

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.

CMOS Setup Utility - Copyright (C) 1984-1999 Award Software	
<ul style="list-style-type: none"> ▶ Standard CMOS Features ▶ Advanced BIOS Features ▶ Advanced Chipset Features ▶ Integrated Peripherals ▶ Power Management Setup ▶ PnP/PCI Configurations ▶ PC Health Status 	<ul style="list-style-type: none"> ▶ Frequency/Voltage Control Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password Set User Password Save & Exit Setup Exit Without Saving
Esc : Quit F9 : Menu in BIOS ↑ ↓ → ← : Select Item F10 : Save & Exit Setup	
Time, Date, Hard Disk Type...	

Some options (marked with a triangle) 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.

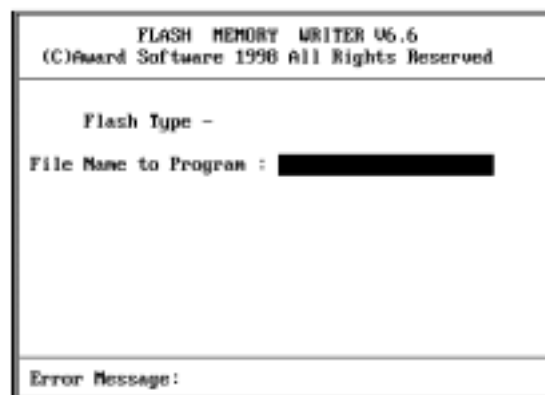
When you are in the main menu, you can exit the utility by pressing the **Escape** key. You can save the current selections and exit the utility by pressing the **F10** key. When you are in one of the options that displays a dialog box, you can return to the main menu by pressing the **Escape** key.

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 **F2** key. You can display a general help screen by pressing **F1**. 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 fail-safe 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. Some Setup programs have an item called Firmware Write Protect that prevents the BIOS from being overwritten. If your BIOS has this item (check the Advanced BIOS Features Setup page) disable it for the present.
3. 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.
4. Locate the flash memory utility on the support CD-ROM. It's called AWD753.EXE. Copy this file to the new system diskette.
5. Copy the new BIOS file that you downloaded from the manufacturer's website to the newly formatted system diskette.
6. Turn off your computer and insert the newly formatted DOS diskette in your computer's diskette drive.
7. You might need to run the setup utility and change the boot priority items on the Advanced BIOS Features Setup page, to force your computer to boot from the floppy diskette drive first.
8. At the A:\ prompt, after your computer has booted a clean DOS from the diskette, type in the filename AWD753 and press **Enter**.



9. 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.
10. 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 Features Option

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

CMOS Setup Utility - Copyright (C) 1984-1999 Award Software Standard CMOS Features		
Date (mm:dd:yy)	Wed, Jan 26 2000	Item Help
Time (hh:mm:ss)	17 : 14 : 43	
▶ IDE Primary Master	Press Enter None	Menu Level ▶
▶ IDE Primary Slave	Press Enter None	
▶ IDE Secondary Master	Press Enter None	Change the day, month, year and century
▶ IDE Secondary Slave	Press Enter None	
Drive A	1.44M, 3.5 in.	
Drive B	None	
Floppy 3 Mode Support	Disabled	
Video	EGA/UGA	
Halt On	All Errors	
Base Memory	640K	
Extended Memory	31744K	
Total Memory	32768K	

↑↓:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

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.

IDE Devices

Defaults: None

Your computer has two IDE channels (Primary and Secondary) and each channel can be installed with one or two devices (Master and Slave). Use these items to configure each device on the IDE channel. Press **Enter** to display the IDE sub-menu.

CMOS Setup Utility - Copyright (C) 1984-1999 Award Software		
IDE Primary Master		
IDE HDD Auto-Detection	Press Enter	Item Help
IDE Primary Master Access Mode	Auto	Menu Level >>
	Auto	
Capacity	0 MB	To auto-detect the HDD's size, head... on this channel
Cylinder	0	
Head	0	
Precomp	0	
Landing Zone	0	
Sector	0	
↑↓:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults		

IDE HDD Auto-Detection

Press **Enter** while this item is highlighted if you want the setup utility to automatically detect and configure a hard disk drive on the IDE channel.

IDE Primary/Secondary Master/Slave

If you leave this item at *Auto*, the system will automatically detect and configure any IDE devices it finds. If it fails to find a hard disk, change the value to *Manual* and then manually configure the drive by entering the characteristics of the drive in the items below (Capacity, Cylinder, Head, Precomp, etc.). If you have no device installed change the value to *None*.

Access Mode

This item defines some special ways that can be used to access IDE hard disks such as LBA (Large Block Addressing). Leave this value at *Auto* and the system will automatically decide the fastest way to access the hard disk drive.

Press **Esc** to close the IDE device sub-menu and return to the Standard CMOS Features page.

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.

Base Memory, Extended Memory, Total Memory

These items are automatically detected by the system at start up time.

Advanced 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. Note that the page has a scroll-bar to scroll down to more items.

CMOS Setup Utility - Copyright (C) 1984-1999 Award Software		
Advanced BIOS Features		
Virus Warning	Disabled	▲ Item Help Menu Level ▶ Allows you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep ▼
Y2K Monitor	Disabled	
H/W Reset Function	Enabled	
CPU Internal Cache	Enabled	
External Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	
Processor Number Feature	Enabled	
Quick Power On Self Test	Enabled	
First Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	LS/ZIP	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Enabled	
Boot Up NumLock Status	On	
Gate A20 Option	Fast	
Typeomatic Rate Setting	Disabled	
x Typeomatic Rate (Chars/Sec)	6	
x Typeomatic Delay (Msec)	250	

↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

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. You 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.

Y2K Monitor**Default: Disabled**

Use this item to enable the onboard Y2K (Year 2000) monitor. When enabled this function can monitor the RTC (Real Time Clock) Y2K data, and avoid that it will be changed inappropriately. Some older programs have Y2K issues and will try to change this data, causing system problems.

<i>H/W Reset Function</i>	<i>Default: Enabled</i>
When this item is set to disabled, the Reset button connector on the board will be disabled.	
<i>CPU Internal Cache</i>	<i>Default: Enabled</i>
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 <i>Enabled</i> for better performance.	
<i>External Cache</i>	<i>Default: Enabled</i>
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.	
<i>CPU L2 Cache ECC Checking</i>	<i>Default: Enabled</i>
This item enables or disables ECC (Error Correction Code) error checking on the CPU cache memory. We recommend that you leave this item at the default value.	
<i>Processor Number Feature</i>	<i>Default: Enabled</i>
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.	
<i>Quick Power On Self Test</i>	<i>Default: Enabled</i>
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.	
<i>First/Second/Third Boot Device</i>	<i>Default: Floppy/HDD-0/LS/ZIP</i>
Use these three items to select the priority and order of the devices that your system will search for an operating system at start-up time.	
<i>Boot Other Device</i>	<i>Default: Enabled</i>
If you enable this item, the system will search all other possible locations for an operating system if it fails to find one in the devices specified under the first, second and third boot devices.	
<i>Swap Floppy Drive</i>	<i>Default: Disabled</i>
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.	
<i>Boot Up Floppy Seek</i>	<i>Default: Enabled</i>
If this item is enabled, it checks the geometry of the floppy disk drives at start-up time. You don't need to enable this item unless you have a old diskette drive with 360K capacity.	
<i>Boot Up NumLock Status</i>	<i>Default: On</i>
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.

Typematic Rate Setting**Default: Disabled**

If this item is enabled, you can use the following two items to set the typematic rate and the typematic delay settings for your keyboard.

Typematic Rate (Chars/Sec)**Default: 6**

If the item Typematic Rate Setting is enabled, you can use this item to define how many characters per second are generated by a held-down key.

Typematic Delay (Msec)**Default: 250**

If the item Typematic Rate Setting is enabled, you can use this item to define how many milliseconds must elapse before a held-down key begins generating repeat characters.

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.

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. You can select the video areas that can be used for this purpose.

Advanced Chipset Features Option

This option displays a table of items that define critical timing parameters of the mainboard components including 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. Note that the page has a scroll-bar to scroll down to more items.

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Advanced Chipset Features

Bank 0/1 DRAM Timing	SDRAM 10ns	▲	Item Help
Bank 2/3 DRAM Timing	SDRAM 10ns		
Bank 4/5 DRAM Timing	SDRAM 10ns		Menu Level ▶
SDRAM Cycle Length	3		
DRAM Clock	Host CLK		
Memory Hole	Disabled		
P2C/C2P Concurrency	Enabled		
Fast R-W Turn Around	Disabled		
System BIOS Cacheable	Enabled		
Video RAM Cacheable	Enabled		
AGP Aperture Size	64M		
AGP 4X Mode	Enabled		
AGP Driving Control	Auto		
x AGP Driving Value	DA		
CPU to PCI Write Buffer	Enabled		
PCI Dynamic Bursting	Enabled		
PCI Master 0 WS Write	Enabled		
PCI Delay Transaction	Disabled		
PCI#2 Access #1 Retry	Enabled	▼	

↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Bank 0/1 DRAM Timing **Default: SDRAM 10ns**

Bank 2/3 DRAM Timing **Default: SDRAM 10ns**

Bank 4/5 DRAM Timing **Default: SDRAM 10ns**

This item allows you to set the speed of the memory used in the DIMM slots.

SDRAM Cycle Length **Default: 3**

This item controls how often the data in memory will be accessed. You can set the value to 2 or 3 clock cycles.

DRAM Clock **Default: Host CLK**

This item lets you set the speed of the system memory bus. You can set this item to follow the host clock, or to under/over perform the host bus by plus or minus 30 MHz. We recommend that you leave this item 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.

P2C/C2P Concurrency **Default: Enabled**

Use this item to enable or disable concurrent memory/PCI and CPU action.

Fast R-W Turn Around **Default: Disabled**

This item sets a timing parameter for CPU access. Since the CPU timing is determined by the system hardware, you can set this item to Disabled.

System BIOS Cacheable **Default: Enabled**

Video RAM Cacheable **Default: Enabled**

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.

AGP Aperture Size (MB)	Default: 64 MB
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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. We recommend that you leave this item at the default value.

AGP 4X Mode	Default: Enabled
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This item allows you to improve video performance by quadrupling the speed of the AGP bus. This function is supported by the mainboard, so we recommend that you set this item to enabled.

AGP Driving Control	Default: Auto
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This item can be used to signal driving current on AGP cards auto or Manual. Some AGP cards need stronger than normal driving current in order to operate. We recommend that you set this item to Auto by default.

AGP Driving Value	Default: DA
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When the previous item AGP Driving Control is set to manual, you can define use this item to set the AGP current driving value.

CPU to PCI Write Buffer	Default: Enabled
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When this item is enabled, writes from the CPU to the PCI bus are buffered to compensate for the different speeds of the CPU and PCI buses. Leave this item at the default value.

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

These items determine how the system carries out read/write operations over the PCI bus. These items are normally optimally determined by the system's hardware and chipset, so we recommend that you leave these items at the manufacturers default.

AGP Master 1 WS Write	Default: Disabled
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 normally optimally determined by the system's hardware and chipset, so we recommend that you leave these items at the manufacturers default.

In Order Queue Depth	Default: 4
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This item can be used to set the CPU in order queue depth. We recommend that you set this item to 4 for best performance.

P6 Lock Function	Default: Disabled
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When this item is enabled, you can lock the signal circle of P6 and North Bridge Chip. We recommend that you leave this item set to the default value Disabled.

Delay DRAM Read Latch	Default: No Delay
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This item allows you to set a delay when reading the memory bus. We recommend that you leave this item at the default value.

Data Drive (MD,WE#)	Default: 6mA
Command (SRAS#,SCA#,SWE#)	Default: 16mA
Address Drive (MA,WE#)	Default: 16mA
CAS# Drive	Default: 8mA
RAS# Drive	Default: 16mA

These items allow you to alter the access speeds of the different memory bus functions. These items are normally optimally determined by the system's hardware and chipset, so we recommend that you leave these items at the manufacturers default.

Memory Parity/ECC Check	Default: Disabled
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If this item is enabled it allows the system to use parity checking and ECC (Error Correcting Code) to catch errors in the system memory. Enabling this item might have an impact on overall system performance.

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.

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Integrated Peripherals

OnChip IDE Channel0	Enabled	▲ ▼	Item Help
OnChip IDE Channel1	Enabled		
IDE Prefetch Mode	Enabled		
Primary Master P10	Auto		Menu Level ▶
Primary Slave P10	Auto		
Secondary Master P10	Auto		
Secondary Slave P10	Auto		
Primary Master UDMA	Auto		
Primary Slave UDMA	Auto		
Secondary Master UDMA	Auto		
Secondary Slave UDMA	Auto		
Init Display First	PCI Slot		
Onboard PCI Audio	Enabled		
Onboard PCI Modem	Enabled		
OnChip USB	Enabled		
USB Keyboard Support	Disabled		
IDE HDD Block Mode	Enabled		
POWER ON Function			
KB Power ON Password	Enter		

↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

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

Use these items to enable or disable the Primary and Secondary PCI IDE channels that are integrated on this mainboard.

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 select Onboard if you have a graphics system integrated on the mainboard.

Onboard PCI Audio	Default: Enabled
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Use this item to enable the onboard audio features. We recommend that you set this item to Enabled when you use an AMR card.

Onboard PCI Modem	Default: Enabled
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Use this item to enable the onboard PCI modem feature. We recommend that you set this item to Enabled when you use an AMR card.

OnChip USB	Default: Enabled
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Use this item to enable the USB ports that are integrated on this mainboard.

USB Keyboard Support	Default: Disabled
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Enable this item if you are using a keyboard connected through the USB Port.

IDE HDD Block Mode	Default: Disabled
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Block mode transfers can improve the access to IDE devices. Enable this item if your IDE devices support block mode transfers.

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 a password. If you choose Password, you can use the item KB Power On Password to install a power on password. Press Enter to display the Password dialog box. If you set it to Hot Key, you can then use the item Hot Key Power On to choose which hot keys are used to power on the system.

KBC input clock	Default: 8 MHz
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Use this item to set the clock speed for keyboard data traffic.

Onboard FDC Controller	Default: Enabled
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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
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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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If you have installed an optional second serial port, 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).

UART Mode Select	Default: IrDA
UART2 Duplex Mode	Default: L Half

This item defines the operation of serial port 2. In the Normal setting, serial port 2 is assigned to the (optional) 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. If you have selected an IR mode, use the following item *UR2 Duplex Mode* to define if the IR port is full duplex or half duplex.

RxD, TxD Active	Default: Hi, Lo
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This item lets you set the Read and Transfer transmission speeds for infrared communication.

IR Transmission delay	Default: Enabled
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This item lets you enable a transmission delay for infrared communication.

Onboard Parallel Port	Default: 378/IRQ7
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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
ECP Mode Use DMA	Default: 3
EPP Mode Select	Default: EPP1.7

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 have changed the parallel port to ECP mode, use the following item *ECP Mode Use DMA* to assign a DMA channel to the port. If you are using EPP mode, use the next item to select the EPP mode version.

PWRON After PWR-Fail	Default: Off
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If this item is enabled, the system will automatically resume when power is restored after an interruption in the power supply.

Power Management Setup Option

This option displays items that 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). The system has various power saving modes including powering down the hard disk, turning off the video, suspending to RAM, and a software power down that allows the system to be automatically resumed by certain events.

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 *Reload Global Timer Events* is Enabled, then any activity on that item will reset the timeout counters to zero.

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, a LAN card, a PCI card, or a fixed alarm on the system realtime clock.

CMOS Setup Utility - Copyright (C) 1984-1999 Award Software		
Power Management Setup		
ACPI function	Enabled	Item Help
▶ Power Management	Press Enter	
ACPI Suspend Type	S1(POS)	Menu Level ▶
PM Control by APM	Yes	
Video Off Option	Suspend -> Off	
Video Off Method	DPMS Support	
MODEM Use IRQ	3	
Soft-Off by PWRBTN	Instant-Off	
▶ Wake Up Events	Press Enter	

↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

ACPI Function

Default: Enabled

This mainboard supports ACPI (Advanced Configuration and Power management Interface). Use this item to enable or disable the ACPI feature.

Power Management

Press **Enter** to display the Power Management sub-menu.

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Power Management

Power Management	User Define	Item Help
HDD Power Down	Disable	Menu Level ▶▶
Doze Mode	Disable	
Suspend Mode	Disable	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

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, power-saving modes occur after a short timeout. If this item is set to Min Saving, power-saving modes occur after a longer timeout. If the item is set to User Define, you can insert your own timeouts for the power-saving modes.

HDD Power Down

Default: Disabled

If you have selected User Define for the Power Management item, you can set this item to 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

Suspend Mode

Default: Disabled

If you have selected User Define for the *Power Management* item, you can set this item to a timeout between 1 Min to 1 Hour. The system will go into the power-saving doze or suspend mode if the timeout passes without any system activity.

Press **Esc** to close the Power Management sub-menu and return to the Power Management Setup page.

ACPI Suspend Type

Default: S1 (POS)

Use this item to define how your system suspends. In the default, S1(POS), the suspend mode is equivalent to a software power down. If you select S3 (STR), the suspend mode is a suspend to RAM – the system shuts down with the exception of a refresh current to the system memory.

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 your system.

Video Off Option**Default: Suspend → Off**

This option defines how and when the video is powered down if the system is put into 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 (display power management software).

MODEM Use IRQ**Default: 3**

If you want an incoming call on a modem to automatically resume the system from a power-saving mode, use this item to specify the interrupt request line (IRQ) that is used by the modem. You might have to connect the fax/modem to a mainboard Wake On Modem connector for this feature to work.

Soft-Off by PWRBTN**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.

Wake Up Events

Press **Enter** to display the Wake-Up Events sub-menu.

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Wake Up Events

		Item Help
UGA	OFF	Menu Level ▶▶
LPT & COM	LPT/COM	
HDD & FDD	ON	
DMA/master	OFF	
WakeUp By PCI/LAN/Modem	Disabled	
Ext.Modem Ring Resume	Disabled	
RTC Alarm Resume	Disabled	
x Date (of Month)	0	
x Resume Time (hh:mm:ss)	0 0 0	
▶ IRQs Activity Monitoring	Press Enter	

↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

VGA	Default: OFF
When this item is enabled, the system will restart the power-saving timeout counters when any activity is detected on the video graphics system.	
LPT & COM	Default: LPT/COM
When this item is enabled, the system will restart the power-saving timeout counters when any activity is detected on the serial ports, or the parallel port.	
HDD & FDD	Default: ON
When this item is enabled, the system will restart the power-saving timeout counters when any activity is detected on the floppy diskette drives or on the IDE drive channels.	
DMA/Master	Default: OFF
When this item is enabled, the system will restart the power-saving timeout counters when any activity is detected on the DMA (Direct Memory Access) channels.	
WakeUp By PCI/LAN/Modem	Default: Disabled
If you enable this item, it allows activity on an add-in card in one of the PCI slots to resume the system from a power-saving mode. It will also wakeup the system whenever there is traffic on an installed fax/modem or network adapter. You might have to connect the fax/modem to a mainboard Wake On Modem connector, and the LAN card to a mainboard Wake On LAN connector, for this feature to work.	
Ext. Modem Ring Resume	Default: Disabled
If this item is enabled, it allows the system to resume from a software powerdown or a power-saving mode whenever there is an incoming call on an installed fax/modem. You might have to connect the fax/modem to a mainboard Wake On Modem connector for this feature to work.	
RTC Alarm Resume	Default: Disabled
If this item is Enabled, it allows you to set a date and time alarm that will automatically resume the system from a software power down. When you enable this feature, new setup items appear to let you set the alarm. Date (of Month) Alarm lets you select a day from 1 to 31. Time Alarm lets you select a time for the alarm in hours, minutes, and seconds.	
IRQ Activity Monitoring	
Press Enter to display the IRQ Activity Monitoring sub-menu.	

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IRQs Activity Monitoring

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

↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

When these item are enabled, the system will restart the timeout counters when any activity is detected on the selected Interrupt request lines. When the Primary INTR item is set to OFF, then the interrupts have no effect on system power management

Press **Esc** to close the the IRQ Activity Monitoring sub-menu and return to the Wake Up Events page.

Press **Esc** to close the Wake Up Events sub-menu and return to the Power Management Setup page.

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.

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PnP/PCI Configurations

PNP OS Installed	No	Item Help
Reset Configuration Data	Disabled	
Resources Controlled By	Auto(ESCD)	Menu Level ▶
x IRQ Resources	Press Enter	
x DMA Resources	Press Enter	
PCI/UGA Palette Snoop	Disabled	
Assign IRQ For UGA	Enabled	
Assign IRQ For USB	Enabled	

↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized 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 enabled, you can use the Device Manager utility in the operating system to make changes to the configuration of expansion cards.

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.

Resources Controlled By

Default: Auto (ESCD)

You should set this item at Auto (ESCD). Under this setting, the system dynamically allocates resources to plug and play devices as they are required. If you cannot get a legacy ISA (Industry Standard Architecture) expansion card to work properly, you might be able to solve the problem by changing this item to Manual, and then opening up the *IRQ Resources* sub-menu.

In the *IRQ/DMA Resources* sub-menus, if you change any of the assignments to Legacy ISA, then that Interrupt Request Line/DMA address is reserved for a legacy ISA expansion card. Press **Esc** to close the IRQ/DMA Resources sub-menus.

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.

Assign IRQ For VGA**Default: Enabled****Assign IRQ For USB****Default Enabled**

Use these items to assign an IRQ line to the onboard video graphics system and USB controller.

PCI Health Status Option

On mainboards which support hardware monitoring, this item lets you set parameters for critical voltages, critical temperatures, and fan speeds.

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PC Health Status

CPU Warning Temperature	Disabled	Item Help
Current CPU Temperature		Menu Level ▶
Current System Temp.		
CPU FAN Speed (RPM)		
Power FAN Speed (RPM)		
Vcc (V)		
Vcc3 (V)		
+12V (V)		
Vcore (V)		
Shutdown Temperature	60°C/140°F	

↑↓←→:Move Enter:Select +/-:PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

If this option is active on your system, we recommend that you accept the default values for these items that are installed by the manufacturer. The system will alert you whenever the manufacturer's safe operating parameters are exceeded.

CPU Warning Temperature**Default: Disabled****Shutdown Temperature****Default: 60°C/140°F**

This item allows you to set the CPU and onboard temperature limit at which point the system should automatically shutdown the system.

Frequency / Voltage Control Option

This item allows you to set the clock speed and system bus for your system. The clock speed and system bus are determined by the kind of processor you have installed in your system.

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Frequency/Voltage Control

Auto Detect DIMM/PCI Clk	Enabled	Item Help
Spread Spectrum	Disabled	
CPU Host Clock (CPU/PCI)	Default	Menu Level ▶
CPU Clock Ratio	X 3	
CPU clock failed reset	Disabled	
CPU Core Voltage	Default	

↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Auto Detect DIMM/PCI Clk

Default: Enabled

When this item is enabled, the BIOS will disable the clock generator signal for unused DIMM and PCI slots, in order to reduce EMI (electromagnetic interference)

Spread Spectrum

Default: Disabled

When this item is enabled, it can significantly reduce the EMI (electromagnetic interference) that your system generates by modulating the extreme values of the clock generator pulses. Enabling this item might cause problems with timing-critical devices such as SCSI adapters. We recommend that you leave this item at the default value disabled.

CPU Host Clock (CPU/PCI)

Default: Default

CPU Clock Ratio

Default: X 3

Use the *CPU Host/PCI Clock* to set the system bus frequency for the installed processor (usually 100 MHz or 66 MHz). Then use *CPU Clock Ratio* 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 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.

CPU Voltage**Default: Auto**

The onboard hardware monitor is able to automatically detect the voltage output by the onboard voltage regulators. We recommend that you leave this item at the default value.

Load Fail-Safe Defaults Option

This option opens a dialog box that lets you install fail-safe 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 fail-safe defaults place no great demands on the system and are generally stable. If your system is not functioning correctly, try installing the fail-safe defaults as a first step in getting your system working properly again. If you only want to install a fail-safe defaults for a specific option, select and display that option, and then press the **F6** key.

Load Optimized Defaults Option

This option opens dialog box that lets you install optimized 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 optimized 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 optimized 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.

Set Supervisor and User Passwords

These items can be used to install a password. A Supervisor password takes precedence over a User password, and the Supervisor can limit the activities of a User. To install a password, follow these steps:

1. Highlight the item Set Supervisor/User password 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.

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.