIOS supports Software Turbo Speed feature. Instead of pressing the Turbo Speed Button on the front panel, simply press the **Alt, Ctrl, and +** keys at the same time to enable the Turbo Speed feature; and press the **Alt, Ctrl, and -** keys at the same time to disable the feature.

## BIOS Features Setup

ROM PCI/ISA BIOS (2A69KF0J) BIOS FEATURES SETUP AWARD SOFTWARE, INC.		
Anti-Virus Protection	: Enabled	Video BIOS Shadow : Enabled
CPU Internal Cache	: Enabled	
External Cache	: Enabled	
CPU L2 Cache ECC Checking	: Enabled	
Quick Power On Self Test	: Enabled	
Boot From LAN First	: Enabled	
Boot Sequence	: A, C, SCSI	
Swap Floppy Drive	: Disabled	
Boot Up Floppy Seek	: Enable	
Boot Up NumLock Status	: On	
Gate A20 Option	: Fast	
Typeomatic Rate Setting	: Disabled	
Typeomatic Rate (Chars/Sec)	: 6	
Typeomatic Delay (Msec)	: 250	
Security Option	: Setup	Esc : Quit      ↑↓←→ : Select Item
PCI/VGA Palette Snoop	: Disabled	F1 : Help      PU/PD/+/- : Modify
OS Select For DRAM > 84MB	: Non-OS2	F5 : Old Values (Shift)F2 : Color
HDD S.M.A.R.T. Capability	: Disabled	F6 : Load BIOS Defaults
Report No FDD For WIN 95	: Yes	F7 : Load Setup Defaults

### Anti-Virus Protection

This feature starts the virus scan tool to detect if boot virus in boot sector of the first hard disk drive when booting up.

The options are: Enabled (Default), Disabled.

### CPU Internal Cache

When enabled, improves the system performance. Disable this item when testing or trouble-shooting. The options are: Enabled (Default), Disabled.

### External Cache

When enabled, supports an optional cache SRAM. This feature allows you to disable the cache function when the system performance is unstable to run some software. The options are: Enabled (Default), Disabled.

### CPU L2 Cache ECC Checking

This feature allows users to activate the CPU's Level 2 cache's error check and correction function. The options are: Enabled (Default), Disabled.

### Quick Power On Self Test

When enabled, allows the BIOS to bypass the extensive memory test.

The options are: Enabled (Default), Disabled.

### Boot From LAN First

This feature makes the system bootable by the remote server via LAN.  
The options are: Enabled (Default), Disabled.

### Boot Sequence

Allows the system BIOS to first try to boot the operating system from the selected disk drive. The options are: A, C, SCSI (Default); C, A, SCSI; C, CDROM, A; CDROM, C, A; D, A, SCSI; E, A, SCSI; F, A, SCSI; SCSI, A, C; SCSI, C, A; C Only; LS/ZIP, C.

### Swap Floppy Drive

Allows you to switch the order in which the operating system accesses the floppy drives during boot up.  
The options are: Enabled, Disabled (Default).

### Boot Up Floppy Seek

When enabled, assigns the BIOS to perform floppy diskette drive tests by issuing the time-consuming seek commands.  
The options are: Enabled (Default), Disabled.

### Boot Up Numlock Status

When set to On, allows the BIOS to automatically enable the Num Lock Function when the system boots up. The options are: On (Default), Off.

### Gate A20 Option

When set at Fast, allows a faster access response under Protected mode.  
The options are: Fast (Default), Normal.

### Typematic Rate Setting

The term typematic means that when a keyboard key is held down, the character is repeatedly entered until the key is released.  
The options are: Disabled (Default), Enabled.

### Typematic Rate (Chars/Sec)

This feature is available only if the above item, Typematic Rate Setting, is set at Enabled. Sets the rate of a character repeat when the key is held down. The options are: 6 (Default), 8, 10, 12, 15, 20, 24, 30.

---

### Typematic Delay (Msec)

This feature is available only if the item, Typematic Rate Setting, is set at Enabled. Sets the delay time before a character is repeated.

The options are: 250 (Default), 500, 750, 1000 millisecond.

### Security Option

Allows you to set the security level of the system.

The options are: Setup (Default), System.

### PCI/VGA Palette Snoop

Set this feature to be enabled if any ISA adapter card installed in the system requires the VGA palette snoop function.

The options are: Disabled (Default), Enabled.

### OS Select For DRAM > 64MB

If your operating system (OS) is OS/2, select the option OS2. Otherwise, stay with the default setting Non-OS2.

The options are: Non-OS2 (Default), OS2.

### HDD S.M.A.R.T. Capability

S.M.A.R.T. stands for Self-Monitoring and Analysis Reporting Technology which allows your hard disk drive to report any read/write errors and issues a warning with LDCM installed.

The options are: Disabled (Default); Enabled.

### Report No FDD For WIN 95

When the field under the Standard CMOS Setup Menu for Drive A and/or Drive B is set at None, users must set this field is set at Yes for it to function properly. Otherwise, set at No, even if field for Drive A and/or Drive B is set at None, system will still detect and recognize of a floppy drive(s).

The options are: Yes (Default), No.

### Video BIOS Shadow

Allows the BIOS to copy the video ROM code of the add-on video card to the system memory for faster access.

The options are: Enabled (Default), Disabled.

## Chipset Features Setup

ROM PCI/ISA BIOS (2A69KF0J) CHIPSET FEATURES SETUP AWARD SOFTWARE, INC.			
SDRAM RAS-to-CAS Delay	: 3	Auto Detect DIMM/PCI Clk	: Enabled
SDRAM RAS Precharge Time	: 2	CPU Clock/Spread Spectrum	: Default
SDRAM CAS latency Time	: 3	CPU Warning Temperature	: Disabled
SDRAM Precharge Control	: Disabled	Current System Temp.	:
DRAM Data Integrity Mode	: Non-ECC	Current CPU Temperature	:
System BIOS Cacheable	: Enabled	Current CPUFAN Speed	:
Video BIOS Cacheable	: Enabled	Current CHAFAN1/2 Speed	:
Video RAM Cacheable	: Disabled	Current PWRFAN Speed	:
8 Bit I/O Recovery Time	: 1	IN0 (V)	: IN2 (V)
16 Bit I/O Recovery Time	: 1	+ 5 V	: +12 V
Memory Hole At 15M-16M	: Disabled	-12 V	: - 5 V
Passive Release	: Enabled	VBAT(V)	: 5VSB(V)
Delayed Transaction	: Disabled	Shutdown Temperature	: 60°C/140°F
AGP Aperture Size (MB)	: 64		
		Esc : Quit	↑↓←→ : Select Item
		F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values	(Shift)F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

### SDRAM RAS-to-CAS Delay

This feature allows you to define the delay time that from the SDRAM RAS# active to CAS# active. The settings are 2 Clocks or 3 Clocks.

### SDRAM RAS Precharge Time

Allows you to select the DRAM RAS# Precharge Time (unit: clock). The options are: 3, 2 (Default).

### SDRAM CAS latency Time

If any SDRAM DIMM is installed, this feature allows you to select the CAS Latency. The options are: 3 (Default), 2.

### DRAM Data Integrity Mode (only for CP11B)

This feature provides software configurability of selecting between ECC (ECC generation and checking/correction) mode or non-ECC mode of operation of the DRAM interface. The options are: Non-ECC (Default), ECC.

### System BIOS Cacheable

Selecting Enabled allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. The options are: Disabled, Enabled (Default).

### Video BIOS Cacheable

When enabled, allows the system to use the video BIOS codes from SRAMs, instead of the slower DRAMs or ROMs.

The options are: Enabled, Disabled (Default).

### Video RAM Cacheable

Selecting Enabled allows caching of the video BIOS ROM at C0000h to C7FFFh, resulting in better video performance. However, if any program writes to this memory area, a memory access error may result.

The options are: Enabled, Disabled (Default).

### 8 Bit I/O Recovery Time

Allows you to set the 8-bit ISA I/O recovery time.

The options are: 1 (Default), 2, 3, 4, 5, 6, 7, NA, 8. Unit: Bus clock.

### 16 Bit I/O Recovery Time

Allows you to set the 16-bit ISA I/O recovery time.

The options are: 1 (Default), 2, 3, NA, 4. Unit: Bus clock.

### Memory Hole At 15M-16M

When enabled, the memory hole at the 15MB address will be relocated to the 15~16MB address range of the ISA or PCI cycle when the processor accesses the 15~16MB address area.

When disabled, the memory hole at the 15MB address will be treated as a DRAM cycle when the processor accesses the 15~16MB address area.

The options are: Enabled, Disabled (Default).

### Passive Release

Set this option to Enabled to enable passive release for the Intel PIIX4E chip. The options are: Enabled (Default), Disabled.

### Delayed Transaction

Enable this feature to abort the current PCI master cycle and to accept the new PCI master request, it reaccepts the original PCI master and returns the PCI data phase to the original PCI master. It will enhance the system performance. The options are: Enabled, Disabled (Default).

### AGP Aperture Size (MB)

It allows you to select the main memory frame size fo AGP use.  
The options are 4, 8, 16, 32, 64 (Default), 128, 256MB.

### Auto Detect DIMM/PCI Clk

Set this field at Enabled to allow auto detection of DIMM and PCI. If none detected, it will stop the clock of each DIMM and PCI.  
The options are: Enabled (Default), Disabled.

### CPU Clock/Spread Spectrum

This feature is used to set the CPU clock with the Spread Spectrum which is either On (for less EMI issue) or Off. The options are: Default (Default), 66 MHz/Off, 66 MHz/On, 75 MHz/On, 83 MHz/On, 117 MHz/Off, 124 MHz/On, 133 MHz/On, 133 MHz/Off, 138 MHz/Off, 140 MHz/On, 150 MHz/On.

### CPU Warning Temperature

This item allows you to set the maximum allowable CPU temperature for system to perform normally. When CPU temperature exceeds this temperature, system will proceed to enter Standby Mode of operation causing system to slowdown.

The options are: Disabled (Default), 50°C/122°F, 53°C/127°F, 56°C/133°F, 60°C/140°F, 63°C/145°F, 66°C/151°F, 70°C/158°F, 75°C/167°F, 80°C/176°F, 85°C/185°F, 90°C/194°F, 95°C/205°F.

### Current System Temp. / Current CPU Temperature / Current CPUFAN Speed / Current CHAFAN1/2 Speed / Current PWRFAN Speed / IN0(V): to IN2(V): / +5V: / +12V: / -12V: / -5V: / VBAT(V): / 5VSB(V):

These items allow end users and technicians to monitor data provided by the BIOS on this mainboard. It is not user-configurable.

### Shutdown Temperature

When Windows 98 ACPI mode installed, this feature helps to shutdown the system when the system temperature is as high as the selected temperature to prevent from the overheat problem.

The options are: 60°C/140°F (Default), 65°C/149°F, 70°C/158°F, 75°C/167°F.

## Power Management Setup

ROM PCI/ISA BIOS (2A89KF0J) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.		
Power Management	: User Define	** Reload Global Timer Events **
PM Control by APM	: Yes	IRQ3-7, 9-15], NMI : Disabled
Video Off Method	: DPMS	Primary IDE 0 : Disabled
Video Off After	: Suspend	Primary IDE 1 : Disabled
MODEM Use IRQ	: 3	Secondary IDE 0 : Disabled
Doze Mode	: Disable	Secondary IDE 1 : Disabled
Standby Mode	: Disable	Floppy Disk : Disabled
Suspend Mode	: Disable	Serial Port : Enabled
HDD Power Down	: Disable	Parallel Port : Disabled
Throttle Duty Cycle	: 62.5%	
PCI/VGA Act-Monitor	: Disabled	
Soft-Off by PWR-BTTN	: Delay 4 Sec.	
CPUFAN Off In Suspend	: Enabled	
Poweron by Ring	: Enabled	
Power On on PCI card	: Disabled	
Resume by Alarm	: Disabled	
Wake Up On LAN	: Enabled	
IRQ 8 Break Suspend	: Disabled	
		Esc: Quit      ←→: Select Item
		F1 : Help      PU/PD+/- : Modify
		F5 : Old Values (Shr)/F2 : Color
		F6 : Load BIOS Defaults
		F7 : Load Setup Defaults

### Power Management

This item allows you to adjust the power management features. Select Disable for disabling global power management features. Select User Defined for configuring your own power management features.

Min Saving initiates all predefined timers in their minimum values. Max Saving, on the other hand, initiates maximum values. The options are: Disabled, User Defined (Default), Min Saving, Max Saving.

### PM Control by APM

The option No allows the BIOS to ignore the APM (Advanced Power Management) specification. Selecting Yes will allow the BIOS wait for APM's prompt before it enters Doze mode, Standby mode, or Suspend mode. If the APM is installed, it will prompt the BIOS to set the system into power saving mode when all tasks are done. The options are: No, Yes (Default).

### Video Off Method

The option V/H SYNC+Blank allows the BIOS to blank off screen display by turning off the V-Sync and H-Sync signals sent from add-on VGA card. DPMS Supported allows the BIOS to blank off screen display by your add-on VGA card which supports DPMS (Display Power Management Signaling function).

Blank Screen allows the BIOS to blank off screen display by turning off the red-green-blue signals. The options are: V/H SYNC+Blank, DPMS (Default), Blank Screen.

### Video Off After

This feature allows you to select under which mode to power off your monitor.

The options are: Standby, Doze, NA, Suspend (Default).

### MODEM Use IRQ

This feature allows you to select the IRQ# of the system that is the same IRQ# as the modem use.

The options are: NA, 3 (Default), 4, 5, 7, 9, 10, 11.

### Doze Mode

When disabled, the system will not enter Doze mode. The specified time option defines the idle time the system takes before it enters Doze mode.

The options are: Disable (Default), 1, 2, 4, 8, 12, 20, 30, 40 Min, 1 Hr.

### Standby Mode

When disabled, the system will not enter the Standby mode. The specified time option defines the idle time before enters Standby mode. The options are: Disable (Default), 1, 2, 4, 8, 12, 20, 30, 40 Min, 1 Hr.

### Suspend Mode

When disabled, the system will not enter Suspend mode. The specified time option defines the idle time the system takes before it enters Suspend mode. The options are: Disable (Default), 1, 2, 4, 8, 12, 20, 30, 40 Min, 1 Hr.

### HDD Power Down

Selecting Disable will turn off the hard disk drive (HDD) motor. Selecting 1 Min..15 Min allows you define the HDD idle time before the HDD enters the Power Saving Mode. The option When Suspend lets the BIOS turn the HDD motor off when system is in Suspend mode.

The options 1 Min..15 Min and When Suspend will not work concurrently. When HDD is in the Power Saving Mode, any access to the HDD will wake the HDD up.

The options are: Disable (Default), 1 Min..15 Min, When Suspend.

---

### Throttle Duty Cycle

This option specifies the speed at which the system clock runs in power saving modes. The settings are expressed as a ratio between the normal clock speed and the power down clock speed.

The settings are 12.5 %, 25 %, 37.5 %, 50 %, 62.5 % (Default), 75%.

### PCI/VGA Act-Monitor

Enable this feature to check if your PCI/VGA monitor can enter power-saving modes. The options are: Disabled (Default), Enabled.

### Soft-Off by PWR-BTTN

This feature is designed for the case when you use an ATX power supply. The selection Delay 4 Sec. will allow the system shut down after 4 seconds after the power button is pressed. The selection Instant-Off will allow the system shut down immediately once the power button is pressed.

The settings are Delay 4 Sec. (Default) or Instant-Off.

### CPUFAN Off In Suspend

Enabling this feature will allow the CPU fan stop running when the system enters Suspend mode.

The options are Disabled or Enabled (Default).

### PowerOn by Ring

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.

The options are Disabled or Enabled (Default).

### Power On on by PCI card

An input signal from outside contact with an installed PCI add-on card that supports PCI Power Management Specification, then the card send a signal to awake the system from a soft off state via South Bridge. The options are Disabled (Default) or Enabled.

### Resume by Alarm

When set at Enabled, it allows you to set the time when the system to be turned on from the system power-off status.

The settings are Disabled (Default) or Enabled.

### Date (of Month) Alarm

If Resume by Ring is set at Enabled , this feature allows you to set the day of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled. The options are: 0 (Default), 1..31.

### Time (hh:mm:ss) Alarm

If Resume by Ring is set at Enabled , this feature allows you to set the time of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled. The options are: 7: 0: 0 (Default). hh (*hour*) - 0, 1, 2,..., 23; mm (*minute*) - 0, 1, 2,...,59; ss (*second*) - 0, 1, 2,...,59.

### Wake Up On LAN

When set at Enabled, an input signal comes from the other client/server on the LAN awakes the system from a soft off state if connected over LAN. The options are Disabled or Enabled (Default).

### IRQ 8 Break Suspend

Enable this feature will keep the system not in the Suspend mode when IRQ8 is active.

The settings are Disabled (Default) or Enabled.

### IRQ[3-7,9-15], NMI

Enable this feature will keep the system not in the Suspend mode when IRQ3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15 is active.

The options are Disabled (Default) or Enabled.

### Primary IDE 0, Primary IDE 1, Secondary IDE 0, Secondary IDE 1, Floppy Disk, Serial Port, Parallel Port

Enable this feature will keep the system not in the Suspend mode when the selected device is active. The settings are Disabled or Enabled. The default setting is Disabled, except Serial Port.

## PNP/PCI Configuration

ROM PCI/ISA BIOS (2A69KF0J) PNP/PCI CONFIGURATION AWARD SOFTWARE, INC.	
PNP OS Installed : No	Assign IRQ For VGA : Enabled
Resources Controlled By : Auto	Slot 1&5 Use IRQ No. : Auto
Reset Configuration Data : Disabled	Slot 2 Use IRQ No. : Auto
	Slot 3 Use IRQ No. : Auto
	Slot 4 Use IRQ No. : Auto
Esc: Quit      ↑↓←→: Select Item F1 : Help      PU/PD/+-: Modify F5 : Old Values (Shift)F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults	

### PNP OS Installed

If your operating system is a Plug-and-Play one, such as Windows 95, select Yes. The options are: No (Default), Yes.

### Resources Controlled By

If set at Auto, the BIOS arranges all system resources. If there exists conflict, select Manual. The options are: Auto (default), Manual. The manual options of **IRQ- / DMA- assigned to** are: Legacy ISA, PCI/ISA PnP.

### Reset Configuration Data

When enabled, allows the system to clear the last BIOS configuration data and reset with the default data. The options are: Enabled, Disabled (default).

### Assign IRQ For VGA

If your PCI VGA card does not need an IRQ, select Disabled to release an IRQ for system use.

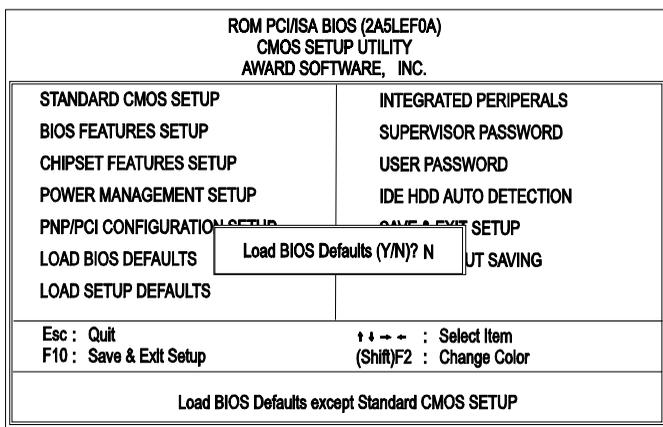
The options are: Enabled (Default), Disabled.

Slot 1&5/2/3/4/ Use IRQ No.

This feature allows you to assign the PCI IRQ numbers for PCI slots. Selecting the default, Auto, allows the PCI controller to automatically allocate the IRQ numbers.

The options are: Auto (Default), 3, 4, 5, 7, 9, 10, 11, 12, 14, 15.

## Load BIOS Defaults



BIOS defaults contain the most appropriate values of the system parameters that allow minimum system performance. The OEM manufacturer may change the defaults through MODBIN before the binary image burns into the ROM.



### IDE HDD Block Mode

When enabled, the system executes read/write requests to hard disk in block mode. The options are: Enabled (Default), Disabled.

### IDE Primary Master PIO

Allows an automatic or a manual configuration of the PCI primary IDE hard disk (master) mode. The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

### IDE Primary Slave PIO

Allows an automatic or a manual configuration of the PCI primary IDE hard disk (slave) mode. The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

### IDE Secondary Master PIO

Allows an automatic or a manual configuration of the PCI secondary IDE hard disk (master) mode. The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

### IDE Secondary Slave PIO

Allows an automatic or a manual configuration of the PCI secondary IDE hard disk (slave) mode. The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

### IDE Primary Master UDMA

Allows you to select the first PCI IDE channel of the first master hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disabled.

### IDE Primary Slave UDMA

Allows you to select the first PCI IDE channel of the first slave hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disabled.

### IDE Secondary Master UDMA

Allows you to select the second PCI IDE channel of the secondary master hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disabled.

---

### On-Chip Primary PCI IDE

When enabled, allows you to use the onboard primary PCI IDE.  
The options are: Enabled (Default), Disabled.

### On-Chip Secondary PCI IDE

When enabled, allows you to use the onboard secondary PCI IDE.  
The options are: Enabled (Default), Disabled.

### USB Keyboard Support

If you install a USB keyboard, please set at Enabled.  
The options are: Enabled, Disabled (Default).

### Init Display First

When you install an AGP VGA card and/or a PCI VGA card on the board, this feature allows you to select the initiation of the monitor display from which card. The options are: PCI Slot (Default), AGP.

### POWER ON Function

This feature provides you with several ways to power on the system; they are: Button Only (press the power button), Password (enter a password to power on the system), Mouse Right (click the mouse right button), Mouse Left (click the mouse left button), Hot Key (press the selected hot key). To use this feature, you have to set the jumper KB\_PWN in Chapter 2 at Enable. The options are: Button Only (Default), Password, Mouse Right, Mouse Left, Hot Key, Keyboard 98.

### KB Power On Password

When set the POWER ON Function at Password, this feature will appear on the monitor. It allows you to set a password to power the system. Press the Enter key when you are prompted to set the power-on password. Type it up to five characters and press the Enter key; then confirm it by typing the password again and pressing the Enter key to complete the setting procedures. To disable the power-on password, press the Enter key when it is disabled. When the power-on password is set, the system can not be powered on by the power button, mouse, or hot key. Once the power-on password is set, you can power on the system simply by entering the password. This feature offers the security on your computer system.

### Hot Key Power ON

When set POWER ON Function at Hot Key, this feature will appear on the monitor. It allows you to select a hot key to power on your computer. The options are: Ctrl-F1 (Default), Ctrl-F2, Ctrl-F3, Ctrl-F4, Ctrl-F5, Ctrl-F6, Ctrl-F7, Ctrl-F8, Ctrl-F9, Ctrl-F10, Ctrl-F11, Ctrl-F12.



**NOTE:** When using Password, Hot KEY, or Mouse Click options for the item POWER ON Function will render the power button on the system case ineffective. In case user forgets password or hot key setting, use the clear password switch or jumper to clear RTC data (refer to section about clear password on Chapter 2). Another method is to unplug system power from the AC power outlet and then re-insert the power cord. Previous password and hot key settings will be disabled allowing user to set a new one.

### KBC input clock

This feature allows you to select different KBC input clocks which your keyboard actually supported. Please read your keyboard manual also for more information. The options are: 6, 8 (Default), 12, 16 MHz.

### Onboard FDC Controller

When enabled, the floppy diskette drive (FDD) controller is activated. The options are: Enabled (Default), Disabled.

### Onboard Serial Port 1

If the serial port 1 uses the onboard I/O controller, you can modify your serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed. The options are: 3F8/IRQ4 (Default), 3E8/IRQ4, 2F8/IRQ3, 2E8/IRQ3, Disabled.

### Onboard Serial Port 2

If the serial port 2 uses the onboard I/O controller, you can modify your serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed. The options are: 2F8/IRQ3 (Default), 3E8/IRQ4, 2E8/IRQ3, 3F8/IRQ4, Disabled.

---

### UART Mode Select

Allows you to select the IR modes if the serial port 2 is used as an IR port. Set at Normal, if you use COM2 as the serial port as the serial port, instead as an IR port. The options are: Normal (Default), IrDA, ASKIR.

### IR Transmission Delay

When Enabled, the transmission delays 4 characters-time (40 bit-time) if SIR is changed from RX mode to TX mode. When Disabled, no transmission delay if SIR is changed from RX mode to TX mode.

The options are: Enabled (Default), Disabled.

### Onboard Parallel Port

Allows you to select from a given set of parameters if the parallel port uses the onboard I/O controller.

The options are: 378/IRQ7 (Default), 278/IRQ5, 3BC/IRQ7, Disabled.

### Parallel Port Mode

Allows you to connect with an advanced printer.

The options are: SPP (Default), EPP, ECP, ECP+EPP.

### ECP Mode Use DMA

If your select ECP or ECP+EPP in Parallel Port Mode, this feature allows you to select Direct Memory Access (DMA) channel.

The options are: 3 (Default), 1.

### EPP Mode Select

If your select EPP or ECP+EPP in Parallel Port Mode, this feature allows you to select the EPP type version.

The options are: EPP1.9, EPP1.7 (Default).

### PWRON After PWR-Fail

This feature allows automatic system power on after electricity is resumed to your system. The option Former-Sts allows the system to revert back to the state it was on before power interruption.

The options are: Off; On; Former-Sts (Default).

## Supervisor/User Password

To enable the Supervisor/User passwords, select the item from the Standard CMOS Setup. You will be prompted to create your own password. Type your password up to eight characters and press Enter. You will be asked to confirm the password. Type the password again and press Enter. To disable password, press Enter twice when you are prompted to enter a password. A message appears, confirming the password is disabled.

Under the BIOS Feature Setup, if *Setup* is selected under the Security Option field and the Supervisor/User Password is enabled, you will be prompted password every time you try to enter the CMOS Setup Utility. If *System* is selected and the Supervisor/User Password is enabled, you will be requested to enter the Password every time when you reboot the system or enter the CMOS Setup utility.

## IDE HDD Auto Detection

The IDE Hard Disk Drive Auto Detection feature automatically configures your new hard disk. Use it for a quick configuration of new hard drives. This feature allows you to set the parameters of up to four IDE HDDs. The option with (Y) are recommended by the system BIOS. You may also keys in your own parameters instead of setting by the system BIOS. After all settings, press Esc key to return the main menu. For confirmation, enter the Standard CMOS Setup feature.

## Save and Exit Setup

After you have made changes under Setup, press Esc to return to the main menu. Move cursor to Save and Exit Setup or press F10 and then press Y to change the CMOS Setup. If you did not change anything, press Esc again or move cursor to Exit Without Saving and press Y to retain the Setup settings. The following message will appear at the center of the screen to allow you to save data to CMOS and exit the setup utility: **SAVE to CMOS and EXIT (Y/N)?**

## Exit without Saving

If you select this feature, the following message will appear at the center of the screen to allow you to exit the setup utility without saving CMOS modifications: **Quit Without Saving (Y/N)?**

## FAQs

### General FAQs

#### How do I know my BIOS version?

Spot it on the boot screen, click [Pause/Break] button to write it down.

#### How to install a PS/2 mouse?

Enable PS/2 in Advanced Setup (AMI BIOS). There is a label on the board which points to pin number one when connecting the PS/2 mouse adapter on the board. The Pin number two is not connected because the female connector (on PS/2 Mouse adapter) doesn't have wire on number two slot. The PS/2 mouse port is a 5 pins pin header which is located beside keyboard socket.

#### How do I know which PCB Revision my motherboard is?

Some motherboards have more than one PCB Revision. This is written in the top left corner of the motherboard, next to the ISA slots. In some cases different PCB revisions may not all support the same processors, or may require different BIOSes. This is indicated where applicable.

#### Can I use ECC memory?

Yes, provided your chipset supports it. Check your manual (Overview section) or consult the chipset manufacturer's Web site (Intel or VIA).

### My FIC Pentium-based motherboard PCI 2.1-compliant?

Yes. All FIC Pentium-based motherboards are PCI 2.1-compliant.

### How do I know which FLASH chip I have?

Partially remove the sticker from the chip and see the name of the manufacturer. Usually the jumper setting is set correctly in the factory.

### What is the purpose of KB\_LOCK pins located on the front panel connector?

To lock the keyboard access to the system (if short). This feature works in conjunction with keylock found on some computer cases - when it is locked, it shorts the two KB\_LOCK pins and prevents keyboard access to the system.

### What the DMI utility is used for?

DMI Configuration Utility can be used to maintain the Management information Format database (MIFD). DMI is also able to auto-detect and record information pertinent to a computer's system such as the CPU type, CPU speed and internal/external frequencies and memory size. The onboard BIOS detects as much system information as possible and stores it in a 4KB Block in the motherboards Flash EPROM and allows the DMI to retrieve data from this database. The DMI utility also allows the system integrator or end user to add additional information into the MIFD such as serial numbers, housing configuration and vendor information. Those information cannot be detected by the motherboards BIOS and has to manually entered through the DMI Configuration utility and updated into the MIFD.

### Is my FIC Pentium-based motherboard PCI 2.1-compliant?

Yes. All FIC Pentium-based motherboards are PCI 2.1-compliant.

---

### Where can I get the drivers for PCI set motherboards?

FIC motherboards are based on Intel® and VIA® chipsets, who also make the drivers. To download drivers you need, visit Drivers and Utilities Page. There you will see links to FAQs and other Web sites that explain in detail how to install the drivers.

### How can I get the USB drivers?

Download Microsoft USB Supplement and a set of generic USB Drivers from Drivers and Utilities Page. You must have Windows 950B (Service Release II, "Windows97") to install these. These drivers resolve the yellow exclamation mark problem (Unknown Devices, USB) in Device Manager.

### How do I use DMI Utility?

Very carefully, because otherwise your system can become totally unusable after altering and saving some configuration on DMI. DMI Utility should not be run from Windows or DOS version higher than v6.22.

If you accidentally alter some settings using DMI Utility under Windows95 (or MS-DOS that comes with it), flash the system BIOS immediately, do not reboot. In some cases, using Win95 as operating system (for applying DMI Utility) shows insufficient error message while trying to load the Flash utility, that's why we recommend to use DOS 6.22. In that case, the other option is to use the Boot Block feature on the BIOS. Use an ISA VGA card for the system to allow them to boot at least on drive "A" (using DOS 6.22 of course) so you will be able to flash the BIOS at least. If you use DMI from Windows95 DOS prompt or Restart in MS-DOS mode, you will not be able to restart the PC.

### Why not update BIOS?

In 90% of cases, a BIOS update is released to address a problem with a particular piece of hardware or software. Therefore, the new BIOS gives the system some new (different) parameters to work with. Newer BIOS'es contain all fixes from previous versions. If the fix list of a new BIOS does NOT address any of problems that you may have, it is unreasonable to update BIOS only for sake of it, because you may be using a combination of hardware/software that is incompatible and yet-untested with the BIOS version you're upgrading to.

It is recommended to refrain from updating BIOS without a good reason. If you don't see your problem listed in the fix list, do not update BIOS - better go to a shareware Web site ([winfiles.com](http://winfiles.com), [shareware.com](http://shareware.com), [tucows.com](http://tucows.com)) and update your software or do something less dangerous.

And finally, some 10% of BIOS updates contain new CPU ID strings and code enhancements (ACPI, etc.). For those an update is recommended only when it is necessary (i.e. the processor ID does not display properly, the system must have ACPI, etc.).

A typical situation occurs when a user wants to update BIOS because the new version supports a CPU he/she "plans" to buy sometime in the future. With some bad luck, the user ends up with a wrong BIOS (wrong PCB, or chipset, or I/O or all of them) and a fried BIOS.

---

## BIOS FAQs

### How do I flash a new BIOS?

The mainboard package provides BIOS flash software tool in the software utility CD-ROM. This software feature is provided for upgrading BIOS use. Play the CD-ROM, click on *Browse CD*, select *Flash*, then choose the BIOS vendor that provided the BIOS this board came with. Please print the relating README file and read it first. For more information about, please visit FIC Online at [www.fic.com.tw](http://www.fic.com.tw).

#### *Downloading BIOS File*

Format a bootable system diskette, visit the FIC website at [www.fic.com.tw](http://www.fic.com.tw). Click *BIOS/Drivers Update* item under **BIOS** group, then select the BIOS file you need. Download it to your bootable diskette.

#### *Upgrading BIOS File*

Place the bootable diskette containing the BIOS file in the diskette drive (Assume the diskette drive is A.), and reboot the system by A drive. At the A: > prompt, execute the BIOS upgrading procedure by entering the Flash BIOS utility and the BIOS file with its extension.

Command: {flash tool file} {space} {downloaded BIOS file} <Enter>

The other parameters are listed in the relating README file, please read it if need.

After press *Enter* key, type Y to the message **Press “Y” to Continue, “N” to Reboot**. Press *Enter* key. When the message **Press Any Key to Reboot**, the procedure is completed. Press any key to reboot.

### What is "Hardware-based intelligent virus protection"?

This is a new BIOS feature based on anti-virus (AV) software that protects the system from boot-time viruses. It is intelligent in the sense that it uses rules modeled after viruses' behavior. For example, it can tell the difference between normal writing to HDD boot sector and virus-attempted writing. It unloads after boot-up so it does not provide total protection and is not intended to serve as replacement for regular anti-virus software.

This utility includes only Scan function and not Virus Delete function. It is not necessary to "update" virus definition files because there are none.

### When I try to flash BIOS I get an error message saying about a wrong part number. Why?

Flash EPROM ("BIOS") chips used on FIC motherboards vary (Intel, AMD, Fujitsu, etc.). As far as this problem is concerned, there are two possible reasons:

- a) you may have used a wrong BIOS or flash utility. Verify that both the BIOS file and the flash utility are the right versions.
- b) the flash utility you used did not recognize the type of flash EPROM installed on your motherboard. Verify that you have the right files and if you're sure in that, ignore the warning.

### I updated my BIOS and am not very much pleased with the result (slower performance, new bugs, etc.). What now?

Restore the old BIOS or wait until a newer BIOS is available. You should use the flash utility supplied with the old BIOS and NOT the flash utility you got with the new BIOS. If you do not know what flash utility it was, consult the Web support pages or contact technical support.

---

## Windows 98 FAQs

### What's the proper install procedure for VIA-based motherboards?

There are four steps:

- 1) Go to BIOS Setup and enable USB
- 2) Install Win98 on your system
- 3) Download and install the VIA IrQ routing miniport driver from our Drivers and Utilities page
- 4) Download and install the VIA AGP driver from the same page (for MVP3 & VP3 chipsets only).

Windows98 comes with PCI Bridge patch included so you don't need to install it. In case you have more PCI devices always put the first PCI device on PCI Slot 2 and remember to enable USB in BIOS.

### Why does my VIA chipset-based motherboard crash under Windows98?

This problem is caused by incorrect assignment of IRQ by Microsoft(r) Windows98. MiniPort driver released by VIA reassigns these IRQs. The driver has not been released by FIC yet but it can be found on the FIC FTP server. Drivers approved by FIC can be downloaded from Drivers and Utilities page.

### I need Windows98 drivers for my (VIA chipset-based) FIC motherboard!

Windows98 contains all drivers necessary. Therefore you need not use any of the drivers supplied on the CD-PRO/floppy.

For VIA chipset based motherboards, there is a problem with the way Windows98 assigns IRQs to devices - some may remain "invisible". This is the IRQ routing problem described above (download the driver).

Another driver you might wish to update (not recommended unless you are experiencing problems) is VIA Bus Master IDE driver. It is shipped with MS Windows98 but newer versions are available for download.

Another thing you might wish to update is your VxD driver, also available on Drivers and Utilities page.

### **I flashed BIOS and now Windows won't boot.. I get a VxD error message.**

This happens sometimes and is a software problem. You will have to reinstall Windows based on new BIOS. Windows must have found new settings (registers) different from the old BIOS, so Vxd error message will pop up if these are not found.

### **My Sound Blaster Live does not work under DOS. Why?**

Creative Labs specifies that it does not work under DOS but it does work in DOS mode under Windows

## **Windows 95 FAQs**

### **What is the proper install order of graphics-related VIA drivers?**

1) Install Windows, 2) If your motherboard has an AGP port, load Vxd driver v. 2.9. 4) Load display card driver.

### **Why does my VIA chipset-based system crash when the system attempts to access UDMA HDD?**

This problem appears under Windows 95 OSR2 and OSR 2.1. Microsoft made two updated versions of drivers that cause the problem. Please download them at

<http://support.microsoft.com/support/kb/articles/q171/3/53.asp>

### **How can I know if a software (example: WindowsNT) is compatible with FIC motherboards?**

Each FIC motherboard is tested with a variety of operating systems and applications. Compatibility reports are published every time new model or updated model of a motherboard is released. Compatibility reports can be downloaded from individual motherboard support pages or from the FIC FTP Server (opens in a new window).

Windows95 shows an exclamation mark next to USB device on my motherboard. Is there any driver that can help me?

The only reason why you can see that Exclamation mark on USB serial Bus & PCI Bridge is that Windows95 didn't support it. You will need to install its drivers to fix it.

## Intel CPU FAQs

What's the difference between Celeron(tm) CPU packages SEPP and PPGA?

Celeron SEPP is a Slot-1 version of the processor. Celeron PPGA is the type that fits on Socket 370. For more information, visit <http://www.intel.com>.

How do I know what Intel CPU I've got?

CPU ID is a string by which a CPU identifies itself to BIOS. Since processor marking can be changed and some processors can run even at higher frequencies than they're manufactured for, remarked processors can be found on the market. Since they usually do run at the remarked frequency, in that case it is hard to find out what CPU you actually have. To learn what Intel CPU you really have, download Intel's utility CPUID.EXE and run it in real mode (boot from a floppy and run it under DOS).

**This Page Left Blank for Note**