

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.

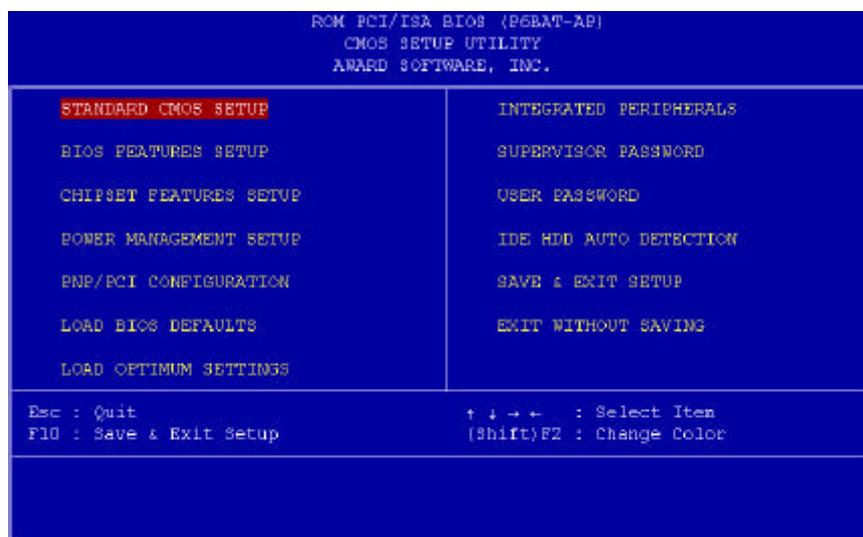
Using the Setup Utility

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.



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 BIOS (PGAT-AB)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Date (mm:dd:yy) : Tue, Mar 30 1999
Time (hh:mm:ss) : 15 : 4 : 50

HARD DISKS          TYPE      SIZE  CYL  HEAD  PRECOMP  LANDE  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 : None
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 operating system, these items will automatically be updated whenever you make changes to the Windows Date and Time Properties utility.

Hard Disks**Defaults: Auto**

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**Default: None , 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.

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

CPU Internal Core Speed : 350MHz
CPU Core Voltage       : Default
CPU clock failed reset : Disabled
CIH Buster Protection  : Enabled
Anti-Virus Protection  : Enabled
CPU Internal Cache     : Enabled
External Cache         : Enabled
CPU L2 Cache ECC Checking : Enabled
Processor Number Feature : Enabled
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
Gate A20 Option        : Normal
Memory Parity/ECC Check : Disabled
Security Option        : Setup
PCI/VGA Palette Snoop : Disabled

OS Select For DRAM > 64MB : Non-OS2
HDD S.M.A.R.T. capability : Disabled
Report No PDD For WIN 95  : Yes

Video BIOS Shadow : Enabled
C8000-CBFFF Shadow : Disabled
CC000-CFFFF Shadow : Disabled
D0000-D3FFF Shadow : Disabled
D4000-D7FFF Shadow : Disabled
D8000-DBFFF Shadow : Disabled
DC000-DEFFF Shadow : Disabled

ESC : Quit      ↑↓←→ : Select Item
F1  : Help      PU/PD/+/- : Modify
F5  : Old Values (Shift)F2 : Color
F6  : Load BIOS Defaults
F7  : Load Optimum Settings

```

CPU Internal Core Speed **Default: 350MHz**

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.*

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: Enabled

When "CIH Buster Protection" item is enabled it provided some protection against viruses which try to destroy BIOS viruses (especially for CIH).

When "Anti-Virus Protection" 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 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
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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
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Most of the processor cartridges that can be installed in this mainboard have (level 2) external cache memory (the Celeron-266 MHz is an exception). Only enable this item if your processor cartridge has external cache memory.

CPU L2 Cache ECC Checking	Default: Enabled
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This item can be used to enable ECC (Error Checking Code) for the level-2 cache memory. We recommend that you leave this item at the default value Enabled.

Processor Number Feature	Default: Enabled
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Some new procesosrs (the Pentium-III) are installed with a unique procesosr identification number. If you disable this item, the number will be suppressed so that it cannot be read by other systems on the network.

Quick Power On Self Test	Default: Enabled
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You can enable this item to shorten the power on testing and have your system start up a little faster.

Boot from LAN First	Default: Enabled
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This items lets you specify that the system will try to load an operating system from a network server first, before booting from any of the local drives.

Boot Sequence	Default: A, C, SCSI
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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
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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: Normal**

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

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

This mainboard supports memory modules that have error checking using a parity bit, or using ECC (Error Correction Code). If your memory modules have this function, you can enable this feature for greater reliability.

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 can help overcome problems that are caused by some non-standard VGA cards. We recommend that you leave this item at the default value Disabled.

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

This item is 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**

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

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

When the item is enabled, the IRQ-6 can be reserved for another device if you don't install FDD.

Video BIOS Shadow **Default: Enabled**

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

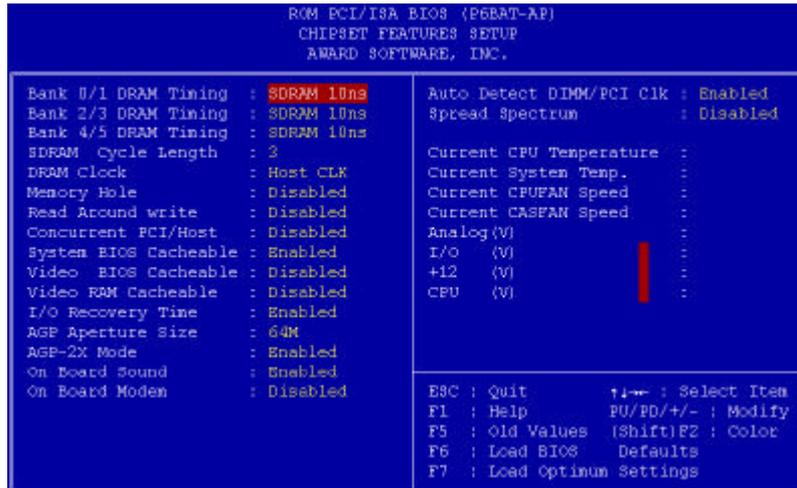
XXXXX-XXXXX Shadow **Default: Disabled**

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 which define timing parameters of the mainboard components including the graphics system, the memory, and the system logic. In general rule, you should leave the items on this page at the default values unless you are very familiar with the technical

specifications of your hardware. If you change the values, you may introduce fatal errors or recurring instability into your system.



Bank 0/1 DRAM Timing
Bank 2/3 DRAM Timing
Bank 4/5 DRAM Timing

Default: SDRAM 10ns
Default: SDRAM 10ns
Default: SDRAM 10ns

These items define the timing parameters for the system memory. We recommend that you leave these items at the default values SDRAM 10ns.

SDRAM Cycle Length

Default: 3

This item sets the number of CPU cycles between SDRAM refresh. If insufficient time is allowed, refresh may be incomplete and data can be lost. We recommend that you leave this item at the default value.

DRAM Clock

Default: Host CLK

When this item is enabled, It allows the DRAM to work concurrently with the host bus clock, otherwise, DRAM will work concurrently with AGP clock .

Memory Hole

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.

Read Around write

Default: Disabled

This item optimizes the cache memory. If the system needs to read data from an address in memory, and the write buffer holds fresh data that has not yet been written to that address, the read can be made directly from the write buffer, instead of the address in the main memory.

Concurrent PCI/Host

Default: Disabled

This item allows other PCI devices to work concurrently with the host PCI IDE channel. We recommend that you leave this item at the default value Disabled.

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

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

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

I/O Recovery Time	Default: Enabled
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When this item is enabled, the ISA command can be extended more than the recovery time default 3.5 SYSClk. We recommend that you leave this item at the default value.

AGP Aperture Size	Default: 64M
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This item defines the size of the aperture for the Accelerated Graphics Port. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space.

AGP-2x Mode	Default: Enabled
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This item allows the AGP graphics adapter to operate in 2x Mode. We recommend that you leave this item at the default value Enabled.

On Board Sound	Default: Enabled
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Use this item to enable or disable the sound system that is integrated on this mainboard.

On Board Modem	Default: Disabled
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Use this item to enable or disable the fax/modem that is integrated on this mainboard.

Auto Detect DIMM/PCI Clk	Default: Enabled
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When this item is enabled, it can be used to detect the clock whether you install the DIMM/PCI on your mainboard or not in order to avoid the clock interference.

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

Right Side Items

The items on the right side of the Chipset Features option are concerned with monitoring certain temperatures, voltages, and so on in your system. These items do not function unless you have installed an optional system monitoring chip on your mainboard.

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 ECI/ISA BIOS (P6BAT-AP)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

Power Management      : User Define
EM Control by APM     : Yes
Video Off After       : Suspend
Video Off Method      : DPM2 Support
MODEM Use IRQ         : 3
Soft-Off by FWRB7N   : Instant-Off
HDD Power Down        : Disable
Doze Mode              : Disable
Suspend Mode          : Disable
** RM Events **
VGA                   : OFF
LPT & COM             : LPT/COM
HDD & FDD             : OFF
DMA/master            : OFF
Resume by Ring/LAN    : Disabled
Resume by Alarm       : Disabled

Primary INTR         : ON
IRQ3 (COM 2)         : Primary
IRQ4 (COM 1)         : Primary
IRQ5 (LPT 2)         : Primary
IRQ6 (Floppy Disk)   : Primary
IRQ7 (LPT 1)         : Primary
IRQ8 (RTC Alarm)     : Disabled
IRQ9 (IRQ2 Redit)    : Secondary
IRQ10 (Reserved)     : Secondary
IRQ11 (Reserved)     : Secondary
IRQ12 (PS/2 Mouse)   : Primary
IRQ13 (Coprocessor)  : Primary
IRQ14 (Hard Disk)    : Primary
IRQ15 (Reserved)     : Disabled

ESC : Quit          +I+ : 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 Disabled, all the power-saving modes are disabled. If this item is set to Max Saving, doze, standby, and suspend mode, will occur after a timeout of 20 seconds. If this item is set to Min Saving, doze, standby, and suspend mode will occur after a timeout of 40 minutes. 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 Option **Default: Suspend -> Off**

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 suspend mode but not standby 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**

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.

Soft-Off by PWRBTN **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.

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.

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.

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.

VGA **Default: OFF**

When this item is enabled, any activity on the graphics system can reset power-saving mode timeouts to zero, or resume the system from a power saving mode.

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

When this item is enabled, it defines system activities which can reset power-saving mode timeouts to zero, or resume the system from a power saving mode. This item is for transmissions through the serial or parallel ports.

HDD & FDD**Default: ON**

When this item is enabled, it defines system activities which can reset power-saving mode timeouts to zero, or resume the system from a power saving mode. This item is for hard disk and/or diskette drive activity.

DMA/master**Default: OFF**

When this item is enabled, it defines system activities which can reset power-saving mode timeouts to zero, or resume the system from a power saving mode. This item is activity through the system DMA controller.

Wake Up On LAN**Default: Enabled**

This item allows you to enable or disable the LAN wake up function that is a feature of this mainboard. When enabled, traffic through a network will resume the system from any of the power-saving modes.

Modem Ring Resume**Default: Disabled**

This item allows you to enable or disable the modem wakeup function that is a feature of this mainboard. When enabled, traffic through a fax/modem will resume the system from any of the power-saving modes.

RTC Alarm Resume**Default: Disabled**

This item lets you install a wakeup alarm, which resumes the system from a power saving mode at a fixed date and time. When the item is enabled, new items appear which allow you to set the date and time of the alarm.

Primary INTR**Default: On**

This item acts like a master switch for all the interrupt items that follow. If this item is set to ON, the all the following interrupts can be manually configured to act as resets for the power saving timeouts. If this item is set to OFF, then all the following interrupt items cannot be used to reset the power saving timeouts.

IRQX

These interrupt events can act as triggers to reset the power saving timeouts or other system maintenance tasks. If you set an interrupt event to Primary, any activity on that interrupt will reset the timeouts that use the primary timer (e.g. the power saving modes). If you set an interrupt to Secondary, then any activity on the interrupt will reset those timeouts that use the secondary timer (usually background maintenance tasks). If you set an interrupt event to Disabled, any activity on the interrupt will not reset the timeouts.

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 (B6BAT-AP)
PNP/PCI CONFIGURATION
AMARD SOFTWARE, INC.

PNP OS Installed      : No
Resources Controlled By : Manual
Reset Configuration Data : Disabled

IRQ-3 assigned to : PCI/ISA PnP
IRQ-4 assigned to : PCI/ISA PnP
IRQ-5 assigned to : Legacy ISA
IRQ-7 assigned to : PCI/ISA PnP
IRQ-9 assigned to : PCI/ISA PnP
IRQ-10 assigned to : PCI/ISA PnP
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
DMA-3 assigned to : PCI/ISA PnP
DMA-5 assigned to : PCI/ISA PnP
DMA-6 assigned to : PCI/ISA PnP
DMA-7 assigned to : PCI/ISA PnP

CPU to PCI Write Buffer: Enabled
PCI Dynamic Bursting  : Enabled
PCI Master 0 MS Write : Enabled
PCI Delay Transaction : Enabled
PCI#2 Access #1 Retry : Disabled
AGP Master 1 MS Write : Enabled
AGP Master 1 MS Read  : Disabled

Assign IRQ For USB   : Enabled
Assign IRQ For VGA   : Enabled

ESC : Quit      ↑↓←→ : Select Item
F1  : Help      F0/FD/+- : Modify
F5  : Old Values (Shift)F2 : Color
F6  : Load BIOS Defaults
F7  : Load Optimus Settings

```

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: Manual***

You should leave this item at the default Manual. 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.

In the default 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.

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

When this item is enabled, the system will assign an IRQ to the USB ports.

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 running 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 the option, and press the **F6** key.

Load Setup Defaults Option

This option displays a dialog box which allows you install setup 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 optimum 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 (P68AT-AP)
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.

OnChip IDE Channel0 : Enabled
OnChip IDE Channel1 : Enabled
IDE Prefetch Mode   : Enabled
IDE HDD Block Mode  : Enabled
Primary Master PIO  : Auto
Primary Slave PIO   : Auto
Secondary Master PIO : Auto
Secondary Slave PIO : Auto
Primary Master UDMA : Auto
Primary Slave UDMA  : Auto
Secondary Master UDMA : Auto
Secondary Slave UDMA : Auto
Init Display First  : PCI Slot
POWER ON Function   :
KB Power ON Password : Enter
Hot Key Power ON    : Ctrl-F12
KBC input clock     : 8 MHz
Onboard FDC Controller : Enabled
Onboard Serial Port 1 : 3F8/IRQ4
Onboard Serial Port 2 :

UART Mode Select    :
RxD , TxD Active    : Hi,Lo
IR Transmittion delay : Enabled
Onboard Parallel Port :
Parallel Port Mode  :
ECP Mode Use DMA    : 2
EPP Mode Select     : EPP1.7
USB Controller       : Enabled
USB Keyboard Support : Disabled

ESC : Quit          +1+ : Select Item
F1  : Help          PU/PD/+/- : Modify
F5  : Old Values   (Shift)F2 : Color
F6  : Load BIOS Defaults
F7  : Load Setup Defaults

```

OnChip IDE Channel0 **Default: Enabled**
OnChip IDE Channel1 **Default: Enabled**

You can use these items to enable or disable the primary (0) and secondary (1) IDE channels that are built into this mainboard. When one or both channels are enabled, items appear which allow you to set the PIO (programmable input/output) mode and the UltraDMA mode for master and slave devices on the channels. We recommend that you leave these items at the default value Auto. The system will then automatically use the best performance PIO mode and UltraDMA mode for each device.

IDE Prefetch Mode **Default: Enabled**

The built-in IDE drive interfaces support IDE prefetching for faster drive accesses. If you use an alternative IDE interface (on an expansion card), disable this field if the alternate IDE interface does not support prefetching.

IDE HDD Block Mode **Default: Enabled**

IDE hard disks can deliver better performance if they use block mode transfer. Most modern hard disk drives support block mode transfers so this item is Enabled as a default.

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.

Init Display First	Default: PCI Slot
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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.

Power On Function	Default: Hot KEY
KB Power ON Password	Default: [Enter]
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 in a password. If you choose Password, you can use the item KB Power On Password to install a power on password. If you set this item 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
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This item lets you set a frequency for the input clock of the keyboard controller. Leave this item at the default value 8 MHz.

Onboard FDC Controller	Default: Enabled
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This item enables or disables the floppy diskette drive controller built into this mainboard.

Onboard Serial Port 1	Default: 3F8/IRQ4
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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
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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
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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 either IrDA, or ASKIR. These settings will disable the mainboard serial port connector and assign serial port 2 to the infrared device. IrDA prepares the port to receive infrared communications using the IrDA serial infrared standard. ASKIR prepares the port to receive infrared communications using the ASK serial infrared standard. The ASK standard is supported by many devices made by the Sharp Corporation. If you have selected an IR mode, you can use the following two items RxD, TxD Active, and IR transmission delay to set the parameters of the

infrared port. See the documentation for the infrared port for information 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: ECP + EPP**

This item defines the operation of the parallel port. As a default it is set to ECP + EPP. 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 that let you configure the EPP and ECP modes.

OnChip USB **Default: Enabled**

This mainboard has a built-in USB (universal serial bus) port so you should leave this item at the default value Enabled.

USB Keyboard Support **Default: Disabled**

If you connect a USB keyboard to your system, enable this item.

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.