945GC-M7 TE BIOS SETUP

BIOS Setup

Introduction

This manual discussed Phoenix-Award™ Setup program built into the ROM BIOS. The Setup program allows users to modify the basic system configuration. This special information is then stored in battery-backed RAM so that it retains the Setup information when the power is turned off.

The Phoenix-Award BIOS™ installed in your computer system's ROM (Read Only Memory) is a custom version of an industry standard BIOS. This means that it supports Intel Pentium ® 4 processor input/output system. The BIOS provides critical low-level support for standard devices such as disk drives and serial and parallel ports.

Adding important has customized the Phoenix-Award BIOS™, but nonstandard, features such as virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

The rest of this manual is intended to guide you through the process of configuring your system using Setup.

Plug and Play Support

These PHOENIX-AWARD BIOS supports the Plug and Play Version 1.0A specification.

EPA Green PC Support

This PHOENIX-AWARD BIOS supports Version 1.03 of the EPA Green PC specification.

APM Support

These PHOENIX-AWARD BIOS supports Version 1.1&1.2 of the Advanced Power Management (APM) specification. Power management features are implemented via the System Management Interrupt (SMI). Sleep and Suspend power management modes are supported. Power to the hard disk drives and video monitors can be managed by this PHOENIX-AWARD BIOS.

ACPI Support

Phoenix-Award ACPI BIOS support Version 1.0b of Advanced Configuration and Power interface specification (ACPI). It provides ASL code for power management and device configuration capabilities as defined in the ACPI specification, developed by Microsoft, Intel and Toshiba.

PCI Bus Support

This PHOENIX-AWARD BIOS also supports Version 2.3 of the Intel PCI (Peripheral Component Interconnect) local bus specification.

DRAM Support

DDR2 SDRAM (Double Data Rate Two Synchronous DRAM) are supported.

Supported CPUs

This PHOENIX-AWARD BIOS supports the Intel CPU.

Using Setup

In general, you use the arrow keys to highlight items, press <Enter> to select, use the <PgUp> and <PgDn> keys to change entries, press <F1> for help and press <Esc> to quit. The following table provides more detail about how to navigate in the Setup program by using the keyboard.

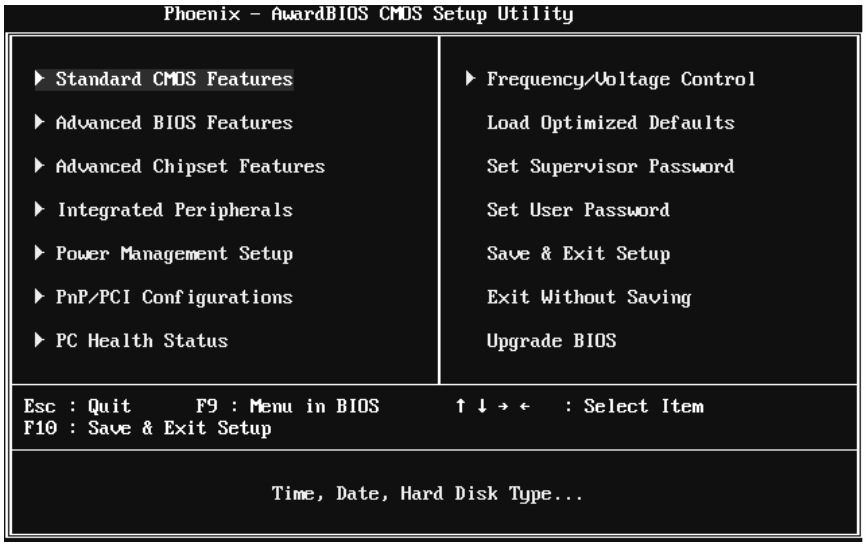
Keystroke	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left (menu bar)
Right arrow	Move to the item on the right (menu bar)
Move Enter	Move to the item you desired
PgUp key	Increase the numeric value or make changes
PgDn key	Decrease the numeric value or make changes
+ Key	Increase the numeric value or make changes
- Key	Decrease the numeric value or make changes
Esc key	Main Menu – Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu – Exit Current page and return to Main Menu
F1 key	General help on Setup navigation keys
F5 key	Load previous values from CMOS
F7 key	Load the optimized defaults
F10 key	Save all the CMOS changes and exit

1 Main Menu

Once you enter Phoenix-Award BIOS™ CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.

> *!! WARNING !!*
>
> The information about BIOS defaults on manual (**Figure 1,2,3,4,5,6,7,8,9**) is just for reference, please refer to the BIOS installed on board, for update information.

■ **Figure 1. Main Menu**



Standard CMOS Features

This submenu contains industry standard configurable options.

Advanced BIOS Features

This submenu allows you to configure enhanced features of the BIOS.

Advanced Chipset Features

This submenu allows you to configure special chipset features.

Integrated Peripherals

This submenu allows you to configure certain IDE hard drive options and Programmed Input/ Output features.

Power Management Setup

This submenu allows you to configure the power management features.

PnP/PCI Configurations

This submenu allows you to configure certain "Plug and Play" and PCI options.

PC Health Status

This submenu allows you to monitor the hardware of your system.

Frequency/Voltage Control

This submenu allows you to change CPU Vcore Voltage and CPU/PCI clock. **(However, this function is strongly recommended not to use. Not properly change the voltage and clock may cause the CPU or M/B damage!)**

Load Optimized Defaults

This selection allows you to reload the BIOS when the system is having problems particularly with the boot sequence. These configurations are factory settings optimized for this system. A confirmation message will be displayed before defaults are set.

Set Supervisor Password

Setting the supervisor password will prohibit everyone except the supervisor from making changes using the CMOS Setup Utility.You will be prompted with to enter a password.

Set User Password

If the Supervisor Password is not set, then the User Password will function in the same way as the Supervisor Password. If the Supervisor Password is set and the User Password is set, the "User" will only be able to view configurations but will not be able to change them.

Save & Exit Setup

Save all configuration changes to CMOS (memory) and exit setup. Confirmation message will be displayed before proceeding.

Exit Without Saving

Abandon all changes made during the current session and exit setup. confirmation message will be displayed before proceeding.

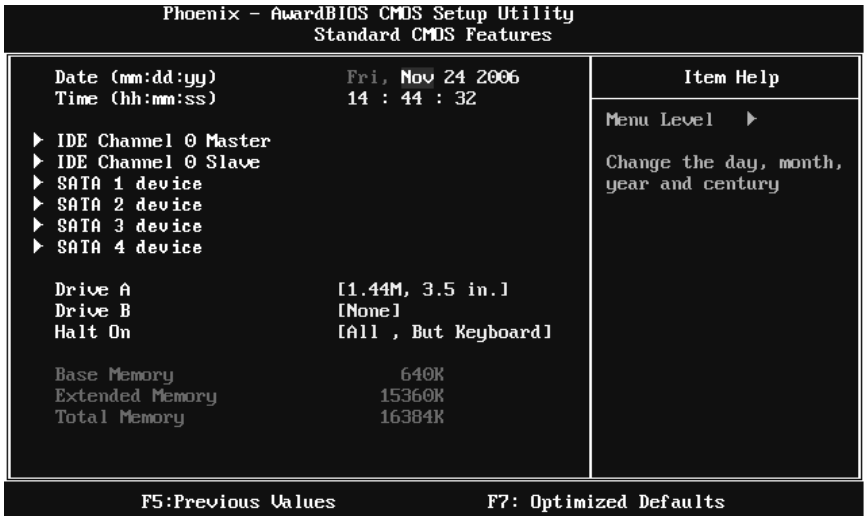
Upgrade BIOS

This submenu allows you to upgrade bios.

2 Standard CMOS Features

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the<PgUp> or <PgDn> keys to select the value you want in each item.

■ **Figure 2. Standard CMOS Setup**



Main Menu Selections

This table shows the selections that you can make on the Main Menu.

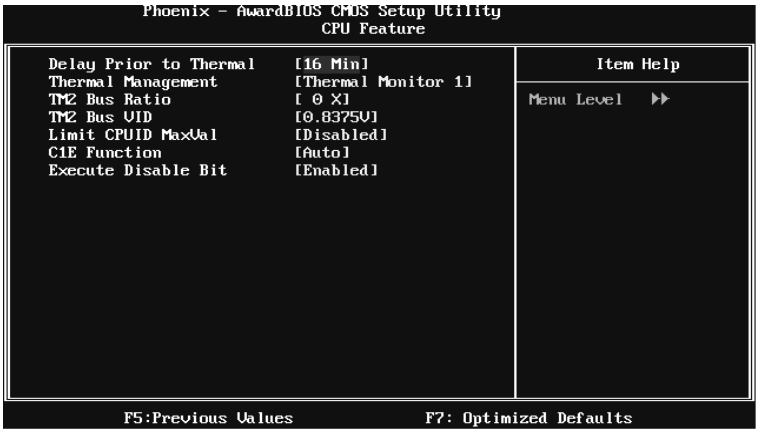
Item	Options	Description
Date	mm : dd : yy	Set the system date. Note that the 'Day' automatically changes when you set the date.
Time	hh : mm : ss	Set the system internal clock.
IDE Channel 0 Master	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options
IDE Channel 0 Slave	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options.

Item	Options	Description
SATA 1~4 device	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options.
Drive A Drive B	360K, 5.25 in 1.2M, 5.25 in 720K, 3.5 in 1.44M, 3.5 in 2.88M, 3.5 in None	Select the type of floppy disk drive installed in your system.
Halt On	All Errors No Errors All, but Keyboard All, but Diskette All, but Disk/ Key	Select the situation in which you want the BIOS to stop the POST process and notify you.
Base Memory	N/A	Displays the amount of conventional memory detected during boot up.
Extended Memory	N/A	Displays the amount of extended memory detected during boot up.
Total Memory	N/A	Displays the total memory available in the system.

3 Advanced BIOS Features

■ **Figure 3. Advanced BIOS Setup**

CPU FEATURE



Delay Prior to Thermal

Set this item to enable the CPU Thermal function to engage after the specified time.

The Choices: 4 Min, 8 Min, **16 Min** (default), 32 Min.

Thermal Management
This option allows you to choose the thermal management method of your monitor.
The Choices: Thermal Monitor 1 (default), Thermal Monitor2.
Notes: The choices will be different according to your CPU features.

TM2 Bus Ratio
This option represents the frequency. (Bus ratio of the throttled performance state that will be initiated when the on-die sensor goes from not hot to hot.)
Min= 0 Max= 255 Key in a DEC number.
The Choices: 14X (default).

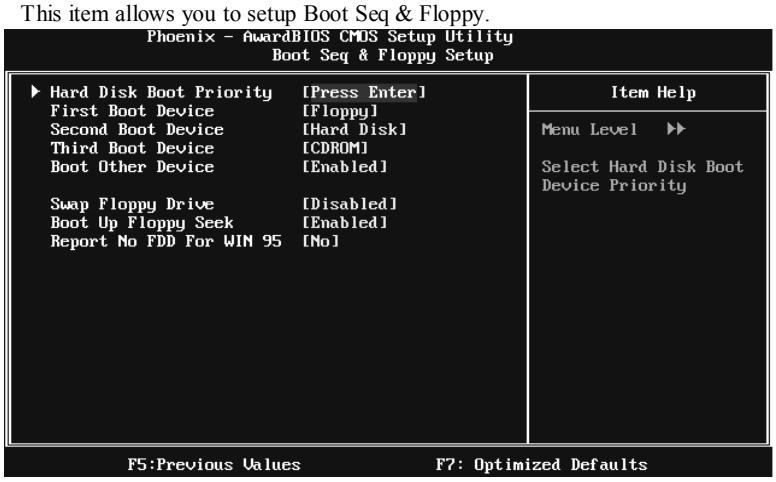
TM2 Bus VID
This option represents the voltage of the throttled performance state that will be initiated when the on-die sensor goes from not hot to hot.
The Choices: 1.2000V (default), 0.8375V-1.6000V.

Limit CPUID MaxVal
Set limit CPUID MaxVal to 3, it should be "Disabled" for Win XP.
The Choices: Disabled (default), Enabled.

C1E Function
This item allows you to choose the C1E function.
The Choices: Auto (default), Disabled.

Execute Disable Bit
When disabled, forces the XD feature flag to always return 0.
The Choices: Enabled (default), Disabled.

Boot Seq & Floppy Setup
This item allows you to setup Boot Seq & Floppy.



Hard Disk Boot Priority

These BIOS attempt to arrange the Hard Disk boot sequence automatically. This will depend on which Hard Disk is installed.

The Choices: Pri. Master, Pri.Slave, Sec.Master, Sec.Slave, USBHDD0, USBHDD1, USBHDD2 and Bootable Add-in Cards.

First/Second/Third Boot Device

These BIOS attempt to load the operating system from the device in the sequence selected in these items.

The Choices: Floppy, LS120, Hard Disk, CDROM, ZIP100, USB-FDD, USB-ZIP, USB-CDROM, LAN, Disabled.

Boot Other Device

When enabled, BIOS will try to load the operating system from other device when it failed to load from the three devices above.

The Choices: Enabled (default), Disabled

Swap Floppy Drive

For systems with two floppy drives, this option allows you to swap logical drive assignments.

The Choices: Disabled (default), Enabled.

Boot Up Floppy Seek

Enabling this option will test the floppy drives to determine if they have 40 or 80 tracks. Disabling this option reduces the time it takes to boot-up.

The Choices: Disabled, **Enabled** (default).

Report NO FDD for Win95
The Choices: NO (default), YES.

Virus Warning

This option allows you to choose the Virus Warning feature that is used to protect the IDE Hard Disk boot sector. If this function is enabled and an attempt is made to write to the boot sector, BIOS will display a warning message on the screen and sound an alarm beep.

Disabled (default)	Virus protection is disabled.
Enabled	Virus protection is activated.

Hyper-Threading Technology

This option allows you to enable or disable CPU Hyper-Threading. "Enabled" for Windows XP and Linux 2.4.x (OS optimized for Hyper-Threading Technology.) "Disabled" for other OS (OS not optimized for Hyper-Threading Technology.)
The Choices: Enabled (default), Disabled.

Quick Power On Self Test

Enabling this option will cause an abridged version of the Power On Self-Test (POST) to execute after you power up the computer.

Disabled	Normal POST.
Enabled (default)	Enable quick POST.

Boot Up NumLock Status

Selects the NumLock State after power on.

On (default)	Numpad is arrow keys.
Off	Numpad is number keys.

Gate A20 Option

Select if chipset or keyboard controller should control Gate A20.

Normal	A pin in the keyboard controller controls GateA20.
Fast (default)	Lets chipset control Gate A20.

Typematic Rate Setting

When a key is held down, the keystroke will repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be configured.
The Choices: Disabled (default), Enabled.

Typematic Rate (Chars/Sec)

Sets the rate at which a keystroke is repeated when you hold the keydown.
The Choices: 6 (default)**,** 8,10,12,15,20,24,30

Typematic Delay (Msec)

Sets the delay time after the key is held down before it begins to repeat the keystroke.
The Choices: 250 (default)**,** 500, 750, and 1000.

Security Option

This option will enable only individuals with passwords to bring the system online and/or to use the CMOS Setup Utility.

System	A password is required for the system to boot and is also required to access the Setup Utility.
Setup (default)	A password is required to access the Setup Utility only.

This will only apply if passwords are set from the Setup main menu.

APIC Mode

Selecting Enabled enables APIC device mode reporting from the BIOS to the operating system.
The Choices: Enabled (default), Disabled.

MPS Version Control For OS

The BIOS supports version 1.1 and 1.4 of the Intel multiprocessor specification. Select version supported by the operation system running on this computer.
The Choices: 1.4 (default), 1.1.

OS Select For DRAM > 64MB

A choice other than Non-OS2 is only used for OS2 systems with memory exceeding 64MB.
The Choices: Non-OS2 (default), OS2.

Small Logo (EPA) Show

This item allows you to select whether the "Small Logo" shows.

Enabled (default)	"Small Logo" shows when system boot up.
Disabled	No "Small Logo" shows when system boots up.

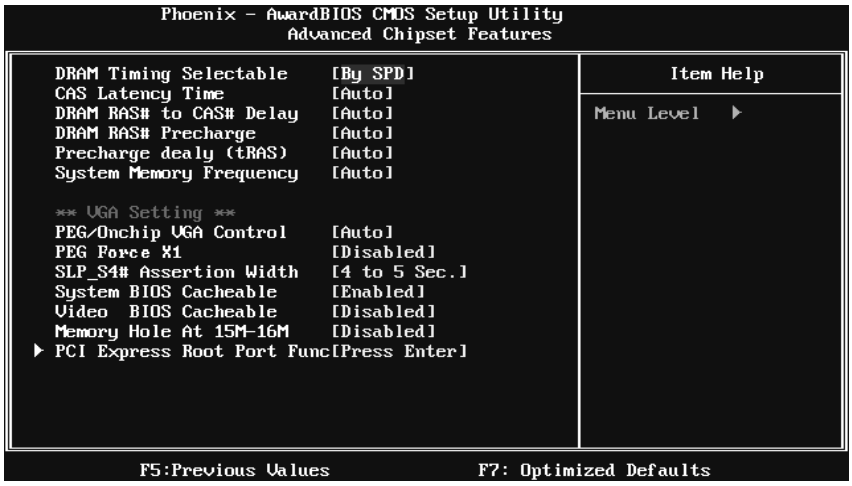
Summary Screen Show

This item allows you to enable/disable the summary screen. Summary screen means system configuration and PCI device listing.
The Choices: Enabled, **Disabled** (default).

4 Advanced Chipset Features

This submenu allows you to configure the specific features of the chipset installed on your system. This chipset manage bus speeds and access to system memory resources, such as DRAM. It also coordinates communications with the PCI bus. The default settings that came with your system have been optimized and therefore should not be changed unless you are suspicious that the settings have been changed incorrectly.

■ **Figure 4. Advanced Chipset Setup**



DRAM Timing Selectable

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.
The Choices: By SPD (default), Manual.

CAS Latency Time

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.
The Choices: 4 (default), 3, 5, 6, Auto.

DRAM RAS# to CAS# Delay

This field let you insert a timing delay between the CAS and RAS strobe signals, used when DRAM is written to, read from, or refreshed. Fast gives faster performance; and slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system.
The Choices: 4 (default), 2, 3, 5, 6, Auto.

DRAM RAS# Precharge

If an insufficient number of cycles is allowed for RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete, and the DRAM may fail to retain data. Fast gives faster performance; and Slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system.
The Choices: 4 (default), 2, 3, 5, 6, Auto.

Precharge Delay (tRAS)

This item controls the number of DRAM clocks to activate the precharge delay.
The Choices: 11 (default), 4/5/6/7/8/9/10/12/13/14/15, Auto.

System Memory Frequency

This item allows you to select the Memory Frequency.
The Choices: Auto (default), 400MHz, 533MHz, and 667MHz.

VGA Setting

PEG/Onchip VGA Control

This item allows you to enabled or disabled PEG/On-chip VGA controller.
The Choices: Auto (default), Onchip VGA, PEG Port.

PEG Force X1

This item allows you to enabled or disabled the PEG Force X1
The Choices: Disabled (default), Enabled.

SLP S4# Assertion Width

This item sets the minimum assertion width of the SLP-S4# signal to guarantee the DRAM has been safely power-cycled.
The Choices: 4 to 5 Sec. (default), 3 to 4 Sec., 2 to 3 Sec., 1 to 2 Sec.

System BIOS Cacheable

Selecting Enabled allows you caching of the system BIOS ROM at F0000h~FFFFFh, resulting a better system performance. However, if any program writes to this memory area, a system error may result.
The Choices: Enabled (default), Disabled.

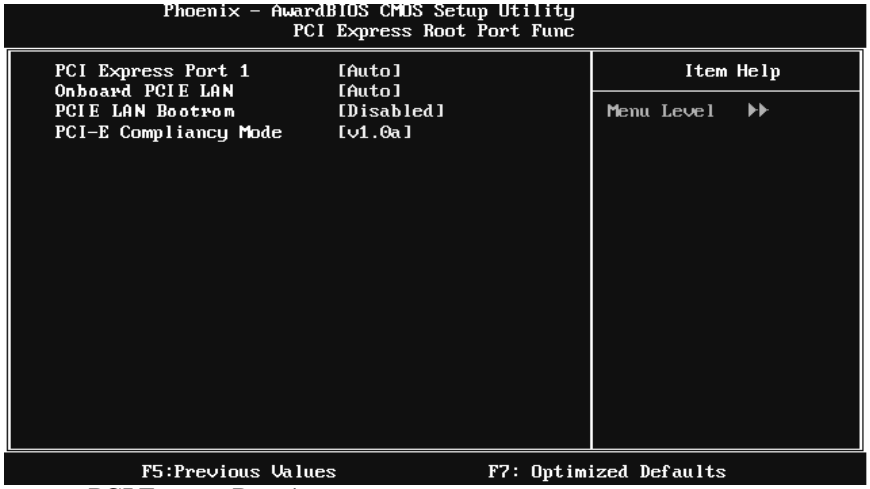
Video BIOS Cacheable

Select Enabled allows caching of the video BIOS, resulting a better system performance. However, if any program writes to this memory area, a system error may result.
The Choices: Disabled (default), Enabled.

Memory Hole At 15M-16M

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved it cannot be cached. The user information of peripherals that need to use this area of system memory usually discussed their memory requirements.
The Choices: Disabled (default), Enabled.

PCI Express Root Port Func



PCI Express Port 1

This item allows you to select the PCI Express Port.
The Choices: Auto (default)**,** Enabled, Disabled.

Onboard PCIE LAN

This item allows you to control the onboard LAN.
The Choices: Auto (default),Disabled.

PCIE LAN Bootrom

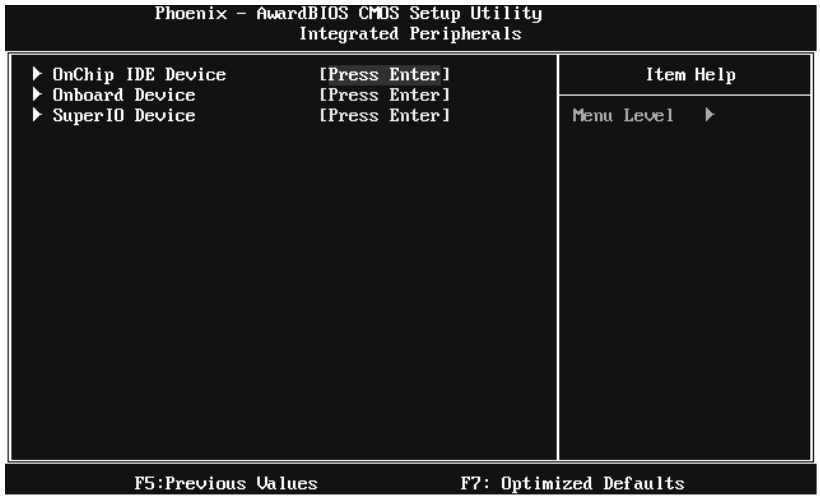
This item allows you to control the onboard LAN bootrom.
The Choices: Disabled (default), Enabled.

PCI-E Compliancy Mode

This item allows you to select the PCI-E Compliancy Mode.
The Choices: v1.0a (default), v1.0.

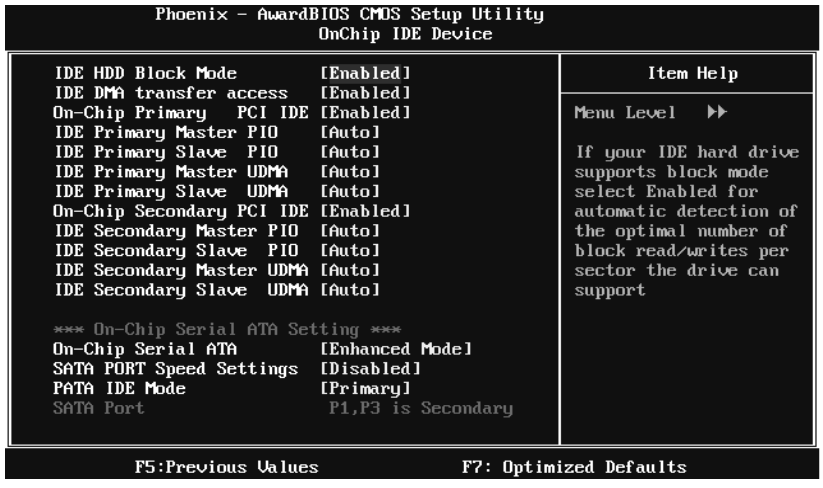
5 Integrated Peripherals

- **Figure 5. Integrated Peripherals**



OnChip IDE Device

If you highlight the literal "Press Enter" next to the "OnChip IDE Device" label and then press the enter key, it will take you a submenu with the following options:



IDE HDD Block Mode
Block mode is also called block transfer, multiple commands, or multiple sector read / write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read / write per sector where the drive can support.
The Choices: Enabled (default)**,** Disabled**.**

IDE DMA Transfer Access
This item allows you to enable or disable the IDE transfer access.
The Choices: Enabled (default), Disabled.

On-chip Primary/Secondary PCI IDE
This item allows you to enable or disable the primary/ secondary IDE Channel.
The Choices: Enabled (default), Disabled.

IDE Primary/Secondary Master/Slave PIO
The IDE PIO (Programmed Input / Output) fields let you set a PIO mode (0-4) for each of the IDE devices that the onboard IDE interface supports. Modes 0 to 4 will increase performance progressively. In Auto mode, the system automatically determines the best mode for each device.
The Choices: Auto (default), Mode0, Mode1, Mode2, Mode3, and Mode4.

IDE Primary/Secondary Master/Slave UDMA
Ultra DMA/100 functionality can be implemented if it is supported by the IDE hard drives in your system. As well, your operating environment requires a DMA driver (Windows 95 OSR2 or a third party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/100, select Auto to enable BIOS support.
The Choices: Auto (default), Disabled.

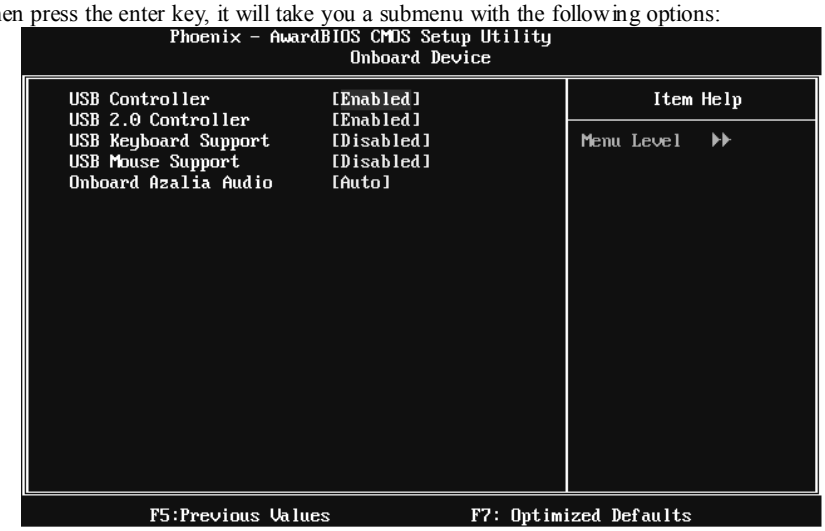
On-Chip Serial ATA
This item allows you to choose:
Disabled: disabled SATA Controller
Combined Mode: PATA and SATA are combined max of 2 IDE drivers in each channel.
Enhanced Mode: enabled both SATA and PATA max of 6 IDE drivers are supported.
SATA Only: SATA is operating in legacy mode.
The Choices: Disabled, Auto, Combined Mode, **Enhanced Mode** (default), and SATA only.

SATA PORT Speed Settings
The Choices: Disabled (default), Force GEN I, Force GEN II.

PATA IDE Mode
The Choices: Primary (default), Secondary.

Onboard Device

If you highlight the literal "Press Enter" next to the "Onboard Device" label and then press the enter key, it will take you a submenu with the following options:



USB Controller

Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have USB peripherals.
The Choices: Enabled (default), Disabled

USB 2.0 Controller

This entry is to enable or disable EHCI controller only. This BIOS itself may/ may not have high speed USB support. If the BIOS has high speed USB support built in, the support will automatically turn on, when high speed device were attached.
The Choices: Enabled (default), Disabled.

USB Keyboard Support

This item allows you to enable or disable the USB Keyboard Legacy Support.

Enabled	Enable USB Keyboard Support.
Disabled (default)	Disable USB Keyboard Support.

USB Mouse Support

This item allows you to enable or disable the USB Mouse Legacy Support.

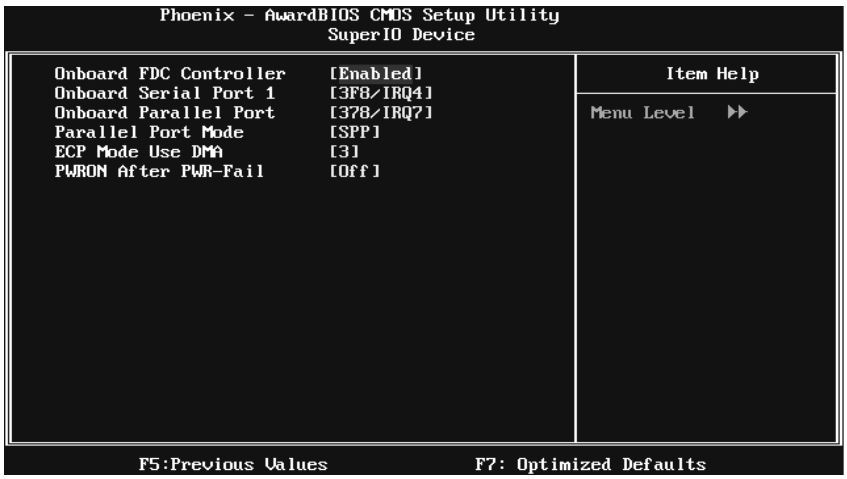
Enabled Enable USB Mouse Support.
Disabled (default) Disable USB Mouse Support.

Onboard Azalia Audio

This item allows you to decide to enable or disable to support HD Audio.
The Choices: Auto (default), Disabled.

Super IO Device

Press Enter to configure the Super I/O Device.



Onboard FDC Controller

Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If install and FDC or the system has no floppy drive, select Disabled in this field.
The Choices: Enabled (default), Disabled.

Onboard Serial Port 1

Select an address and corresponding interrupt for the first and second serial ports.
The Choices: Disabled, **3F8/IRQ4** (default), 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Auto.

Onboard Parallel Port

This item allows you to determine access onboard parallel port controller with which I/O Address.
The Choices: 378/IRQ7 (default), 278/IRQ5, 3BC/IRQ7, Disabled.

Parallel Port Mode
The default value is SPP.
The Choices:

SPP (default)	Using Parallel port as Standard Printer Port.
EPP	Using Parallel Port as Enhanced Parallel Port.
ECP	Using Parallel port as Extended Capabilities Port.
ECP+EPP	Using Parallel port as ECP & EPP mode.

ECP Mode Use DMA
Select a DMA Channel for the port.
The Choices: 3 (default), 1.

PWRON After PWR-Fail
This setting specifies whether your system will reboot after a power fail or interrupts occurs.

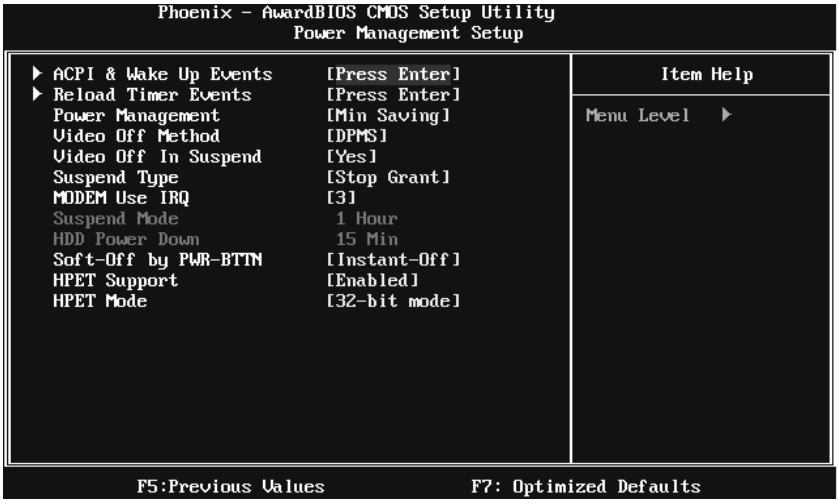
Off	Leaves the computer in the power off state.
On	Reboots the computer.
Former-Sts	Restores the system to the status before power failure or interrupt occurs.

The Choices: Off (default), On, Former-Sts.

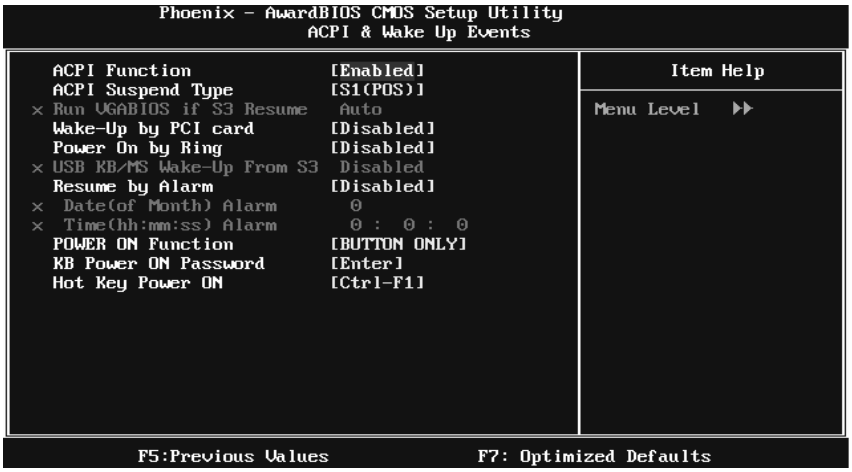
6 Power Management Setup

The Power Management Setup Menu allows you to configure your system to utilize energy conservation and power up/power down features.

■ **Figure 6. Power Management Setup**



ACPI & Wake Up Events



ACPI Function
This item displays the status of the Advanced Configuration and Power Management (ACPI).
The Choices: Enabled (default), Disabled.

ACPI Suspend Type
The item allows you to select the suspend type under the ACPI operating system.

The Choices: S1 (POS) (default)	Power on Suspend
S3 (STR)	Suspend to RAM
S1 & S3	POS+STR

Run VGABIOS if S3 Resume
Choosing Enabled will make BIOS run VGA BIOS to initialize the VGA card when system wakes up from S3 state. The system time is shortened if you disable the function, but system will need AGP driver to initialize the card. So, if the AGP driver of the VGA card does not support the initialization feature, the display may work abnormally or not function after S3.
The Choices: Auto (default), Yes, No.

Wake-Up by PCI card
When you select "Enable", a PME signal from PCI card returns the system to Full On state.
The Choices: Enabled, **Disabled** (default).

Power On by Ring
An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.
The Choices: Enabled, **Disabled** (default).

USB KB/MS Wake-Up From S3
This item allows you to enable or disable USB keyboard wake up from S3.
The Choices: Disabled (default), Enabled.

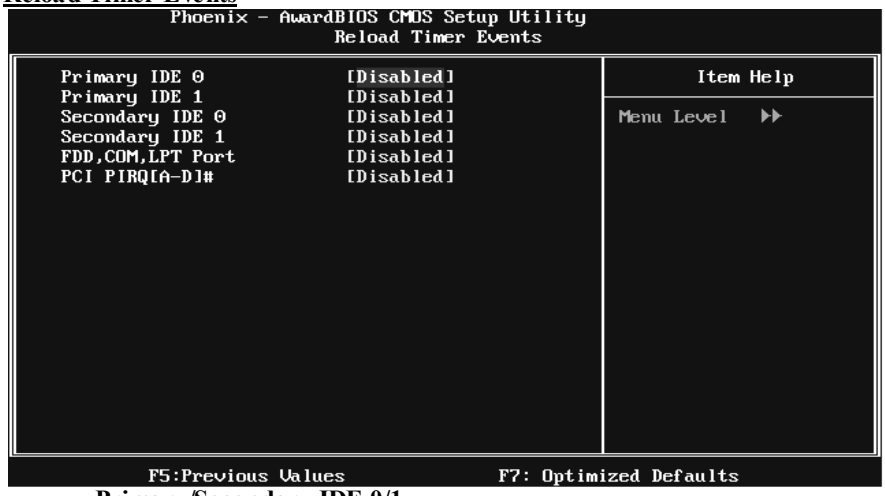
Resume by Alarm
This function is for setting date and time for your computer to boot up. During Disabled, you cannot use this function. During Enabled, Choose the Date and Time.
Date (of Month) Alarm
You can choose which month the system will boot up.
Time (hh:mm:ss) Alarm
You can choose shat hour, minute and second the system will boot up.
Note: If you have changed the setting, you must let the system boot up until it goes to the operating system, before this function will work.

POWER ON Function
This item allows you to choose the power on function.
The Choices: Button Only (default), Password, Hot Key, Mouse Move/Click, Mouse Double Click, Any Key, Keyboard 98.

KB POWER ON Password
Input password and press Enter to set the Keyboard power on password.

Hot Key Power ON
Input password and press Enter to set the Keyboard power on password.
The Choices: Ctrl-F1 (default), Ctrl-F2, Ctrl-F3, Ctrl-F4, Ctrl-F5, Ctrl-F6, Ctrl-F7, Ctrl-F8, Ctrl-F9, Ctrl-F10, Ctrl-F11, and Ctrl-F12.

Reload Timer Events



Primary/Secondary IDE 0/1
You can select to enable or disable Primary or Secondary RAID 0 or RAID 1 function under this item.
The Choices: Disabled (default), Enabled.

FDD, COM, LPT Port
You can select to enable or disable FDD, COM, and LPT port under this item.
The Choices: Disabled (default), Enabled.

PCI PIRQ [A-D]#
You can select to enable or disable PCI PIRQ [A-D]# under this item.
The Choices: Disabled (default), Enabled.

Power Management

This category allows you to select the type (or degree) of power saving and is directly related to the following modes:
1. HDD Power Down.
2. Suspend Mode.

There are four options of Power Management, three of which have fixed mode settings

Min Saving (default)
Minimum power management.
Suspend Mode = 1 hr.
HDD Power Down = 15 min

Max. Saving
Maximum power management only available for sl CPU's.
Suspend Mode = 1 min.
HDD Power Down = 1 min.

User Define (default)
Allows you to set each mode individually.
When not disabled, each of the ranges is from 1 min. to 1 hr. Except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

Video Off Method

This option determines the manner in which the monitor is goes blank.
The Choices: DPMS (default), Blank Screen, V/H SYNC+Blank.

Video Off In Suspend

This determines the manner in which the monitor is blanked.
The Choices: Yes (default), No.

Suspend Type

Select the Suspend Type.
The Choices: Stop Grant (default), PwrOn Suspend.

Modem Use IRQ

This determines the IRQ, which can be applied in MODEM use.
The Choices: 3 (default), 4 / 5 / 7 / 9 / 10 / 11 / NA.

Suspend Mode

The item allows you to select the suspend type under ACPI operating system.
The Choices: Disabled (default), 1 Min, 2 Min, 4 Min, 6 Min, 8 Min, 10 Min, 20 Min, 30 Min, 40 Min, 1 Hour.
This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.
Blank Screen

This option only writes blanks to the video buffer.

HDD Power Down

When enabled, the hard disk drive will power down and after a set time of system inactivity. All other devices remain active.
The Choices: Disabled (default), 1 Min, 2 Min, 3 Min, 4 Min, 5 Min, 6 Min, 7 Min, 8 Min, 9 Min, 10 Min, 11 Min, 12 Min, 13 Min, 14 Min, 15 Min.

Soft-Off by PWR-BTN

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has "hung."
The Choices: Delay 4 Sec, **Instant-Off** (default).

HPET Support

This item allows you to enable or disable HPET.
The Choices: Enabled (default), Disabled.

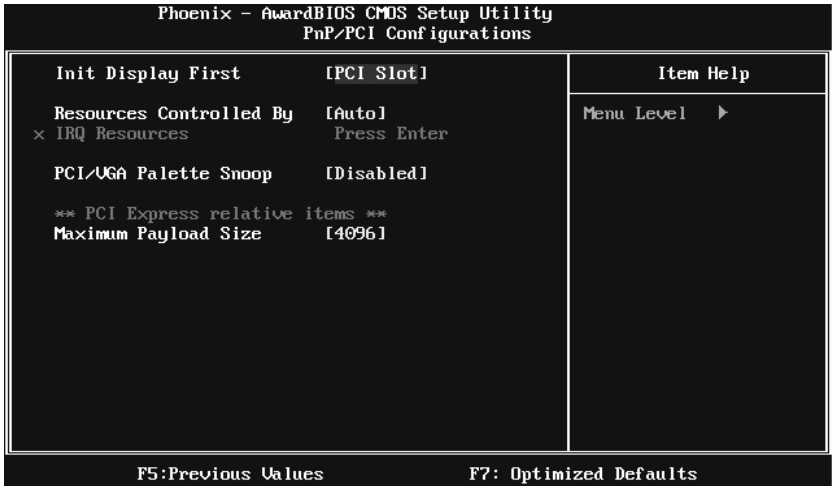
HPET Mode

This item allows you to select the HPET mode.
The Choices: 32-bit mode (default), 64-bit mode.

7 PnP/PCI Configurations

This section describes configuring the PCI bus system. PCI, or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed of the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

- **Figure 7. PnP/PCI Configurations**



Init Display First

This item allows you to decide to active whether PCI Slot or on-chip VGA first.
The Choices: PCI Slot (default), PCIEx, Onboard.

Resources Controlled By

By Choosing "**Auto (ESCD)**" (default), the system BIOS will detect the system resources and automatically assign the relative IRQ and DMA channel for each peripheral. By Choosing "Manual", the user will need to assign IRQ & DMA for add-on cards. Be sure that there are no IRQ/DMA and I/O port conflicts.
The Choices: Auto (default), Manual.

IRQ Resources

This submenu will allow you to assign each system interrupt a type, depending on the type of device using the interrupt. When you press the "Press Enter" tag, you will be directed to a submenu that will allow you to configure the system interrupts. This is only configurable when "Resources Controlled By" is set to "Manual".

IRQ-3	assigned to	PCI Device
IRQ-4	assigned to	PCI Device
IRQ-5	assigned to	PCI Device
IRQ-7	assigned to	PCI Device
IRQ-9	assigned to	PCI Device
IRQ-10	assigned to	PCI Device
IRQ-11	assigned to	PCI Device
IRQ-12	assigned to	PCI Device
IRQ-14	assigned to	PCI Device
IRQ-15	assigned to	PCI Device

PCI / VGA Palette Snoop

Choose Disabled or Enabled. Some graphic controllers that are not VGA compatible take the output from a VGA controller and map it to their display as a way to provide boot information and VGA compatibility. However, the color information coming from the VGA controller is drawn from the palette table inside the VGA controller to generate the proper colors, and the graphic controller needs to know what is in the palette of the VGA controller. To do this, the non-VGA graphic controller watch for the Write access to the VGA palette and registers the snoop data. In PCI based systems, where the VGA controller is on the PCI bus and a non-VGA graphic controller is on an ISA bus, the Write Access to the palette will not show up on the ISA bus if the PCI VGA controller responds to the Write.

In this case, the PCI VGA controller should not respond to the Write, it should only snoop the data and permit the access to be forwarded to the ISA bus. The non-VGA ISA graphic controller can then snoop the data on the ISA bus. Unless you have the above situation, you should disable this option.

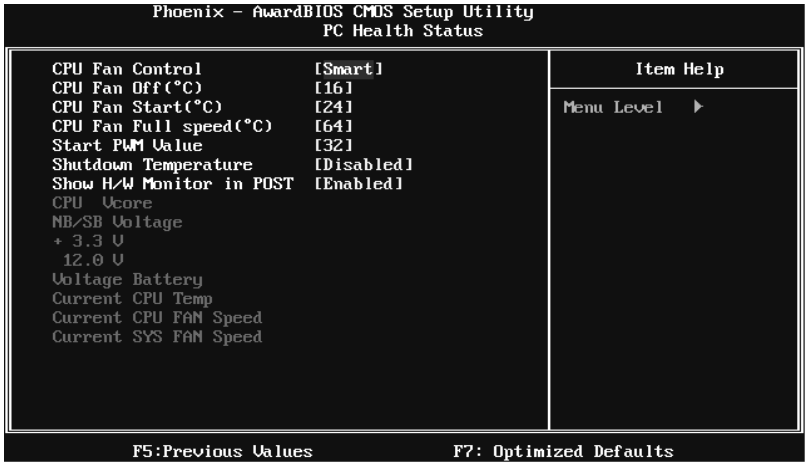
Disabled (default)	Disable the function.
Enabled	Enable the function.

Maximum Payload Size

Set the maximum payload size for Transaction packets (TLP).
The Choice: 4096 (default.), 128, 256, 512, 1024, 2048.

8 PC Health Status

■ **Figure 8. PC Health Status**



CPU FAN Control

The Choice "smart" can make your CPU FAN to reduce noise.
The Choices: Smart (default), Always On.

CPU Fan Off<℃>

If the CPU Temperature is lower than the set value, FAN will turn off.
The Choices: Min=0,.Max=127, Key in a DEC number.

CPU Fan Start<℃>

CPU fan starts to work under smart fan function when arrive this set value.
The Choices: Min=0,.Max=127, Key in a DEC number.

CPU Fan Full speed <℃>

When CPU temperature is reach the set value, the CPU fan will work under Full Speed.
The Choices: Min=0,.Max=127, Key in a DEC number.

Start PWM Value

When CPU temperature arrives to the set value, the CPU fan will work under Smart Fan Function mode. The range is from 0~127, with an interval of 1.
The Choices: Min=0,.Max=127, Key in a DEC number.

SHUTDOWN TEMPERATURE

This item allows you to set up the CPU shutdown Temperature. This item only effective under Windows 98 ACPI mode

The Choices: 65°C/140°F, 70°C/149°F, 75°C/158°F, **Disabled** (default).

SHOW H/W MONITOR IN POST

If you computer contain a monitoring system, it will show PC health status during POST stage. The item offers several delay time to select you want.

The Choices: Enabled (default), Disabled.

CPU VCORE, NB/SB VOLTAGE, +3.3V, 12.0V, VOLTAGE BATTERY

Detect the system's voltage status automatically.

CURRENT CPU TEMP

This field displays the current temperature of CPU.

CURRENT CPU FAN SPEED

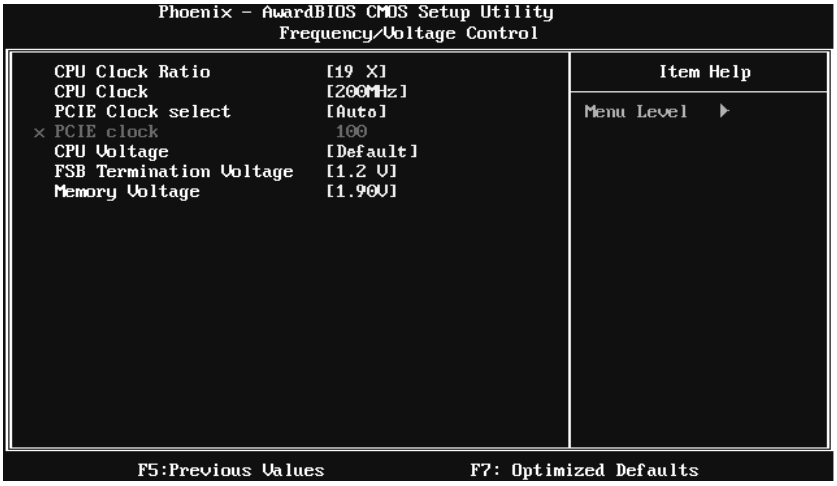
This field displays the current speed of CPU fan.

CURRENT SYS FAN SPEED

This field displays the current speed SYSTEM fan.

9 Frequency/Voltage Control

■ **Figure 9. Frequency/Voltage Control**



CPU Clock Ratio

This item allows you to select the CPU Ratio.
Min = 8 Max = 50 Key in a DEC number.
The Choices: 19X (default).

CPU Clock

This item allows you to select CPU Clock, and CPU over clocking.
Min= 100 Max = 265 Key in a DEC number.
The Choices: 200Mhz (default).

PCIE Clock select

The Choices: Auto (default), Manual

PCIE Clock

Display the PCIE Clock frequency; Min=100, Max=200, key in a DEC number.
This option is configurable only when "PCIE Clock Select" is set to "Manual".

CPU Voltage

This item allows you to select CPU Voltage Control.
The Choices: Default (default), +0.012V~+0.787V.

FSB Termination Voltage

The Choices: 1. 2V (default), 1.3V, 1.4V, 1.5V.

Memory Voltage

The Choices:1.90V (default), 1.80V, 2.00V, 2.10V, 2.20V, 2.30V, 2.40V, 2.50V.

Special Notice:
If unfortunately, the system's frequency that you are selected is not functioning, there are two methods of booting-up the system.

Method 1:
Clear the COMS data by setting the JCOMS1 ((2-3) closed)) as "ON" status. All the CMOS data will be loaded as defaults setting.

Method 2:
Press the <Insert> key and Power button simultaneously, after that keep-on pressing the <Insert> key until the power-on screen showed. This action will boot-up the system according to FSB of the processor

It's strongly recommended to set CPU Vcore and clock in default setting. If the CPU Vcore and clock are not in default setting, it may cause CPU or M/B damage.