

Chapter 3: Setup

About the Setup Utility

This chapter explains how to use and modify the BIOS setup utility that is stored on the mainboard. The setup utility stores information about the mainboard components, and the configuration of other devices that are connected to it. The system uses this information to test and initialize components when it is started up, and to make sure everything runs properly when the system is operating.

The setup utility is installed with a set of default values. The default values are designed to ensure that the system will operate adequately. You will probably have to make changes to the setup utility whenever you add new components to your system such as new disk drives. You may be able to generate increased performance by changing some of the timing values in the setup, but this can be limited by the kind of hardware you are using, for example the rating of your memory chips. In certain circumstances, the system may generate an error message which asks you to make changes to the setup utility. This happens when the system finds an error during the POST (power on self test) that it carries out at start up.

Starting the Setup Utility

You can only start the setup utility shortly after the computer has been turned on. A prompt appears on the computer display which says “*Press DEL to run Setup*”. When you see this prompt, press the **Delete** key, and the system will start the setup utility and display the main menu of the utility.

Using the Setup Utility

When you press the **Delete** key to start setup, the main menu of the utility appears.

The main menu of the setup utility shows a list of the options that are available in the utility. A highlight shows which option is currently selected. You can use the cursor arrow keys to move the highlight to other options. When an option is highlighted, you can execute the option by pressing the **Enter** key.

Some options lead to dialog boxes which ask you verify that that you wish to execute that option. You usually answer these dialogs by typing **Y** for yes and **N** for no.

Some options lead to dialog boxes which ask for more information. Setting the User Password or Supervisor Password have this kind of dialog box.

ROM PCI/ISA BIOS (P6EX-MM)
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 |
| | |

Some options lead to tables of items. These items usually have a value on the right side. The value of the first item is highlighted, and you can use the cursor arrow keys to select any of the other values in the table of items. When an item is highlighted, you can change the value by pressing the **PageUp** or **PageDown** keys, or the **Plus** or **Minus** keys. The **PageUp** and **Plus** keys cycle forward through the available values, the **PageDown** and **Minus** keys cycle backwards through the values.

When you are in the main menu, you can exit the utility by pressing the **Escape** key. You can save the current selections and exit the utility by pressing the **F10** key. You can change the color scheme of the utility by pressing the **F2** key while holding down the **Shift** key.

When you are in one of the options that displays a dialog box, you can return to the main menu by pressing the **Escape** key.

When you are in one of the options that displays a table of items, you can return to the main menu by pressing the **Escape** key. For some items, you can display a help message by pressing the **F1** key. You can change the color scheme of the utility by pressing the **F2** key while holding down the **Shift** key. You can press **F5** to discard any changes you have made and return all items to the value that they held when the setup utility was started. You can press **F6** to load the displayed items with a standard list of default values. You can press **F7** to load the displayed items with a high-performance list of default values.

Standard CMOS Setup Option

This option displays a table of items which defines basic information about your system.

```
ROM PCI/ISA BIOS (P6EX-MM )
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.
```

| | | | | | | | |
|------------------------------------|--------|--------------------------|------|---------------------|---------|-------|-------------|
| Date (mm:dd:yy) : Wed, Jun 10 1998 | | | | | | | |
| Time (hh:mm:ss) : 13 : 30 : 11 | | | | | | | |
| HARD DISKS | TYPE | SIZE | CYLS | HEAD | PRECOMP | LANDZ | SECTOR MODE |
| Primary Master | : Auto | 0 | 0 | 0 | 0 | 0 | 0 NORMAL |
| Primary Slave | : Auto | 0 | 0 | 0 | 0 | 0 | 0 NORMAL |
| Secondary Master | : Auto | 0 | 0 | 0 | 0 | 0 | 0 NORMAL |
| Secondary Slave | : Auto | 0 | 0 | 0 | 0 | 0 | 0 NORMAL |
| Drive A : 1.44M, 3.5 in. | | | | Base Memory: 0K | | | |
| Drive B : None | | | | Extended Memory: 0K | | | |
| Video : EGA/UGA | | | | Other Memory: 512K | | | |
| Halt On : All Errors | | | | Total Memory: 512K | | | |
| ESC : Quit | | ↑ ↓ → ← : Select Item | | PU/PD/+/- : Modify | | | |
| F1 : Help | | (Shift)F2 : Change Color | | | | | |

Date and Time

The Date and Time items show the current date and time held by your computer. If you are running a Windows operating system, these items will automatically be updated whenever you make changes to the Windows Date and Time Properties utility.

Hard Disks

These items show the characteristics of any hard disk drives on the four available IDE channels. (Note that SCSI hard disk drives do not appear here.) You can automatically install most modern hard disks using the IDE HDD Auto Detect Option from the main menu. However, if you find that a drive cannot be automatically detected, you can use these items to select USER, and then manually enter the characteristics of the drive. The documentation provided with your drive provides the data you need to fill in the values for CYLS (cylinders), HEAD (read/write heads), and so on.

The documentation provided with the drive may not tell you what value to use under the MODE heading. If the drive is smaller than 528 MB, set MODE to Normal. If the drive is larger than 528 MB and it supports Logical Block Addressing, set MODE to LBA. Very few high-capacity drives do not support Logical Block Addressing. If you have such a drive, you might be able to configure it by setting the MODE to Large. If you're not sure which MODE setting is required by your drive, set MODE to Auto and let the setup utility try to determine the mode automatically.

Drive A and Drive B

These items define the characteristics of any diskette drive attached to the system. You can connect one or two diskette drives.

Default: 1.44M, 3.5 in., None

Video**Default: EGA/VGA**

This item defines the video mode of the system. This mainboard has a built-in VGA graphics system so you must leave this item at the default value.

Halt On**Default: All Errors**

This item defines the operation of the system POST (Power On Self Test) routine. You can use this item to select which kind of errors in the POST are sufficient to halt the system.

Base, Extended and Other Memory.

These items show how much memory is available on the system. They are automatically detected by the system so you cannot manually make changes to these items.

BIOS Feature Setup Option

This option displays a table of items which defines more advanced information about your system. You can make modifications to most of these items without introducing fatal errors to your system.

ROM PCI/ISA BIOS (P6EX-MM)
BIOS FEATURES SETUP
AWARD SOFTWARE, INC.

| | | | |
|---------------------------|------------|--------------------------|--------------------|
| CPU Internal Core Speed | : 233Mhz | Video BIOS Shadow | : Enabled |
| Virus Warning | : Disabled | C8000-CBFFF Shadow | : Disabled |
| CPU Internal Cache | : Enabled | CC000-CFFFF Shadow | : Disabled |
| External Cache | : Enabled | D0000-D3FFF Shadow | : Disabled |
| Quick Power On Self Test | : Enabled | D4000-D7FFF Shadow | : Disabled |
| Boot Sequence | : A,C,SCSI | D8000-DBFFF Shadow | : Disabled |
| Swap Floppy Drive | : Disabled | DC000-DFFFF Shadow | : Disabled |
| Boot Up NumLock Status | : On | | |
| Gate A20 Option | : Fast | | |
| Security Option | : Setup | | |
| PCI/VGA Palette Snoop | : Disabled | | |
| OS Select For DRAM > 64MB | : Non-OS2 | | |
| | | ESC : Quit | ↑↓←→ : Select Item |
| | | F1 : Help | PU/PD/+/− : Modify |
| | | F5 : Old Values | (Shift)F2 : Color |
| | | F6 : Load BIOS Defaults | |
| | | F7 : Load Setup Defaults | |

CPU Internal Core Speed**Default: 233 MHz**

This item should be installed with the rated internal core speed of the Pentium-II class processor that is installed in your system. The setup utility will then automatically configure the system with the correct host bus speed, and bus frequency multiplier.

If you set this item to Manual, two new items will appear: CPU Host BUS Frequency and CPU Core:Bus Freq. Multiple. You can use these two items to manually configure the mainboard for the speed of the processor. The values available in these two items will vary, according to the kind of Pentium-II processor that is installed.

***Note:** Using the three items above, you can configure the mainboard so that it runs a processor faster than the rated clock speed. We strongly recommend that you do not overclock the processor. Overclocking can introduce excess heat, recurring instability, or even complete failure in your system.*

| | |
|----------------------|--------------------------|
| Virus Warning | Default: Disabled |
|----------------------|--------------------------|

When this item is enabled it provides some protection against viruses which try to write to the boot sector and partition table of your hard disk drive. This item is disabled as a default so that you can install an operating system. We recommend that you enable Virus Warning as soon as you have installed your disk with an OS.

| | |
|---------------------------|-------------------------|
| CPU Internal Cache | Default: Enabled |
|---------------------------|-------------------------|

All the processors that can be installed in this mainboard use internal (level 1) cache memory to improve performance. Leave this item at the default value Enabled for better performance.

| | |
|-----------------------|-------------------------|
| External Cache | Default: Enabled |
|-----------------------|-------------------------|

Most of the processor cartridges that can be installed in this mainboard have (level 2) external cache memory (the Celeron is an exception). Only enable this item if your processor cartridge has external cache memory.

| | |
|---------------------------------|-------------------------|
| Quick Power On Self Test | Default: Enabled |
|---------------------------------|-------------------------|

You can enable this item to shorten the power on testing and have your system start up a little faster. You might like to enable this item after you are confident that your system hardware is operating smoothly.

| | |
|----------------------|--------------------------|
| Boot Sequence | Default: A,C,SCSI |
|----------------------|--------------------------|

This item defines where the system will look for an operating system, and the order of priority. You can boot an operating system from many locations including a SCSI device, a ZIP drive, a floppy diskette drive or an LS-120 high-capacity diskette drive.

| | |
|--------------------------|--------------------------|
| Swap Floppy Drive | Default: Disabled |
|--------------------------|--------------------------|

If you have two floppy diskette drives in your system, this item allows you to swap around the assigned drive letters so that drive A becomes drive B, and drive B becomes drive A.

| | |
|-------------------------------|--------------------|
| Boot Up NumLock Status | Default: On |
|-------------------------------|--------------------|

This item defines if the keyboard Num Lock key is active when your system is started.

| | |
|------------------------|----------------------|
| Gate A20 Option | Default: Fast |
|------------------------|----------------------|

This option provides compatibility with older software written for the 286 processor. Leave this item at the default value Fast.

| | |
|------------------------|-----------------------|
| Security Option | Default: Setup |
|------------------------|-----------------------|

If you have installed password protection, this item defines if the password is required at system start up, or if it is only required when a user tries to enter the setup utility.

| | |
|------------------------------|--------------------------|
| PCI/VGA Palette Snoop | Default: Disabled |
|------------------------------|--------------------------|

This item is designed to overcome some problems that can be caused by some non-standard VGA cards.

| | |
|--------------------------------------|-------------------------|
| OS Select For DRAM > 64 MB | Default: Non-OS2 |
|--------------------------------------|-------------------------|

This item is only required if you have installed more than 64 MB of memory and you are running the OS/2 operating system. Otherwise, leave this item at the default Non-OS2.

| | |
|--------------------------|-------------------------|
| Video BIOS Shadow | Default: Enabled |
|--------------------------|-------------------------|

This item allows the video BIOS to be copied to system memory for faster performance.

XXXXX-XXXXX Shadow**Default: Disabled**

These items allow the BIOS of other devices to be copied to system memory for faster performance.

Chipset Features Option

This option displays a table of items that define critical timing parameters of the mainboard components including the CPU, the memory, and the system logic.

As a general rule, you should leave the items on this page at their default values unless you are very familiar with the technical specifications of your system hardware. If you change the values, or load the optimum settings, you may introduce fatal errors or recurring instability into your system. The item list below shows only the default values for some items.

ROM PCI/ISA BIOS (P6EX-MM)
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.

| | | |
|--------------------------|-----------------------|--------------------|
| Auto Configuration | : Enabled | |
| DRAM Speed Selection | : 50ns | |
| MA Wait State | : Slow | |
| EDO RAS# To CAS# Delay | : 3 | |
| EDO RAS# Precharge Time | : 3 | |
| EDO DRAM Read Burst | : x222 | |
| EDO DRAM Write Burst | : x222 | |
| CPU-To-PCI IDE Posting | : Enabled | |
| System BIOS Cacheable | : Enabled | |
| Video BIOS Cacheable | : Enabled | |
| Video RAM Cacheable | : Disabled | |
| 8 Bit I/O Recovery Time | : 1 | |
| 16 Bit I/O Recovery Time | : 1 | |
| Memory Hole At 15M-16M | : Disabled | |
| Passive Release | : Enabled | |
| Delayed Transaction | : Enabled | |
| AGP Aperture Size (MB) | : 64 | |
| SDRAM RAS-to-CAS Delay | : Slow | |
| SDRAM RAS Precharge Time | : Slow | |
| SDRAM CAS latency Time | : 3 | |
| ESC | : Quit | ↑↓→← : Select Item |
| F1 | : Help | PU/PD/+/- : Modify |
| F5 | : Old Values (Shift) | F2 : Color |
| F6 | : Load BIOS Defaults | |
| F7 | : Load Setup Defaults | |

Auto Configuration**Default: Enabled**

Leave this item at the default value Enabled. This will automatically install the correct values for the EDO RAM memory timing in the following items; *MA Wait State*, *RAS to CAS Delay*, *RAS Precharge time*, *DRAM Read Burst*, and *DRAM Write Burst*.

DRAM Speed Selection**Default: 50ns**

This item sets the timing for the system DRAM in the DRAM timing registers. The alternate value of 60ns ensures reliability if slower DRAM is installed.

CPU-To-PCI IDE Posting**Default: Enabled**

If you enable this item, the system will use a fast buffer for posting writes to memory. This allows release of the CPU before completion of the write cycle.

System BIOS Cacheable**Default: Enabled****Video BIOS Cacheable****Default: Enabled**

These two items allow the system and video BIOS to be cached for faster performance. We recommend that you leave these items at the default value Disabled.

Video RAM Cacheable**Default Disabled**

This item permits the video memory to be cached for faster performance. We recommend that you leave this item at the default value Disabled.

8 Bit I/O Recovery Time**Default: 1****16 Bit I/O Recovery Time****Default: 1**

These two items set timing parameters for 8-bit and 16-bit ISA expansion cards. We recommend that you leave these items at the default value 1.

Memory Hole at 15M-16M**Default: Disabled**

This item can be used to reserve memory space for some ISA cards that require it. We recommend that you leave this item at the default value Disabled.

Passive Release**Default: Enabled**

When Enabled, CPU to PCI bus accesses are allowed during passive release.

Delayed Transaction**Default: Disabled**

This chipset has an embedded 32-bit write buffer to support delay transaction cycles. Enable this item to provide compliance with the PCI Ver. 2.1 specification.

AGP Aperture Size (MB)**Default: 64**

This item defines the size of the aperture if you use an AGP graphics adapter. It refers to a section of the PCI memory address range dedicated for graphics memory.

SDRAM RAS-to-CAS Delay**Default: Slow**

For SDRAM, this item defines the relative delay between the row and column address strobes.

SDRAM RAS Precharge Time**Default: Slow**

For SDRAM, this item defines the length of time for the Row Address Strobe to precharge.

SDRAM CAS latency Time**Default: 3**

For SDRAM, this item defines the latency time for the Column Address Strobe.

Clock Spread Spectrum**Default: Disabled**

When this item is enabled, it can significantly reduce the EMI (electrical magnetic interference) that your system generates.

Power Management Setup Option

This option displays a table of items which lets you control the power management of the system. Modern operating systems take care of much of the routine power management. This mainboard supports ACPI (advanced configuration and power interface).

This system supports three levels of power-saving modes; doze mode, standby mode, and suspend mode. Standby mode uses less power than doze mode and suspend mode uses the least power.

The power management in the setup utility lets you specify a timeout for each of the power-saving modes, and a timeout for a hard disk drive power down. A timeout, means a period of time when the system (or the hard disk drive) is inactive. If the timeout completes, the system power-saving mode will execute, or the hard disk drive will power down. You can resume from the power-saving modes by carrying out any of the activities which are enabled in the list ***Reload Global Timer Events***. If the hard disk has been powered down it will automatically resume to full power when an access to the hard disk is required (this takes just a few seconds).

ROM PCI/ISA BIOS (P6EX-MM)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

| | | | |
|-----------------------|---------------|---|--------------------|
| ACPI function | : Enabled | ** Reload Global Timer Events ** | |
| Power Management | : Disable | IRQ[3-7,9-15],NMI | : Enabled |
| PM Control by APM | : Yes | Primary IDE 0 | : Disabled |
| Video Off Method | : DPMS | Primary IDE 1 | : Disabled |
| Video Off After | : Standby | Secondary IDE 0 | : Disabled |
| MODEM Use IRQ | : 3 | Secondary IDE 1 | : Disabled |
| Doze Mode | : Disable | Floppy Disk | : Disabled |
| Standby Mode | : Disable | Serial Port | : Enabled |
| Suspend Mode | : Disable | Parallel Port | : Disabled |
| HDD Power Down | : Disable | | |
| Throttle Duty Cycle | : 62.5% | | |
| UGA Active Monitor | : Disabled | | |
| Soft-Off by PWR-BTIN | : Instant-Off | | |
| CPUFAN Off In Suspend | : Enabled | | |
| Resume by Ring | : Enabled | | |
| Wake Up On LAN | : Enabled | | |
| IRQ 8 Break Suspend | : Disabled | | |
| | | ESC : Quit | F10+ : Select Item |
| | | F1 : Help | PU/PD+/- : Modify |
| | | F5 : Old Values | (Shift)F2 : Color |
| | | F6 : Load BIOS Defaults | |
| | | F7 : Load Setup Defaults | |

ACPI function

Default: Enabled

ACPI stands for Advanced Configuration and Power Interface. This mainboard supports this function so leave this item at the default value Enabled.

Power Management

Default: Disabled

This item acts like a master switch for the power-saving modes and hard disk timeouts. If this item is set to Disabled, all the power-savings modes are disabled. If this item is set to Max Saving, doze, standby, and suspend mode, will occur after a very short timeout. If this item is set to Min Saving, doze, standby, and suspend mode will occur after a long timeout. If the item is set to User Define, you can insert your own timeouts for the power-saving modes.

PM Control by APM

Default: Yes

Windows 95 and 98 have built-in power management capabilities called APM (advanced power management). When you enable this item, you allow the APM routines in Windows to operate on your system.

| | |
|-------------------------|----------------------|
| Video Off Method | Default: DPMS |
|-------------------------|----------------------|

This item defines how the video is powered down to save power. As a default, this is set to DPMS (display power management software).

| | |
|-------------------------|-------------------------|
| Video Off Option | Default: Standby |
|-------------------------|-------------------------|

This option defines which level of power-saving mode is required in order to power down the video display. As a default, the video powers down in both suspend mode and standby mode.

| | |
|----------------------|-------------------|
| Modem Use IRQ | Default: 3 |
|----------------------|-------------------|

If you would like an incoming call on a modem to automatically resume the system from suspend mode, use this item to specify the interrupt request line (IRQ) that is used by the modem.

| | |
|------------------|--------------------------|
| Doze Mode | Default: Disabled |
|------------------|--------------------------|

If you have selected User Define for the Power Management item, you can set this item to a selection of timeouts from 20 seconds to 40 minutes.

| | |
|---------------------|--------------------------|
| Standby Mode | Default: Disabled |
|---------------------|--------------------------|

If you have selected User Define for the Power Management item, you can set this item to a selection of timeouts from 20 seconds to 40 minutes.

| | |
|---------------------|--------------------------|
| Suspend Mode | Default: Disabled |
|---------------------|--------------------------|

If you have selected User Define for the Power Management item, you can set this item to a selection of timeouts from 20 seconds to 40 minutes.

| | |
|-----------------------|--------------------------|
| HDD Power Down | Default: Disabled |
|-----------------------|--------------------------|

You can use this item to set a timeout for a hard disk powerdown. You can set a time from 1 to 15 minutes. If the hard disk is inactive for the time specified, it will power down. It will automatically return to full power when it is next accessed.

| | |
|----------------------------|-----------------------|
| Throttle Duty Cycle | Default: 62.5% |
|----------------------------|-----------------------|

This item defines what percentage of time the system will halt the processor clock when it is in power-saving mode.

| | |
|---------------------------|--------------------------|
| VGA Active Monitor | Default: Disabled |
|---------------------------|--------------------------|

When this item is enabled, it means that any activity on the active monitor will restart the Standby mode timeout.

| | |
|-----------------------------|-----------------------------|
| Soft-Off by PWR-BTTN | Default: Instant-Off |
|-----------------------------|-----------------------------|

Under ACPI (advanced configuration and power interface) the system can be turned off mechanically (by the power button) or it can undergo a software power off. If the system has been turned off by software, the system can be resumed by a LAN, MODEM or ALARM wake up signal. This item allows you to define a software power off using the power button. If the value is set to Instant-Off, the power button will automatically cause a software power off. If the value is set to Delay 4 Sec. the power button must be held down for a full four seconds to cause a software power off.

| | |
|------------------------------|-------------------------|
| CPUFAN Off In Suspend | Default: Enabled |
|------------------------------|-------------------------|

This item allows you to program the CPU cooling fan to turn off whenever the system is placed in suspend mode.

Default: Enabled

When this item is enabled, the system will wake up or power up when an incoming call to an internal modem is detected.

Default: Disabled

When this item is enabled, the system will resume from suspend mode when any activity on the Interrupt Request Line 8 is detected.

Default: Enabled

When this item is enabled, the system will restart the power-saving timeout counters when any activity is detected on the system interrupts (IRQs) and the non-masked interrupt (NMI).

Default: Disabled

Default: Disabled

Default: Disabled

Default: Disabled

When these items are enabled, the system will restart the power-saving timeout counters when any activity is detected on any of the drives or devices on the primary or secondary IDE channels, or any of the drives connected to the floppy disk drive controller

Default: Enabled

Default: Disabled

When these items are enabled, the system will restart the power-saving timeout counters when any activity is detected through the system's serial ports, or the parallel port.

PNP/PCI Configuration Option

This option displays a table of items that configures how PNP (Plug and Play) and PCI expansion cards operate in your system. If you have not installed a riser card with expansion slots, you do not need to make any changes to this option.

ROM PCI/ISA BIOS (P6EX-MM)
PNP/PCI CONFIGURATION
AWARD SOFTWARE, INC.

| | |
|-------------------------------------|---|
| PNP OS Installed : No | PCI IDE IRQ Map To : PCI-AUTO |
| Resources Controlled By : Auto | Primary IDE INT# : A |
| Reset Configuration Data : Disabled | Secondary IDE INT# : B |
| | 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**Default: No**

If you have installed a Plug and Play operating system such as Windows 95 or 98, you can change this item to Yes. When the item is set to Yes you can use the Device Manager utility in the operating system to make changes to the configuration of expansion cards.

Resources Controlled By**Default: Auto**

You should leave this item at the default Auto. If you find that you cannot get a particular expansion card to work properly, you might be able to solve the problem by changing this item to Manual, and defining the characteristics of the card in the new items which appear.

If you change this item to Manual, the display will list a series of items that allow you to define the assignments of the system interrupt lines (IRQs) and Direct Memory Access (DMA) channels. As a default, these items are set to PCI/ISA PnP. If you install an ISA-bus card that does not support PNP, and it requires a special IRQ and DMA, you can modify the list of assignments. Change the values of the IRQ and DMA that are required to Legacy ISA.

Reset Configuration Data**Default: Disabled**

If you enable this item and restart the system, any PNP configuration data stored in the BIOS setup will be cleared from memory. New updated configuration data will be created.

PCI IDE IRQ Map To**Default: PCI-Auto****Primary IDE INT#****Default: A****Primary IDE INT#****Default: B**

These items tell the system to detect which PCI slot is installed with an IDE card, and assigns the appropriate interrupts to the IDE channels. Leave these items at the default values.

Load BIOS Defaults Option

This option displays a dialog box which allows you to install BIOS defaults for all appropriate items in the whole setup utility. Press the **Y** key and then the **Enter** key to install the defaults. Press the **N** key and then **Enter** to not install the defaults. The BIOS defaults do not place great demands on the system and are generally very stable. If your system is not functioning correctly, you might like to install the BIOS defaults as a first step in getting your system working properly again. If you only want to install BIOS defaults for a specific option, select and display that option, and then press the **F6** key.

Load Setup Defaults Option

This option displays a dialog box which allows you install optimum defaults for all appropriate items in the whole setup utility. Press the **Y** key and then the **Enter** key to install the defaults. Press the **N** key and then **Enter** to not install the defaults. The setup defaults can place some demands on the system that are greater than the performance level of the components, such as the processor and the memory. You could cause fatal errors or recurring instability if you install the setup defaults when your hardware does not support it. If you only want to install optimum settings defaults for a specific option, select and display that option, and then press the **F7** key.

Integrated Peripherals Option

This option displays a list of items which defines the operation of some peripheral items on the system's input/output ports.

ROM PCI/ISA BIOS (P6EX-MM)
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.

| | |
|-------------------------------------|------------------------------------|
| IDE HDD Block Mode : Enabled | Onboard Parallel Port : 378/IRQ7 |
| IDE Primary Master PIO : Auto | Parallel Port Mode : SPP |
| IDE Primary Slave PIO : Auto | |
| IDE Secondary Master PIO : Auto | |
| IDE Secondary Slave PIO : Auto | |
| IDE Primary Master UDMA : Auto | |
| IDE Primary Slave UDMA : Auto | |
| IDE Secondary Master UDMA : Auto | |
| IDE Secondary Slave UDMA : Auto | |
| On-Chip Primary PCI IDE : Enabled | |
| On-Chip Secondary PCI IDE : Enabled | |
| USB Keyboard Support : Disabled | |
| Init Display First : PCI Slot | |
| KBC input clock : 8 MHz | |
| Onboard FDC Controller : Enabled | |
| Onboard Serial Port 1 : 3F8/IRQ4 | ESC : Quit ↑↓→← : Select Item |
| Onboard Serial Port 2 : 2F8/IRQ3 | F1 : Help PU/PD/+/- : Modify |
| UART Mode Select : Normal | F5 : Old Values (Shift)F2 : Color |
| | F6 : Load BIOS Defaults |
| | F7 : Load Setup Defaults |

IDE HDD Block Mode

Default: Enabled

Block mode transfers can improve the access to IDE devices. Enable this item if your IDE devices support block mode transfers.

IDE Primary Master PIO

Default: Auto

IDE Primary Slave PIO

Default: Auto

IDE Secondary Master PIO

Default: Auto

IDE Secondary Slave PIO

Default: Auto

Each IDE channel supports a master device and a slave device. These four items let you assign which kind of PIO (Programmed Input/Output) is used by IDE devices. You can choose Auto, to let the system auto detect which PIO mode is best, or you can install a PIO mode from 0-4.

IDE Primary Master UDMA

Default: Auto

IDE Primary Slave UDMA

Default: Auto

IDE Secondary Master UDMA

Default: Auto

IDE Secondary Slave UDMA

Default: Auto

Each IDE channel supports a master device and a slave device. This motherboard supports UltraDMA. UltraDMA technology provides faster access to IDE devices. If you install a device which supports UltraDMA, change the appropriate item on this list to Auto. You may have to install the UltraDMA driver supplied with this motherboard in order to use an UltraDMA device.

On-Chip Primary PCI IDE

Default: Enabled

On-Chip Secondary PCI IDE

Default: Enabled

These items allow you to enable or disable the primary and secondary IDE channels built into this mainboard.

USB Keyboard Support**Default: Disabled**

Enable this item if you are using a keyboard connected through the USB interface.

Init Display First**Default: PCI Slot**

Use this item to define if your graphics adapter is installed in one of the PCI slots, or if you have installed an AGP graphics adapter into the AGP slot.

KBC input clock**Default: 8 MHz**

This item sets the clock speed for the keyboard controller. Leave this item at the default value of 8 MHz.

Onboard FDC Controller**Default: Enabled**

Use this item to turn on or off the floppy disk controller that is built into this mainboard.

Onboard Serial Port 1**Default: 3F8/IRQ4**

This item lets you disable the built-in serial port 1, or enable it by assigning an I/O address and an Interrupt Request Line (IRQ).

Onboard Serial Port 2**Default: 2F8/IRQ3**

This item lets you disable the built-in serial port 2, or enable it by assigning an I/O address and an Interrupt Request Line (IRQ).

UART Mode Select**Default: Normal**

This item defines the operation of serial port 2. In the default Normal setting, serial port 2 is assigned to the connector on the mainboard. If you have installed an optional infrared port, you must change the setting of this item to one of the Infrared settings (usually IrDA or FIR). These settings will disable the mainboard serial port connector and assign serial port 2 to the infrared device. If you have selected an IR mode, two items appear, *RxD*, *TxD Active* and *IR Transmission delay*, which let you set the duplex and transmission parameters for the Infrared port. See the documentation of your infrared port for help on these items.

Onboard Parallel Port**Default: 378/IRQ7**

This item lets you disable the built-in parallel port, or enable it by assigning an I/O address and an Interrupt Request Line (IRQ).

Parallel Port Mode**Default: SPP**

This item defines the operation of the parallel port. As a default it is set to SPP (standard parallel port). If you are connected to a parallel device that supports the higher-performance EPP (enhanced parallel port) or the ECP (extended capabilities port) make the appropriate changes to this item. If you change the parallel port to EPP or ECP, new items appear to let you configure the EPP and ECP modes.

Supervisor Password and User Password

These two items can be used to install a Supervisor Password and a User Password. If you log on as Supervisor, you have full access to the system, and you can restrict the permissions granted to someone who logs on as User. For example, a Supervisor can restrict a User from entering the setup utility.

To install a Supervisor or User Password, follow these steps:

1. Highlight the item Supervisor/User password on the main menu and press **Enter**.
2. The password dialog box will appear.
3. If you are installing a new password, carefully type in the password. You cannot use more than 8 characters or numbers. The password will differentiate between upper case and lower characters. Press **Enter** after you have typed in the password. If you are deleting a password that is already installed just press **Enter** when the password dialog box appears.
4. The system will ask you to confirm the new password by asking you to type it in a second time. Carefully type the password again and press **Enter**, or just press **Enter** if you are deleting a password that is already installed.
5. If you typed the password correctly, the password will be installed.

IDE HDD Auto Detection Option

This item automatically detects and installs any hard disk drives installed on the primary and secondary IDE channel. Most modern drives can be detected. If you are using a very old drive that can't be detected, you can install it manually using the Standard CMOS Setup option.

Setup will check for two devices on the primary IDE channel and then two devices on the secondary IDE channel. At each device, the system will flash an N in the dialog box. Press **Enter** to skip the device and proceed to the next device. Press **Y**, then **Enter** to tell the system to auto-detect the device.

Save And Exit Setup Option

Highlight this item and press **Enter** to save the changes that you have made in the setup utility and exit the setup program. When the Save and Exit dialog box appears, press **Y** to save and exit, or press **N** to return to the setup main menu.

Exit Without Saving Option

Highlight this item and press **Enter** to discard any changes that you have made in the setup utility and exit the setup program. When the Exit Without Saving dialog box appears, press **Y** to discard changes and exit, or press **N** to return to the setup main menu.