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 data about the mainboard components and the configuration of devices that are connected to it. This information is used to test and initialize components at start-up time and to make sure everything runs properly when the system is operating.

The setup utility is installed with a set of default values. 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 that 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 start setup, the main menu appears. The main menu of the setup utility shows a list of the options that are available. 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 passwords have this kind of dialog box.

```
ROM PCI/ISA BIOS (P6BAT-ME)
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 OPTIMUM SETTINGS

Esc : Quit                          ↑ ↓ → ←   : Select Item
F10 : Save & Exit Setup             (Shift)F2 : Change Color
```

Some options lead to tables of items that 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 an option 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. 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. Press **F6** to load the displayed items with a standard list of default values. Press **F7** to load the displayed items with a high-performance list of default values.

How to Flash a New BIOS

You can install an updated BIOS for this motherboard that you can download from the manufacturer's website. New BIOS may provide support for new peripherals, improvements in performance or fixes to address known bugs. Install a new BIOS as follows:

1. Some mainboards have a Flash BIOS jumper that protects the current BIOS from being changed or overwritten. If your mainboard has this jumper, change the setting to allow flashing a new BIOS.
2. Your computer must be running in a real-mode DOS environment, not the DOS window of Windows NT or Windows 95/98. We recommend that you create a new formatted DOS system floppy diskette.
3. Locate the flash memory utility on the support CD-ROM. Its called AWDFLASH.EXE. copy this file to the new system diskette.
4. Copy the new BIOS file that you downloaded from the manufacturer's website to the newly formatted system diskette.
5. Turn off your computer and insert the newly formatted DOS diskette in your computer's diskette drive.
6. You might need to run the setup utility and change the boot priority items on the BIOS Features Setup page, to force your computer to boot from the floppy diskette drive first.
7. At the A:\ prompt, after your computer has booted a clean DOS from the diskette, type in the filename AWDFLASH and press Enter.

8. In the opening dialog box, type in the filename of the new BIOS and follow the onscreen directions to flash the new BIOS to the motherboard.
9. When the installation is complete, remove the floppy diskette from the diskette drive and restart your computer. If your mainboard has a

Flash BIOS jumper, don't forget to reset the jumper to protect the newly installed BIOS from being overwritten.

Standard CMOS Setup Option

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

```
                    ROM PCI/ISA BIOS (P6BAT-ME)
                      STANDARD CMOS SETUP
                      AWARD SOFTWARE, INC.

  Date (mm:dd:yy) : Thu, Jul 15 1999
  Time (hh:mm:ss) : 14 : 23 : 33

  HARD DISKS          TYPE    SIZE   CYLS HEAD PRECOMP LANDZ SECTOR  MODE

  Primary Master   :    0       0      0    0       0     0      0 NORMAL
  Primary Slave    :    0       0      0    0       0     0      0 NORMAL
  Secondary Master :    0       0      0    0       0     0      0 NORMAL
  Secondary Slave  :    0       0      0    0       0     0      0 NORMAL

  Drive A : 1.44M, 3.5 in.
  Drive B : None
  Floppy 3 Mode Support : Disabled

  Video   : EGA/VGA
  Halt On : All Errors

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 OS, these items are automatically updated whenever you make changes to the Windows Date and Time Properties utility.

Hard Disks ***Defaults: None***

These items show the characteristics of hard disk drives on the two available IDE channels. You can automatically install most hard disks using the IDE HDD Auto Detect Option from the main menu. If you find that a drive cannot be automatically detected, you can use these items to select a number, 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 drive documentation 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 ***Default: 1.44M, 3.5 in., None***

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

Floppy 3 Mode Support ***Default: Disabled***

Floppy 3 mode refers to a 3.5" diskette with a capacity of 1.2 MB. Floppy 3 mode is sometimes used in Japan.

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.

BIOS Features 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 (P6BAT-ME)
                      BIOS FEATURES SETUP
                      AWARD SOFTWARE, INC.

CPU Internal Core Speed     : 233MHz          OS Select For DRAM > 64MB   : Non-OS2
                                              HDD S.M.A.R.T. capability   : Disabled
                                              Report No FDD For WIN 95    : Yes
CPU Core Voltage            : Default
CPU clock failed reset      : Disabled        Video  BIOS Shadow   : Enabled
CIH Buster Protection       : Enabled         C8000-CBFFF Shadow   : Disabled
Anti-Virus Protection       : Disabled        CC000-CFFFF Shadow   : Disabled
CPU Internal Cache          : Enabled         D0000-D3FFF Shadow   : Disabled
External Cache              : Enabled         D4000-D7FFF Shadow   : Disabled
CPU L2 Cache ECC Checking   : Enabled         D8000-DBFFF Shadow   : Disabled
Processor Number Feature    : Enabled         DC000-DFFFF Shadow   : Disabled
Quick Power On Self Test    : Enabled
Boot From LAN First         : Enabled
Boot Sequence               : A,C,SCSI
Swap Floppy Drive           : Disabled
Boot Up NumLock Status      : On              ESC : Quit        ↑↓→← : Select Item
Gate A20 Option             : Normal          F1  : Help        PU/PD/+/- : Modify
Memory Parity/ECC Check     : Disabled        F5  : Old Values  (Shift)F2 : Color
Security Option             : Setup           F6  : Load BIOS  Defaults
PCI/VGA Palette Snoop       : Disabled        F7  : Load Optimum Settings
```

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

Use this item to automatically set up the mainboard for the kind of processor that you have installed. Set this item to the rated internal clock speed of the installed processor. If you set this to Manual, two new items appear: *CPU Host Bus Frequency* and *CPU Frequency*.

CPU Host Bus Frequency
CPU Core: Bus Freq. Multiple

These items appear if you have set the *CPU Internal Core Speed* to Manual. Use the *CPU Host Bus Frequency* to set the system bus frequency for the installed processor (usually 100 MHz or 66 MHz). Then use *CPU Frequency* to set a multiple. The multiple times the system bus must equal the core speed of the installed processor e.g. **3.5 (multiple) x 100 MHz (system bus) = 350 MHz (installed processor clock speed)**.

CPU Core Voltage ***Default: Default***

This item can be used to a set a core voltage for different kinds of processors. Leave this item at the default value and your system will automatically assign the correct voltage.

CPU Clock Failed Reset ***Default: Disabled***

If this item is enabled, and your system crashes three times because you have overclocked the processor, this item will automatically adjust the speed of the processor to the system bus speed multiplied by two.

CIH Buster Protection ***Default: Enabled***
Anti-Virus Protection ***Default: Disabled***

When CIH Buster Protection is enabled it provides some protection against viruses that target the system BIOS (particularly the CIH virus)

When Anti-Virus Protection 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 Enabled as a default . You might need to disable it so that you can install an operating system. We recommend that you enable Anti-Virus Protection 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 processors that can be installed in this system use external (L2) cache memory to improve performance. The exceptions are older SEPP Celeron CPUs running at 266 or 300 MHz. Enable this item for all but these two processors.

CPU L2 Cache ECC Checking ***Default: Enabled***

This item enables or disables ECC (Error Correction Code) checking on the CPU cache memory. We recommend that you leave this item at the default value.

Processor Number Feature ***Default: Enabled***

Each Pentium-III processor cartridge is installed with a unique processor number. This number may be used for verification in internet transactions and e-commerce. If you prefer not to use or distribute the unique processor number, use this item to suppress the processor number.

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 From LAN First ***Default: Enabled***

Enable this item if you want your computer to remote boot an operating system from a network server.

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 OS from many locations including a SCSI or 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: Enabled***

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

Gate A20 Option ***Default: Normal***

This item defines how the system handles legacy software that was written for an earlier generation of processors. Leave this item at the default value.

Memory Parity/ECC Check ***Default: Disabled***

If this item is enabled, it allows the system to use parity checking and ECC (Error Correction Code) to catch errors in system memory.

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. This board includes a built-in VGA system that does not require palette snooping so you must leave this item disabled.

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.

HDD S.M.A.R.T. capability ***Default: Disabled***

SMART is an industry acronym for Self-monitoring, Analysis and Reporting Technology. If the documentation of your hard disk states that SMART is supported, you can enable this item.

Report No FDD for WIN 95 ***Default: Yes***

If you are running a system with no floppy drive and using the Windows 95 OS, select Yes for this item to ensure compatibility with the Windows 95 logo certification.

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. Generally, 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 incorrectly you may introduce fatal errors or recurring instability into your system.

```
                    ROM PCI/ISA BIOS (P6BAT-ME)
                     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      Spread Spectrum          : Disabled
Bank 4/5 DRAM Timing  : SDRAM 10ns
SDRAM  Cycle Length   : 3               Current CPU Temperature  :
DRAM Clock            : Host CLK        Current System Temp.     :
Memory Hole           : Disabled        Current CPUFAN Speed     :
Read Around write     : Disabled        Current CASFAN Speed     :
Concurrent PCI/Host   : Disabled        Analog(V)                :
System BIOS Cacheable : Enabled         I/O   (V)                :
Video  BIOS Cacheable : Disabled        +12   (V)                :
Video RAM Cacheable   : Disabled        CPU   (V)                :
I/O Recovery Time     : Enabled
AGP Aperture Size     : 64M
AGP-2X Mode           : Enabled
On Board Sound        : Enabled
On Board Modem        : Enabled         ESC : Quit        ↑↓→← : Select Item
                                        F1  : Help        PU/PD/+/- : Modify
                                        F5  : Old Values  (Shift)F2 : Color
                                        F6  : Load BIOS    Defaults
                                        F7  : Load Optimum Settings
```

Bank 0/1 DRAM Timing ***Default: SDRAM 10ns***
Bank 2/3 DRAM Timing ***Default: SDRAM 10ns***
Bank 4/5 DRAM Timing ***Default: SDRAM 10ns***

These three fields define the speed of the memory chips that you can install in each of the three DIMM slots. For this motherboard, you must install SDRAM memory modules. Select SDRAM 10ns if the memory is rated for 10ns access time, or SDRAM 8ns if the memory is rated for 8ns access time. If you're not sure, select SDRAM 10ns as a default that ensures reliability.

SDRAM Cycle Length ***Default: 3***
DRAM Clock ***Default: Host CLK***

These two items determine timing parameters for system memory. We recommend that you leave these items at the default value.

Memory Hole ***Default: Disabled***

This item can be used to reserve memory space for some ISA expansion cards that require it.

Read Around Write ***Default: Disabled***
Concurrent PCI/Host ***Default: Disabled***

These two items determine how the system organizes read/write operations over the system's memory and PCI buses. These items are determined by the mainboard chipset so leave these items at the default value.

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

These items allow the video and/or system BIOS to be cached in memory for faster execution. We recommend that you leave these items at the default value.

Video RAM Cacheable ***Default: Disabled***

This item determines if the system Video RAM can be cached to main memory for faster execution. We recommend that you leave this item at the default value.

I/O Recovery Time ***Default: Enabled***

This item sets timing parameters for legacy 8-bit and 16-bit ISA expansion cards. We recommend that you leave these items at the default value Enabled.

AGP Aperture Size ***Default: 64M***

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 used for graphics memory.

AGP-2X Mode ***Default: Enabled***

This item lets you improve performance by doubling the speed of the AGP bus. This function is supported by this mainboard so we recommend that you leave this item at the default value Enabled.

On Board Sound ***Default: Enabled***

Use this item to enable or disable the onboard audio system that is integrated on this mainboard.

On Board Modem ***Default: Enabled***

Use this item to enable or disable the onboard fax/modem that is integrated on this mainboard.

Auto-Detect DIMM/PCI Clk ***Default: Enabled***

If this item is enabled, the system reduces EMI (electromagnetic interference) by turning off the clock generator signal to DIMM slots or PCI slots that are unoccupied.

Spread Spectrum ***Default: Disabled***

When this item is enabled, it can significantly reduce the EMI (electrical magnetic interference) that your system generates. However, it can cause timing critical devices, such as SCSI host adapters, to malfunction. We recommend that you leave this item at the default value.

Current CPU Temp., Current System Temp., etc.

If you are using the hardware monitoring features of this system, you can use these items to set thermal and electrical parameters for the system.

Power Management Setup Option

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

Power Management Timeouts

The power-saving modes can be controlled by timeouts. If the system is inactive for a time, the timeouts begin counting. If the inactivity continues so that the timeout period elapses, the system enters a power-saving mode. If any item in the list of *PM Events* is Enabled, then any activity on that item will restart the timeout counters.

Wake Up Calls

If the system is suspended, or has been powered down by software, it can be resumed by a wake up call that is generated by incoming traffic to a modem or LAN card, or a fixed alarm on the system realtime clock.

```
ROM PCI/ISA BIOS (P6BAT-ME)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

Power Management   : User Define        Primary INTR       : ON
PM Control by APM  : Yes                 IRQ3  (COM 2)      : Primary
Video Off After    : Suspend             IRQ4  (COM 1)      : Primary
Video Off Method   : DPMS Support        IRQ5  (LPT 2)      : Primary
MODEM Use IRQ      : 3                   IRQ6  (Floppy Disk): Primary
Soft-Off by PWRBTN : Instant-Off         IRQ7  (LPT 1)      : Primary
HDD Power Down     : Disable             IRQ8  (RTC Alarm)  : Disabled
Doze Mode          : Disable             IRQ9  (IRQ2 Redir) : Secondary
Suspend Mode       : Disable             IRQ10 (Reserved)   : Secondary
       ** PM Events **                   IRQ11 (Reserved)   : Secondary
VGA                : OFF                 IRQ12 (PS/2 Mouse) : Primary
LPT & COM          : LPT/COM             IRQ13 (Coprocessor): Primary
HDD & FDD          : OFF                 IRQ14 (Hard Disk)  : Primary
DMA/master         : OFF                 IRQ15 (Reserved)   : Disabled
Resume by Ring/LAN : Disabled
Resume by Alarm    : Disabled            ESC : Quit        ↑↓→← : Select Item
                                         F1  : Help        PU/PD/+/- : Modify
                                         F5  : Old Values  (Shift)F2 : Color
                                         F6  : Load BIOS    Defaults
                                         F7  : Load Optimum Settings
```

Power Management ***Default: User Define***

This item acts like a master switch for the power-saving modes and hard disk timeouts. If this item is set to Max Saving, doze and suspend mode, will occur after a short timeout. If this item is set to Min Saving, doze and suspend mode will occur after a longer 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 After ***Default: Suspend***

This option defines the level of power-saving mode required in to power down the video display. As a default, the video powers down in suspend mode.

Video Off Method ***Default: DPMS Support***

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

MODEM Use IRQ ***Default: 3***

Use this item to assign an IRQ (Interrupt Request Line) to the modem that is integrated on this mainboard.

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

Under ACPI (Advanced Configuration and Power management Interface) you can create a software power down. In a software power down, the system can be resumed by Wake Up Alarms. This item lets you install a software power down that is controlled by the normal power button on your system. If the item is set to Instant-Off, then the power button causes a software power down. If the item is set to Delay 4 Sec. Then you have to hold the power button down for four seconds to cause a software power down.

HDD Power Down ***Default: Disabled***

You can set this item to Disabled, or a selection of timeouts from 1 to 15 minutes. The hard disk drive will power down if the selected timeout passes without any activity on the hard disk.

Doze Mode ***Default: Disabled***

If you have selected User Define for the Power Management item, you can set this item to Disabled, or a selection of timeouts from 10 seconds to 1 hour. The system will go into the power-saving doze mode if the selected timeout passes without any system activity.

Suspend Mode ***Default: Disabled***

If you have selected User Define for the Power Management item, you can set this item to Disabled, or a selection of timeouts from 10 seconds to 1 hour. The system will go into the power-saving suspend mode if the selected timeout passes without any system activity.

VGA ***Default: Off***

If this item is set to On, any activity on the graphics system will resume the system from a power-saving mode and/or reset the power-saving mode timeout counters.

LPT & COM ***Default: LPT/COM***

Select None, or either LPT or COM or both. If LPT and/or COM is selected, any activity on the system's parallel port (LPT) and/or serial ports (COM) will resume the system from a power-saving mode and/or reset the power-saving mode timeout counters.

HDD & FDD ***Default: Off***

If this item is set to On, any activity on the hard disk drive or floppy disk drive will resume the system from a power-saving mode and/or reset the power-saving mode timeout counters.

DMA/master ***Default: Off***

If this item is set to On, any activity on the system's DMA (Direct Memory Access) channels will resume the system from a power-saving mode and/or reset the power-saving mode timeout counters.

Resume by Ring/Alarm ***Default: Disabled***

If you enable this item, the incoming calls to a fax/modem or incoming traffic to a netork adapter can resume the system from a power-saving mode. You might have to make a hardware connection on the system mainboard in order to implement this feature.

Resume by Alarm ***Default: Disabled***

If you enable this item, you can use the Date and Timer items which appear to install your system with an alarm time and date on the system's realtime clock. When the alarm time is reached, the system will resume from a power-saving mode.

Primary INTR ***Default: On***

If you enable this item you can use the list of interrupt options that appears below to determine the effect that each interrupt can have on the system power management. If you set this item to OFF, then the interrupts have no effect on system power management.

IRQ3 (COM2) ...IRQ15 (Reserved)

These items appear if Primary INTR is set to ON. For each interrupt request line, you can set it to Disabled, Primary or Secondary. If it is set to disabled, the IRQ has no effect on system power management. If it is set to Secondary, activity on the IRQ can reset the power-saving mode timeout counters. If it is set to Primary, acivity on the IRQ can reset the power-saving mode timeout counters and resume the system from a power saving mode.

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.

```
                    ROM PCI/ISA BIOS (P6BAT-ME)
                     PNP/PCI CONFIGURATION
                      AWARD SOFTWARE, INC.

PNP OS Installed          : No                CPU to PCI Write Buffer: Enabled
Resources Controlled By   : Manual            PCI Dynamic Bursting   : Enabled
Reset Configuration Data  : Disabled          PCI Master 0 WS Write  : Enabled
                                              PCI Delay Transaction  : Enabled
IRQ-3  assigned to : PCI/ISA PnP              PCI#2 Access #1 Retry  : Disabled
IRQ-4  assigned to : PCI/ISA PnP              AGP Master 1 WS Write  : Enabled
IRQ-5  assigned to : Legacy ISA               AGP Master 1 WS Read   : Disabled
IRQ-7  assigned to : PCI/ISA PnP
IRQ-9  assigned to : PCI/ISA PnP              Assign IRQ For USB  : Enabled
IRQ-10 assigned to : PCI/ISA PnP              Assign IRQ For VGA  : Enabled
IRQ-11 assigned to : PCI/ISA PnP
IRQ-12 assigned to : PCI/ISA PnP
IRQ-14 assigned to : PCI/ISA PnP
IRQ-15 assigned to : PCI/ISA PnP
DMA-0  assigned to : PCI/ISA PnP
DMA-1  assigned to : PCI/ISA PnP              ESC : Quit        ↑↓→← : Select Item
DMA-3  assigned to : PCI/ISA PnP              F1  : Help        PU/PD/+/- : Modify
DMA-5  assigned to : PCI/ISA PnP              F5  : Old Values  (Shift)F2 : Color
DMA-6  assigned to : PCI/ISA PnP              F6  : Load BIOS    Defaults
DMA-7  assigned to : PCI/ISA PnP              F7  : Load Optimum Settings
```

PNP OS Installed ***Default: No***

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

Resources Controlled By ***Default: Manual***

If you cannot get an expansion card to work properly, you might be able to solve the problem by setting this item to Manual, and defining the characteristics of the card in the new items that 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 by the ISA card 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 is cleared from memory. New updated data is created.

CPU to PCI Write Buffer ***Default: Enabled***
PCI Dynamic Bursting ***Default: Enabled***
PCI Master 0 WS Write ***Default: Enabled***
PCI Delay Transaction ***Default: Enabled***
PCI#2 Access #1 Retry ***Default: Disabled***

All of these five items determine how the system carries out read/write operations over the PCI bus. These items are determined by the system hardware and chipset, so you should leave these items at the manufacturer's defaults.

AGP Master 1 WS Write ***Default: Enabled***
AGP Master 1 WS Read ***Default: Disabled***

These two items determine how the system carries out read/write operations over the AGP bus. These items are determined by the system hardware and chipset, so you should leave these items at the manufacturer's defaults.

Assign IRQ for USB ***Default: Enabled***

If this item is enabled, an IRQ will be assigned to the system's USB ports.

Assign IRQ for VGA ***Default: Enabled***

If this item is enabled, an IRQ will be assigned to the PCI VGA graphics system.

Load BIOS Defaults Option

This option opens dialog box that lets you install BIOS defaults for all appropriate items in the whole setup utility. Press the **Y** key and then **Enter** to install the defaults. Press the **N** key and then **Enter** to not install the defaults. The BIOS defaults place no great demands on the system and are generally stable. If your system is not functioning correctly, try installing 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 Optimum Settings Option

This option opens dialog box that lets you install optimum defaults for all appropriate items in the whole setup utility. Press the **Y** key and then **Enter** to install the defaults. Press the **N** key and then **Enter** to not install the defaults. The setup defaults place demands on the system that may be greater than the performance level of the components, such as the CPU and the memory. You can cause fatal errors or instability if you install the setup defaults when your hardware does not support them. If you only want to install setup 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 (P6BAT-ME)
                     INTEGRATED PERIPHERALS
                      AWARD SOFTWARE, INC.

OnChip IDE Channel0 : Enabled          UART Mode Select      : IrDA
OnChip IDE Channel1 : Enabled          UART2 Duplex Mode     : Half
IDE Prefetch Mode   : Enabled          RxD , TxD Active      : Hi,Lo
IDE HDD Block Mode  : Enabled          IR Transmittiion delay: Enabled
Primary Master   PIO: Auto             Onboard Parallel Port : 378/IRQ7
Primary Slave    PIO: Auto             Parallel Port Mode    : SPP
Secondary Master PIO: Auto             ECP Mode Use DMA      : 3
Secondary Slave  PIO: Auto             EPP Mode Select       : EPP1.7
Primary Master  UDMA: Auto             PWRON After PWR-Fail  : Off
Primary Slave   UDMA: Auto             OnChip USB            : Enabled
Secondary MasterUDMA: Auto             USB Keyboard Support  : Disabled
Secondary Slave UDMA: Auto
Init Display First  : PCI Slot
POWER ON Function   :
KB Power ON Password  : Enter
Hot Key Power ON      : Ctrl-F12       ESC : Quit        ↑↓→← : Select Item
KBC input clock       : 8 MHz          F1  : Help        PU/PD/+/- : Modify
Onboard FDC Controller: Enabled        F5  : Old Values  (Shift)F2 : Color
Onboard Serial Port 1 : 3F8/IRQ4       F6  : Load BIOS    Defaults
Onboard Serial Port 2 : 2F8/IRQ3       F7  : Load Optimum Settings
```

OnChip IDE Channel0 ***Default: Enabled***

OnChip IDE Channel0 ***Default: Enabled***

Use these items to enable or disable the primary (channel0) and secondary (channel1) IDE channels that are integrated on this mainboard.

IDE Prefetch Mode ***Default: Enabled***

Prefetching can improve access to IDE devices. Enable this item if your IDE devices support prefetching.

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 UltraDMA drivers supplied with this motherboard in order to use an UltraDMA device.

Init Display First ***Default: PCI Slot***

Use this item to define if your graphics adapter is installed in one of the PCI slots.

Power On Function ***Default: Hot KEY***
KB Power ON Password ***Default: Enater***
Hot Key Power ON ***Default: Ctrl-F12***

The Power On Function item allows you to power on the system by pressing hot-keys, or typing a password. If you choose Password, you can use the item KB Power On Password to install a power on password. If you set it to Hot Key, you can then use the item Hot Key Power On to choose which hot keys are installed.

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 enable or disable 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: IrDA***

This item defines the operation of serial port 2. In the Normal setting, serial port 2 is assigned to the external COM2 connector. 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 external COM2 serial port connector and assign the resources to the infrared device.

UART2 Duplex Mode ***Default: Half***
RxD, TxD Active ***Default: Hi,Lo***
IR Transmission delay ***Default: Enabled***

If you have selected an IR mode in UART Mode Select, use these items to configure the operation of the IR port.

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. It can be 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.

ECP Mode Use DMA ***Default: 3***
EPP Mode Select ***Default: EPP1.7***

These items may not be active depending on the settings you have installed for the parallel port. If the items are active, use them to assign a DMA channel to the ECP mode parallel port, and a mode type to the EPP parallel port.

PWRON After PWR-Fail ***Default: Off***

If you turn this item ON, the system will attempt to restart any time the power supply has been unexpectedly interrupted.

OnChip USB ***Default: Enabled***

Use this item to enable or disable the USB ports that are integrated in this mainboard.

USB Keyboard Support: ***Default: Disabled***

Enable this item if you plan on using a keyboard that operates through a USB port.

Supervisor and User Password Settings

This item can be used to install a password. To install a password, follow these steps:

1. Highlight the item Password Settings on the main menu and press **Enter**.
2. The password dialog box appears.
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.