XPC User Guide

For the ： SN27P2

Statement of Shuttle Mainboard via the EMI Test

Shuttle mainboards have been via the EMI test in terms of series of regulations: EN55022/CISPR22/ AS/NZS3548 Class B, EN55024 (1998/AS/NZS), EN4252.1 (1994), EN61000, ANSI C63.4 (1992), CFR47 Part 15 Subpart B, and CNS13438 (1997). The items tested are illustrated as follows:

(A) Voltage: AC 110V/60HZ & AC 230V/50HZ

(B) Tested Product Information:

Product Name: PC Mainboard

Status: Sample

Model Name: SN27P2

S/N: N/A

CPU:

External Frequency: 200 MHz

AMD Athlon™ 64x2 : 5000+

Clear CMOS button: one port

USB 2.0 Port: eight ports with 4 pins respectively

1394 Port: one port with 6 pins respectively,one port with 4 pins.

LAN Port: one port with 8 pins (10Mbps/100Mbps/1000Mbps)

Mic-In & Line-In & Earphone Ports: one port for each

Center/Bass-Out Port: one port

Surround-Out Port: one port

Surround-Back Port: one port

Front-Out Port: one port

SPDIF-Out (Coaxial) Port: one port

SPDIF-Out (Optical) Port: one port

SPDIF-In (Optical) Port: one port

DIMM Memory (optional): DDRII 533/667 1GB *4

Power Cable: Detachable and Shielded (with a GND pin)

All CPUs have completely been tested, and values offered by the worst EMI combination of CPU external frequency are listed as follows:

Test Mode	External Frequency	CPU	CPU Open/Close
1	200MHz	AMD Athlon™ 64X2 5000+	Close
2	200MHz	AMD Athlon™ 64X2 5000+	Open

(C) Remedy for the Tested Product & Its EMI Interference:

Remedy: N/A

EMI Interference:

Crystal : 32.768 KHz(X1)/ 25 MHz(X2)/ 24.576 MHz(X1)

(D) Supported Host Peripherals:

Host Peripheral	Product Name	Model Name
# 1	Case	SN27P2
# 2	Power Supply	PC43I3503
# 3	Serial ATA II HITACHI	HDS728080PLA380
# 4	Serial ATA II HITACHI	HDS728080PLA380
# 5	DVD Dual Player	CR40
# 6	Gigabyte 7800GTX	GV-NX78X256V-B
# 7	Gigabyte 7800GTX	GV-NX78X256V-B

(E) Notices for Assembling Computers:

1. Cases should be made of iron or other metal that has good electric conductivity.

2. Cylinders in a case should be made of metal, and as having a mainboard mounted in a case, make sure screws are all utilized and fastened on a mainboard.

3. An I/O shielding should be contacted with I/O metallic parts of a mainboard.

4. Cables should appropriately be arranged and fixed in a case. Follow instructions:

   ➢ Leave IDE cables not crossed upon CPU and SDRAM;

   ➢ Leave power cables minimum in length, and not crossed upon a mainboard;

   ➢ Leave CPU fan cables minimum in length, and not near CPU;

   ➢ Leave cables on panels and other spare cables tied in a computer case.

5. Make sure an EMI shielding attached to a case has properly been installed.

6. Make sure a 5.25" or 3.5" FDD and screws are fastened to an EMI shielding.

7. Make sure a case is closely in contact with EMI connected points.

8. Make sure there is no cleft in a case which is not deformed.

9. Make sure a PCI or AGP door is bound to a case.

10. Make sure cables of other devices (fans or some others) are fixed in a case.

Shuttle®

XPC Installation Guide

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This device complies with Part 15 of the FCC Rules, Operation is subject to the following two conditions:

1. This device may not cause harmful interference.

2. This device must accept any interference received, including interference that may cause undesired operation.

Trademarks

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Intel and Pentium are registered trademarks of Intel Corporation.
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Microsoft and Windows are registered trademarks of Microsoft Corporation.

General Notice

Other brand and product names used herein are for identification purposes only and may be trademarks of their respective owners.

Safety Information

Read the following precautions before setting up a Shuttle XPC.

CAUTION

Incorrectly replacing the battery may damage this computer. Replace only with the same or equivalent as recommended by Shuttle. Dispose of used batteries according to the manufacturer's instructions.

Installation Notices

Do not place this device underneath heavy loads or in an unstable position.
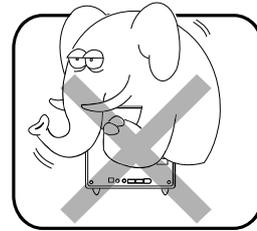
Do not expose this device to high levels of direct sunlight, high-humidity or wet conditions.

Do not use or expose this device around magnetic fields as magnetic interference may affect the performance of the device.
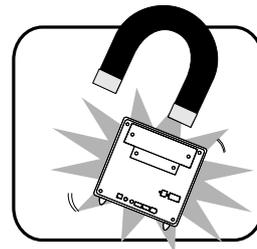
Do not block the air vents to this device or impede the airflow in any way.
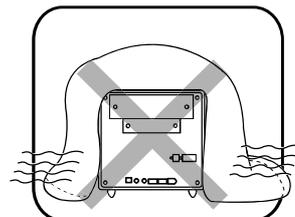
TABLE OF CONTENTS

1 Driver and Software Installation

■ 1.1 Mainboard Driver CD

> **Note : The CD contents attached in SN27P2 mainboard are subject to change without notice.**

The Mainboard Driver CD contains all the motherboard driver necessary to optimize the performance of this XPC in a Windows(R) OS. Install these drivers after installing Microsoft(R) Windows(R).

Navigation Bar Description :

☞ **Install Mainboard Software -** DirectX9 Utility, nVIDIA Chipset Driver,
   High Definition Driver,nVIDIA USB 2.0 Driver,

   nVIDIA Raid Tools Driver (Win2000 Only).

☞ **Install Utility -** Install Acrobat Reader, WinFlash Utility.

☞ **Manual -** SN27P2 user's guide and nVIDIA manual in PDF format.

☞ **Link to Shuttle Homepage -** Link to shuttle website homepage.

☞ **Browse this CD -** Allows you to see contents of this CD.

☞ **Quit -** Close this CD.
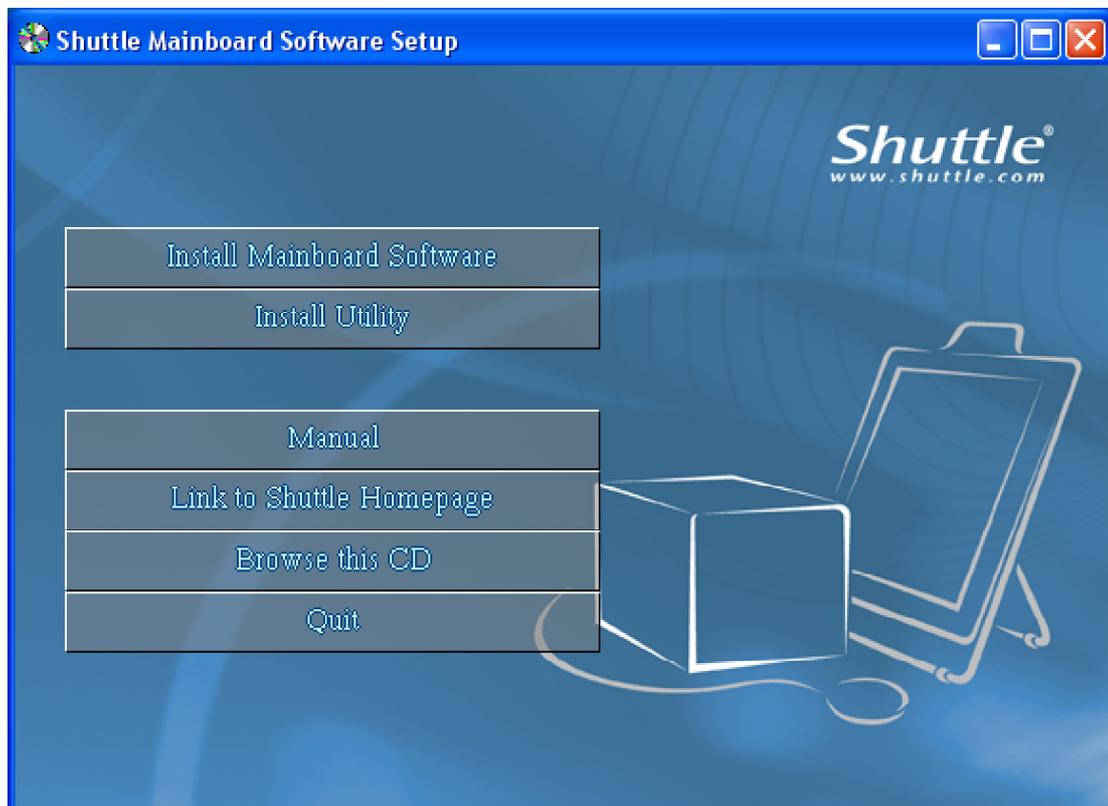
■ 1.1.1 Install Mainboard Software

Insert the attached CD into your CD-ROM drive. The CD AutoRun screen should appear. If the AutoRun screen does not appear, double click on Autorun icon in **My Computer** to bring up **Shuttle Main-board Software Setup** screen.

Click the "**Install Main-board Software**" bar. Individually install the following drivers.

     ☞   **Install DirectX9 Utility**

     ☞   **Install nVIDIA Chipset Driver**

     ☞   **Install High Definition Driver**

     ☞   **Install nVIDIA USB 2.0 Driver**

     ☞   **Install nVIDIA Raid Tools Driver (Win2000 Only)**

Appendix
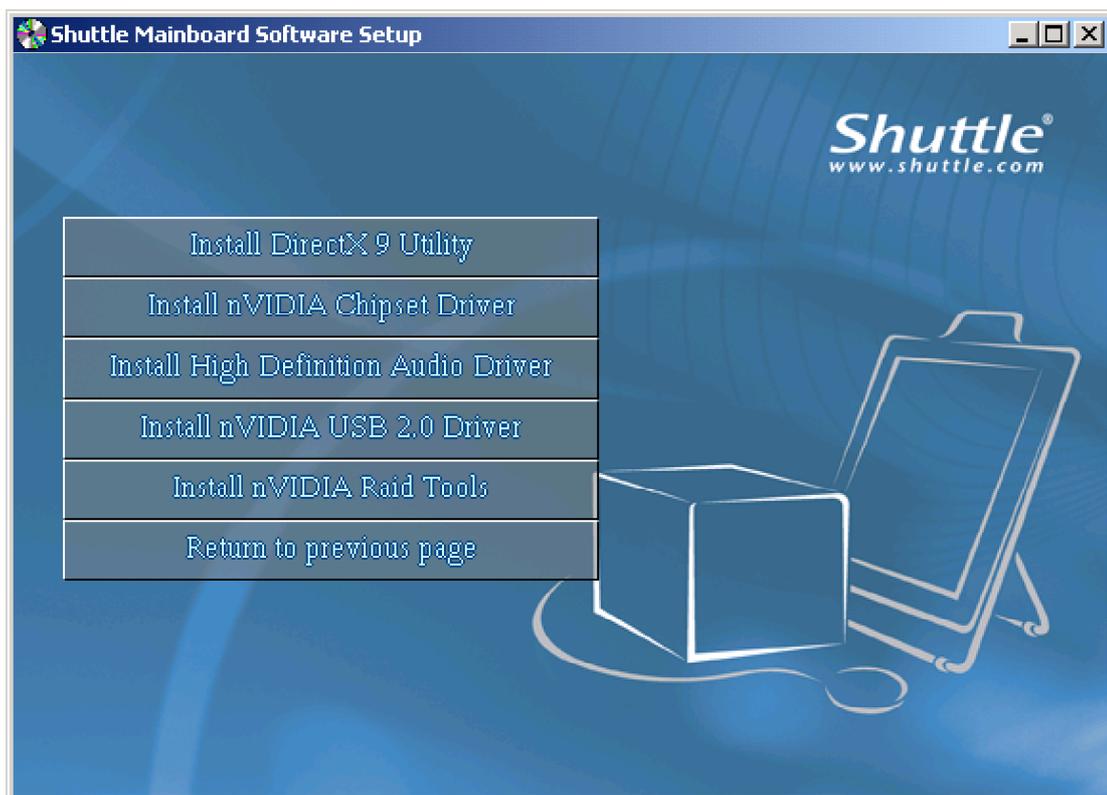
BIOS Settings

The SN27P2 BIOS ROM has a built-in Setup program that allows users to modify basic system configuration. This information is stored in battery-backed RAM so that it retains Setup information even if the system power is turned off.

The system BIOS manages and executes a variety of hardware related functions including:

System date and time

Hardware execution sequence

Power management functions

Allocation of system resources

Enter the BIOS

To enter the BIOS (Basic Input / Output System) utility, follow these steps:

Step1. Power on the computer. The system will perform its POST (Power-On Self Test) routine checks.

Step2. Press the <Del> key immediately, or at the following message: Press DEL to enter SETUP, or simultaneously press <Ctrl>, <Alt>, <Esc> keys

> **Note 1. If you miss the train of words mentioned in step2 (the message disappears before you can respond) and you still wish to enter BIOS Setup, restart the system and try again by turning the computer OFF and ON again or by pressing the <RESET> switch located at the computer's front-panel. You may also reboot by simultaneously pressing the <Ctrl>, <Alt>, <Del> keys simultaneously.**
>
> **Note 2. If you do not press the keys in time and system does not boot, the screen will prompt an error message, and you will be given the following options:**
>
> **"Press F1 to Continue, DEL to Enter Setup"**

Step3. When you enter the BIOS program, the CMOS Setup Utility will display the Main Menu, as shown in the next section.

The Main Menu

Once you enter the AwardBIOS(tm) CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions and two exit choices. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.

```
         Phoenix - Award WorkstationBIOS CMOS Setup Utility
 ┌─────────────────────────────────────────────────────────────────────┐
 │  ▶ Standard CMOS Features        ▶ Frequency/Voltage Control          │
 │                                                                       │
 │  ▶ Advanced BIOS Features          Load Fail-Safe Defaults            │
 │                                                                       │
 │  ▶ Advanced Chipset Features       Load Optimized Defaults            │
 │                                                                       │
 │  ▶ Integrated Peripherals          Set Supervisor Password            │
 │                                                                       │
 │  ▶ Power Management Setup          Set User Password                  │
 │                                                                       │
 │  ▶ PnP/PCI Configurations          Save & Exit Setup                  │
 │                                                                       │
 │  ▶ PC Health Status                Exit Without Saving                │
 │                                                                       │
 ├─────────────────────────────────────────────────────────────────────┤
 │  Esc : Quit                      ↑ ↓ → ←   : Select Item              │
 │  F10 : Save & Exit Setup                                              │
 ├─────────────────────────────────────────────────────────────────────┤
 │                Time, Date, Hard Disk Type...                          │
 └─────────────────────────────────────────────────────────────────────┘
```

Note that a brief description of each highlighted selection appears at the bottom of the screen.

Setup Items

The main menu includes the following main setup categories. Recall that some systems may not include all entries.

Standard CMOS Features

Use this menu for basic system configuration.

Advanced BIOS Features

Use this menu to set the Advanced Features available on your system.

Advanced Chipset Features

Use this menu to change the values in the chipset registers and optimize your system's performance.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals.

Power Management Setup

Use this menu to specify your power management settings.

PnP / PCI Configurations

This entry appears if your system supports PnP / PCI.

PC Health Status

This entry displays the current system temperature, Voltage, and FAN settings.

Frequency/Voltage Control

Use this menu to specify your settings for Frequency/Voltage control.

Load Fail-Safe Defaults

Use this menu to load the BIOS default values for the minimal/stable performance of your system to operate.

Load Optimized Defaults

Use this menu to load the BIOS default values that are factory-set for optimal system operation. While Award has designed the custom BIOS to maximize performance, the factory has the right to change these defaults to meet users' needs.

Set Supervisor / User Password

Use this menu to change, set, or disable password protection. This allows you to limit access to the system and Setup, or only to Setup.

Save & Exit Setup

Save CMOS value changes in CMOS and exit from setup.

Exit Without Saving

Abandon all CMOS value changes and exit from setup.

✍ *Standard CMOS Features*

The items in the Standard CMOS Setup Menu are divided into several categories. Each category includes none, 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.

```
              Phoenix - Award WorkstationBIOS CMOS Setup Utility
                            Standard CMOS Features
    ┌─────────────────────────────────────────────────┬─────────────────────┐
    │  Date (mm:dd:yy)          Wed, Jan 25 2006       │      Item Help       │
    │  Time (hh:mm:ss)          16 : 16 : 52           ├─────────────────────┤
    │                                                  │  Menu Level    ▶     │
    │ ▶ IDE Channel 0 Master                           │                      │
    │ ▶ IDE Channel 0 Slave     [ None]                │  Change the day, month, │
    │                                                  │  year and century    │
    │  Drive A                  [1.44M, 3.5 in.]       │                      │
    │  Halt On                  [All Errors]           │                      │
    │                                                  │                      │
    │  Base Memory                      640K           │                      │
    │  Extended Memory                65472K           │                      │
    │  Total Memory                    1024K           │                      │
    │                                                  │                      │
    │                                                  │                      │
    ├─────────────────────────────────────────────────┴─────────────────────┤
    │ ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help │
    │    F5: Previous Values    F6: Fail-Safe Defaults   F7: Optimized Defaults │
    └────────────────────────────────────────────────────────────────────────┘
```

Date

<Month> <DD> <YYYY>

Set the system date. Note that the 'Day' automatically changes when you set the date.

Time

<HH : MM : SS>

The time is converted based on the 24-hour military-time clock. For example, 5 p.m. is 17:00:00.

IDE Channel 0 Master/Slave

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

Drive A

Select the type of floppy disk drive installed in your system.

➢ The choice: None, 360K, 5.25 in, 1.2M, 5.25 in, 720K, 3.5 in, 1.44M, 3.5 in, or 2.88M, 3.5 in.

Halt On

Select the situation in which you want the BIOS to stop the POST process and notify you.

➢ The choice: All Errors, No Errors, All, But Keyboard, All, But Diskette, or All, But Disk/Key.

Base/Extended/Total Memory
Theseitems are automatically detected by the system at start up time. These are display-only fields. You can't make change to these fields.

* *

IDE Adapters
The IDE adapters control the hard disk drive. Use a separate sub-menu to configure each hard disk drive.

IDE HDD Auto-Detection
Press < Enter > to auto-detect HDD on this channel. If detection is successful, it fills the remaining fields on this menu.
> ➢ Press Enter

IDE Channel 0 Master
Selecting 'manual' lets you set the remaining fields on this screen and select the type of fixed disk. "User Type" will let you select the number of cylinders, heads, etc., Note: PRECOMP = 65535 means
NONE !
> ➢ The choice: None, Auto, or Manual.

Access Mode
Choose the access mode for this hard disk.
> ➢ The choice: CHS, LBA, Large, or Auto.

Capacity
Disk drive capacity (Approximated). Note that this size is usually slightly greater than the size of a formatted disk given by a disk checking program.
> ➢ Auto-Display your disk drive size.

> *The following options are selectable only if the 'IDE Primary Master' item is set to 'Manual'*

Cylinder
Set the number of cylinders for this hard disk.
> ➢ Min = 0, Max = 65535

Head
Set the number of read/write heads.
> ➢ Min = 0, Max = 255

Precomp

Warning: Setting a value of 65535 means no hard disk.

➢ Min = 0, Max = 65535

Landing zone
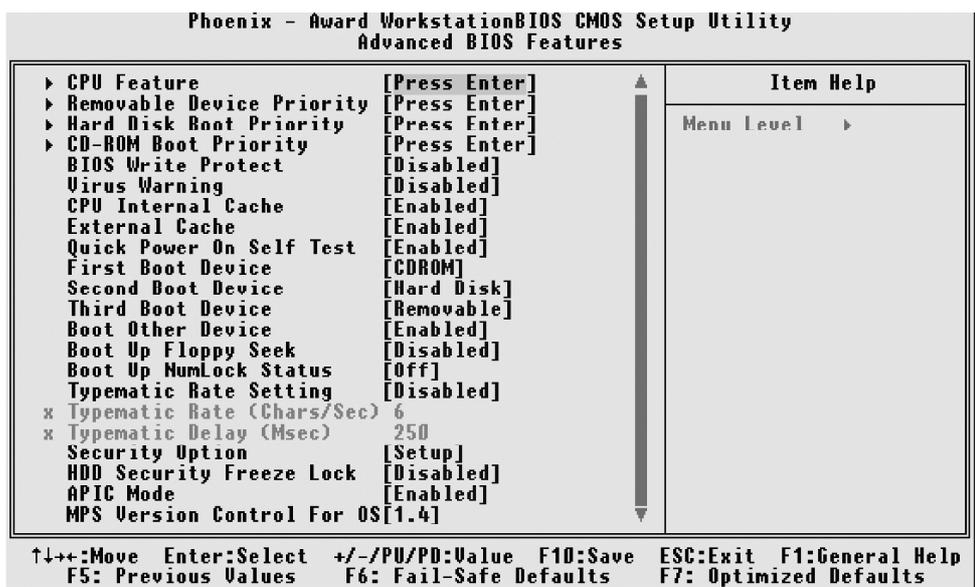
Set the Landing zone size.

➢ Min = 0, Max = 65535

Sector

Number of sector per track.

➢ Min = 0, Max = 255

****

✍ *Advanced BIOS Features*

This section allows you to configure your system for basic operation. You have the opportunity to select the system's default speed, boot-up sequence, keyboard operation, shadowing, and security.

```
          Phoenix - Award WorkstationBIOS CMOS Setup Utility
                        Advanced BIOS Features
 ┌────────────────────────────────────────────────┬──────────────────────┐
 │  ▶ CPU Feature              [Press Enter]     ▲ │    Item Help         │
 │  ▶ Removable Device Priority [Press Enter]      │                      │
 │  ▶ Hard Disk Boot Priority  [Press Enter]       │ Menu level    ▶      │
 │  ▶ CD-ROM Boot Priority     [Press Enter]       │                      │
 │    BIOS Write Protect       [Disabled]          │                      │
 │    Virus Warning            [Disabled]          │                      │
 │    CPU Internal Cache       [Enabled]           │                      │
 │    External Cache           [Enabled]           │                      │
 │    Quick Power On Self Test [Enabled]           │                      │
 │    First Boot Device        [CDROM]             │                      │
 │    Second Boot Device       [Hard Disk]         │                      │
 │    Third Boot Device        [Removable]         │                      │
 │    Boot Other Device        [Enabled]           │                      │
 │    Boot Up Floppy Seek      [Disabled]          │                      │
 │    Boot Up NumLock Status   [Off]               │                      │
 │    Typematic Rate Setting   [Disabled]          │                      │
 │  x Typematic Rate (Chars/Sec) 6                 │                      │
 │  x Typematic Delay (Msec)     250               │                      │
 │    Security Option          [Setup]             │                      │
 │    HDD Security Freeze Lock  [Disabled]         │                      │
 │    APIC Mode                [Enabled]           │                      │
 │    MPS Version Control For OS[1.4]            ▼ │                      │
 ├────────────────────────────────────────────────┴──────────────────────┤
 │ ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help │
 │    F5: Previous Values    F6: Fail-Safe Defaults   F7: Optimized Defaults │
 └────────────────────────────────────────────────────────────────────────┘
```

CPU Feature

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

K8 NPT C1E Support

This item is select K8 NPT C1E Support.

➢ The Choice: Disabled, SoftWare SMI or HareWare C1E.

AMD K8 Cool & Quiet control

This item is select AMD K8 Cool & Quiet Control.

➢ The Choice: Auto or Disabled.

Removable Device Proirity

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

Hard Disk Boot Priority

This item allows you to select Hard Disk Book Device Priority.

CD-ROM Boot Priority

This item allows you to select Hard Disk Book Device Priority.

Bios Write Protect

This item allows you to enable or disable the Bios Write Protect.
If you want to flash BIOS, you must set it [Disabled].

➢ The choice: Enabled or Disabled.

Virus Warning

Allows you to choose the VIRUS Warning feature for IDE Hard Disk boot sector protection. If this function is enables and someone attempts to write data into this area, BIOS will show a warning message on screen, and an alarm beep.

Enabled Activates automatically when the system boots up, causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.

Disabled No warning message will appear when anything attempts to access the boot sector or hard disk partition table.

➢ The choice: Enabled or Disabled.

CPU Internal Cache

All processors that can be installed in this mainboard use internal level 1 (L1) cache memory to improve performance. Leave this item at the default value for better performance.

➢ The choice: Enabled or Disabled.

External Cache

Most processors that can be installed in this system use external level 2 (L2) cache memory to improve performance. Leave this item at the default value for better performance.

➢ The choice: Enabled or Disabled.

Quick Power On Self Test

This item speeds up Power-On Self Test (POST) after you power on the computer. If it is set to enabled, BIOS will shorten or skip some check items during POST.

➢ The choice: Enabled or Disabled.

First/Second/Third Boot Device

The BIOS attempts to load the operating system from the devices in the sequence selected in these items.

➢ The Choice: Floppy, LS120, Hard Disk, CDROM, ZIP100, USB-FDD, USB-ZIP, USB-CDROM, Legacy LAN, or Disabled.

Boot Other Device

Select Your Boot Device Priority.

➢ The choice: Enabled or Disabled.

Boot Up Floppy Seek

Seeks disk drives during boot-Up. Disabling speed boots up. Enabled tests floppy drives to determine whether they have 40 or 80 tracks.

➢ The choice: Enabled or Disabled.

Boot Up NumLock Status

Selects power on state for NumLock.

➢ The choice: Off or On.

Typematic Rate Setting

Keystrokes repeat at a rate determined by the keyboard controller. When this controller enabled, the typematic rate and typematic delay can be selected.

➢ The choice: Enabled or Disabled.

Typematic Rate (Chars/Sec)

This item sets how many times the keystroke will be repented in a second when you hold the key down.

➢ The choice: 6, 8, 10, 12, 15, 20, 24 or 30.

Typematic Delay (Msec)

Sets the delay time after the key is held down before it begins to repeat the keystroke.

➢ The choice: 250, 500, 750 or 1000.

Security Option

Select whether the password is required every time the system boots or only when you enter setup.

System   The system will not boot and access to Setup will be denied if the correct password is not entered promptly.

Setup   The system will boot, but access to Setup will be denied if the correct password is not entered promptly.

➢ The choice: System or Setup.

> **Note :** To disabled security, select PASSWORD SETTING at Main Menu, and then you will be asked to enter password. Do not type anything and just press <Enter>; it will disable security. Once the security is disabled, the system will boot, and you can enter Setup freely.

HDD Security Freeze Lock

Selects enable/disable HDD Security Freeze Lock, Enable-prevents any external application from locking Hard drive except for BIOS.

➢ The choice: Enabled or Disabled.

APIC Mode

Selects enable/disable IO APIC function.

➢ The choice: Enabled or Disabled.
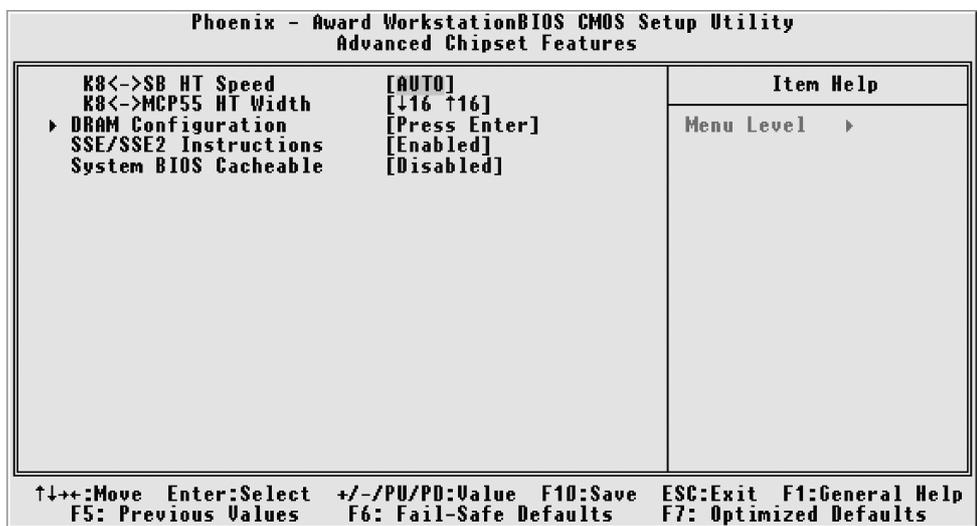
MPS Version Control For OS

Selects the operating system multiprocessor support version.

➢ The choice: 1.1 or 1.4.

✎ *Advanced Chipset Features*

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as DRAM and the external cache. It also coordinates communications between the conventional ISA bus and the PCI bus. It states that these items should never need to be altered.

The default settings have been chosen because they provide the best operating conditions for your system. If you discovered that data was being lost while using your system, you might consider making any changes.

```
        Phoenix - Award WorkstationBIOS CMOS Setup Utility
                     Advanced Chipset Features

    K8<->SB HT Speed          [AUTO]              Item Help
    K8<->MCP55 HT Width        [↓16 ↑16]
  ▶ DRAM Configuration         [Press Enter]    Menu Level   ▶
    SSE/SSE2 Instructions      [Enabled]
    System BIOS Cacheable      [Disabled]




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

K8 <--> SB HT Speed

This item allows you to set the HT Speed.

➢ The choice: Auto, 1x ~ 5x.

K8<-->MCP55 HT Width

This item allows you to set the HT Width.

➢ The choice:↓ 8 ↑8 or ↓16 ↑16.

DRAM Configuration

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

Timing Mode

➢ The Choice: Auto or MaxMemClk.

DDRII Timing Item

➢ The Choice: Enabled or Disabled.

SSE/SSE2 Instructions

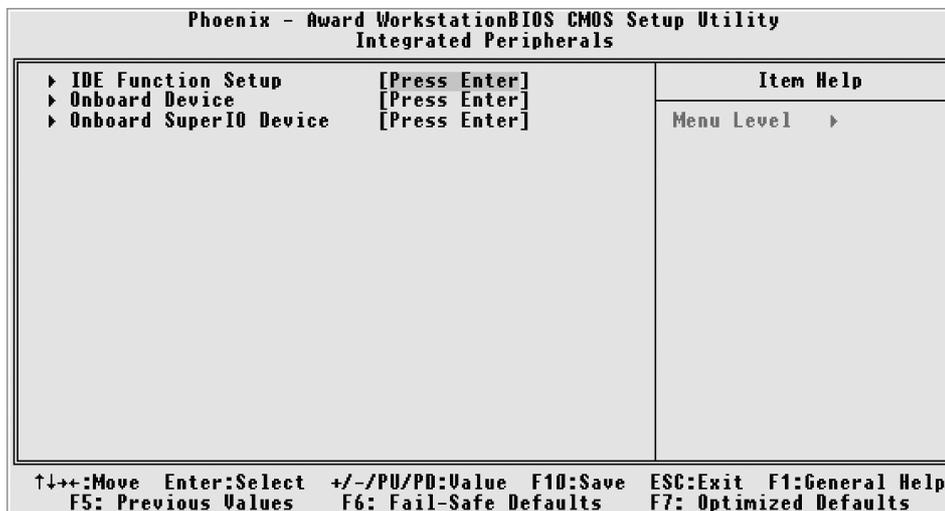This item allows you to enable/disable the SSE/SSE2 Instructions.

➢ The Choice: Enabled or Disabled.

System BIOS Cacheable

Select Enable allows caching of the system BIOS ROM at F000h-FFFFFh, resulting in better system performance. However, if any program is written to this memory area, a system error may result.

➢ The Choice: Enabled or Disabled.

✍ *Integrated Peripherals*

```
          Phoenix - Award WorkstationBIOS CMOS Setup Utility
                         Integrated Peripherals
 ┌──────────────────────────────────────────┬─────────────────────────┐
 │ ▶ IDE Function Setup      [Press Enter]   │        Item Help        │
 │ ▶ Onboard Device          [Press Enter]   │                         │
 │ ▶ Onboard SuperIO Device  [Press Enter]   │ Menu Level    ▶         │
 │                                           │                         │
 │                                           │                         │
 │                                           │                         │
 │                                           │                         │
 │                                           │                         │
 │                                           │                         │
 │                                           │                         │
 │                                           │                         │
 │                                           │                         │
 │                                           │                         │
 │                                           │                         │
 ├──────────────────────────────────────────┴─────────────────────────┤
 │ ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help │
 │    F5: Previous Values    F6: Fail-Safe Defaults  F7: Optimized Defaults │
 └─────────────────────────────────────────────────────────────────────┘
```

Onboard IDE Device

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

RAID Function Setup

Press <Enter> to enter the RAID Function Setup.

RAID Enable

This setting item need to be configued as "Enabled" in order that the "SATA 1 Primary / Secondary and SATA 2 Primary / Secondary RAID" setting item could be configuable.

➢The Choice: Enabled or Disabled.

OnChip IDE Channel 0

The chipset contains a PCI IDE interface with support to two IDE channels. Select Enabled to activate the primary IDE interface. select Disabled to deactivate this interface.

➢ The Choice: Enabled or Disabled.

Primary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

➢ The choice: Auto, Mode 0, Mode 1, Mode 2, Mode 3, or Mode 4.

Primary Master/Slave UDMA

Ultra DMA/100 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If both of your hard drive and your system software support Ultra DMA/100, select Auto to enable BIOS support.

➢ The choice: Auto or Disabled.

Serial-ATA Controller

This item allows you to enable/disable the SATA transfer access.

➢ The choice: All Enabled, Disabled or SATA-1.

IDE Prefetch Mode

The onboard IDE drive interface support IDE prefetching for faster drive access. If you install a primary and /or secondary add-on IDE interface, set this field to Disabled if the interface does not support prefetching.

➢ The Choice: Enabled or Disabled.

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 drivers do), select Enabled for automatic detection of the optimal number of block read/write per sector the drive can support.

➢ The Choice: Enable or Disabled.

Onboard Device

Options are in its sub-menu.

Press < Enter > to enter the sub-menu of detailed options.

Init Display First

This item is used to determine initial device when system power on.

➢ The choice: PCI Slot or PCI-Ex Slot.

OnChip USB

This should be enabled if your system has a USB installed on the system board and you want to use it.

➢ The choice: Desable, V1.1 + V2.0 or V1.1.

HD Audio

This item allows you to control the HD Audio.

➢ The Choice: Auto or Disabled.

MAC Lan

This item allows you to control the MAC Lan.

➢ The Choice: Auto or Disabled.

Onboard SuperIO Device

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

Onboard FDC Controller

This item specifices onboard floopy disk drive controller. This setting allows you to connect your floopy disk drives to the onboard floopy connector.

➢ The Choice: Enable or Disabled.

✐ *Power Management Setup*

```
         Phoenix - Award WorkstationBIOS CMOS Setup Utility
                      Power Management Setup

  ACPI function             Enabled                  Item Help
  ACPI Suspend Type         [S1(POS)]            ┌──────────────────
  Power Management          [User Define]        Menu Level  ▶
  Video Off Method          [DPMS Support]
  HDD Power Down            [Disabled]
  HDD Down In Suspend       [Disabled]
  Soft-Off by PBTN          [Instant-Off]
  WOL(PME#) From Soft-Off   [Disabled]
  MAC Resume from S4/S5     [Enabled]
  Power-On by Alarm         [Disabled]
x Day of Month Alarm          0
x Time (hh:mm:ss) Alarm       0 :  0 :  0
  PWRON After PWR-Fail      [Off]




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

The Power Management Setup allows you to configure your system to most effectively saving energy while operating in a manner consistent with your own style of computer use.

ACPI Function

This item allows you to enable/disable the Advanced Configuration and Power Management (ACPI).

➢ Always "Enabled".

ACPI Suspend Type

This item allows you to select sleep state when suspend.

➢ The choice: S1(POS) or S3(STR).

Power Management

This category allows you to select the type (or degree) of power saving mode settings.

Min Saving   Minimum power management.
　　　　　　　 Suspend Mode = 15 min.

Max Saving   Maximum power management.
　　　　　　　 Suspend Mode = 1 min.

User Define   Allows you to set each mode individually.
　　　　　　　 Suspend Mode = Disabled or 1 min ~ 15min.

➢ The choice: User Define, Min Saving or Max Saving.

Video Off Method

This determines the manner in which the monitor is blanked.

V/H SYNC+Blank	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.
DPMS Supported	Initial display power management signaling.

➤ The choice: V/H SYNC+Blank, Blank Screen or DPMS Supported.

HDD Power Down

The IDE hard drive will spin down if it is not accessed within a specified length of time. Options are from 1 Min to 15 Min and Disable.

➤ The choice: Disabled or 1 Min ~ 15 Min.

HDD Down In Suspend

The item allows you to enabled or disabled the HDD Down In Suspend.

➤ The choice: Enabled or Disabled.

Soft-Off By PBTN

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has " hung".

➤ The choice: Delay 4 Sec or Instant-Off.

WOL(PME#) From Soft-Off

If this item sets to Enable, the system power will be turned on when the LAN port receives an incoming signal. You have to connect the fax/modem to the mainboard Wake On LAN connector for this feature to work.

➤ The choice: Enabled or Disabled.

MAC Resume from S4/S5

If this item sets to Enable, the system power will be turned on when the LAN port receives an incoming signal. You have to connect the fax/modem to the mainboard Wake On LAN connector for this feature to work.

➤ The choice: Enabled or Disabled.

Power-On by Alarm

When set to Enabled, the following three fields become available and you can set the month, date (day of the month), hour, minute and second to turn on your system.

➢ The choice: Enabled or Disabled.

Day of Month Alarm

This item selects the alarm Day of Month.

➢ The choice: 0 ~ 31.

Time (hh : mm : ss) Alarm

This item selects the alarm Time.

[hh]   ➢ Key in a DEC number: Min = 0, Max = 23.

[mm/ss] ➢ Key in a DEC number: Min = 0, Max = 59.

PWRON After PWR-Fail

This item allows you to select power on function when power fail.

➢ The choice: Former-Sts, Off or On.

✎   ***PnP/PCI Configurations***

```
        Phoenix - Award WorkstationBIOS CMOS Setup Utility
                      PnP/PCI Configurations
┌──────────────────────────────────────────┬──────────────────────┐
│  Reset Configuration Data    [Disabled]   │      Item Help       │
│                                           ├──────────────────────┤
│  Resources Controlled By     [Auto(ESCD)] │  Menu Level   ▶      │
│ x IRQ Resources               Press Enter │                      │
│                                           │  Default is Disabled.│
│  PCI/VGA Palette Snoop        [Disabled]  │  Select Enabled to   │
│                                           │  reset Extended System│
│  ** PCI Express relative items **         │  Configuration Data  │
│  Maximum Payload Size         [4096]      │  ESCD) when you exit │
│                                           │  Setup if you have   │
│                                           │  installed a new add-on│
│                                           │  and the system      │
│                                           │  reconfiguration has │
│                                           │  caused such a serious│
│                                           │  conflict that the OS│
│                                           │  cannot boot         │
│                                           │                      │
├──────────────────────────────────────────┴──────────────────────┤
│ ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help│
│    F5: Previous Values    F6: Fail-Safe Defaults   F7: Optimized Defaults│
└──────────────────────────────────────────────────────────────────┘
```

This section describes the configuration of PCI bus system. PCI or Personal Computer Interconnection is a system which allows I/O devices to operate at the speed CPU itself keeps when CPU 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.

Reset Configuration Data

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit from Setup if you have installed a new device or software and the system reconfiguration has caused such a serious conflict that the operating system can not boot.

➢ The choice: Enabled or Disabled .

Resource controlled By

The Award Plug-and-Play BIOS has the capacity to automatically configure all of the boot and Plug-and-Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug-and-Play operating system such as Windows 95.

If you set this field to "manual" , choose specific resources by going into each of the sub-menu that follows this field (a sub-menu is proceeded by a "➢").

➢ The choice: Auto(ESCD) or Manual.

IRQ Resources

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

IRQ3/4/5/7/9/10/11/12/14/15 assigned

This item allows you to determine the IRQ assigned to the ISA bus and is not available to any PCI slot. Legacy ISA for devices is compliant with the original PC AT bus specification; PCI/ISA PnP for devices is compliant with the Plug-and-Play standard whether designed for PCI or ISA bus architecture.

➢ The choice: PCI Device or Reserved.

PCI/VGA Palette Snoop

It determines whether the MPEG ISA/VESA VGA Cards can work with PCI/VGA or not. If you have MPEG ISA/VESA VGA Cards and PCI/VGA Card worked, Enable this field. Otherwise, please Disable it.

➢ The choice: Enabled or Disabled.

** PCI Express relative items **

Maximum Payload Size

Set maximum TLP payload size for the PCI Express devices.
The unit is byte.

➢ The choice: 128, 256, 512, 1024, 2048 or 4096.

✍ *PC Health Status*

```
        Phoenix - Award WorkstationBIOS CMOS Setup Utility
                        PC Health Status
┌────────────────────────────────────────────┬──────────────────────┐
│ Advanced CPU Fan Setting  [Smart Fan]        │      Item Help       │
│ System Fan Setting        [      Low]        │                      │
│ LED Bright Setting        [ 100%]            │  Menu Level    ▸     │
│ CPU Voltage                                  │                      │
│ Chipset Voltage                              │                      │
│ 3.3V VIN                                     │                      │
│ + 5V VIN                                     │                      │
│ +12V VIN                                     │                      │
│ -12V VIN                                     │                      │
│ RAM Voltage                                  │                      │
│ 5V SBVIN                                     │                      │
│ Voltage Battery                              │                      │
│ CPU Temperature                              │                      │
│ System Temperature                           │                      │
│ CPU Fan Speed                                │                      │
│ Fan 2 Speed                                  │                      │
│ Fan 3 Speed                                  │                      │
│ FAN 4 Speed                                  │                      │
│ System Fan Speed                             │                      │
├────────────────────────────────────────────┴──────────────────────┤
│ ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help │
│     F5: Previous Values    F6: Fail-Safe Defaults   F7: Optimized Defaults    │
└────────────────────────────────────────────────────────────────────┘
```

Advanced CPU Fan Setting

Set the CPU Fan Speed.

➢The choice : Smart Fan, Noise Control - U Low, Noise Control - Low, Noise Control - Mid, Noise Control - Full, Temp Control - 40ºC, Temp Control - 45ºC, Temp Control - 50ºC, Temp Control - 55ºC, Temp Control - 60ºC.

Smart Fan : The CPU fan speed will be increased when the temperature of CPU is raising up. Upon the temperature raising up to 80ºC, the CPU fan will be full speed.

Noise Control-U Low : When the CPU fan being set up as ULTRA LOW and the temperature of CPU is raising up to 80ºC, the CPU fan being full speed.

Noise Control-Low : When the CPU fan being set up as LOW and the temperature of CPU is raising up to 80ºC, the CPU fan being full speed.

Noise Control-Mid : When the CPU fan being set up as Mid and the temperature of CPU is raising up to 80ºC, the CPU fan being full speed.

Noise Control-Full : CPU fan full speed.

Temp Control-45ºC : When the CPU fan being set up as auto-modified, the temperature of CPU will be remained as 45ºC.

Temp Control-45°C : When the CPU fan being set up as auto-modified, the temperature of CPU will be remained as 45°C.

Temp Control-50°C : When the CPU fan being set up as auto-modified, the temperature of CPU will be remained as 50°C.

Temp Control-55°C : When the CPU fan being set up as auto-modified, the temperature of CPU will be remained as 55°C.

Temp Control-60°C : When the CPU fan being set up as auto-modified, the temperature of CPU will be remained as 60°C.

> **Note** : Before manually modifying the CPU fan setting, please make sure fan connectors are plug into the correct fan connector designations on the mainboard.

System Fan Setting

Set the System Fan.

➢The choice : Ultra Low, Low, Mid or Full.

LED Bright Setting :

Set the LED Bright.

➢The choice : 0%, 25%, 37.5%, 50%, 62.5%, 75%, 87.5% or 100%.

CPU Voltage

Chipset Voltage

+3.3V VIN

+5V VIN

+12V VIN

-12V VIN

> **Warning :** It is Strongly reco-mmended to disable CPU Fan Auto Guardian feature, if you wish to use other fan cooler, allowing the fan to run at its default speed.

RAM Voltage

5V SBVIN
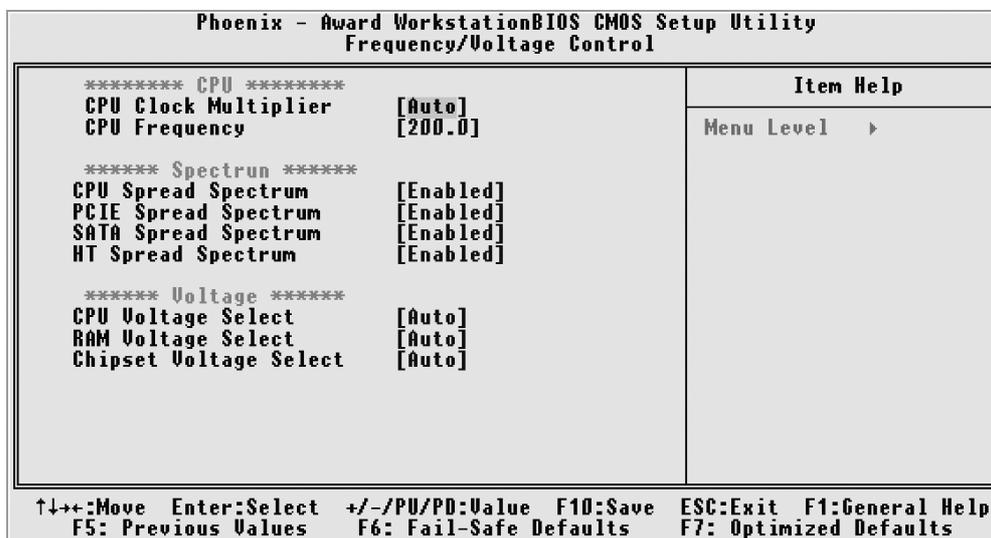
Voltage Battery

CPU Temperature

System Temperature

CPU Fan Speed

Fan 2 Speed

Fan 3 Speed

Fan 4 Speed

SYSTEM Fan Speed

✎ *Frequency/Voltage Control*

```
          Phoenix - Award WorkstationBIOS CMOS Setup Utility
                      Frequency/Voltage Control
   ┌──────────────────────────────────────────┬──────────────────────┐
   │  ******** CPU ********                    │      Item Help       │
   │  CPU Clock Multiplier    [Auto]           ├──────────────────────┤
   │  CPU Frequency           [200.0]          │ Menu Level    ▶      │
   │                                           │                      │
   │  ****** Spectrun ******                   │                      │
   │  CPU Spread Spectrum     [Enabled]        │                      │
   │  PCIE Spread Spectrum    [Enabled]        │                      │
   │  SATA Spread Spectrum    [Enabled]        │                      │
   │  HT Spread Spectrum      [Enabled]        │                      │
   │                                           │                      │
   │  ****** Voltage ******                    │                      │
   │  CPU Voltage Select      [Auto]           │                      │
   │  RAM Voltage Select      [Auto]           │                      │
   │  Chipset Voltage Select  [Auto]           │                      │
   │                                           │                      │
   │                                           │                      │
   │                                           │                      │
   ├───────────────────────────────────────────┴─────────────────────┤
   │ ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help │
   │   F5: Previous Values      F6: Fail-Safe Defaults    F7: Optimized Defaults  │
   └──────────────────────────────────────────────────────────────────┘
```

******CPU******

CPU Clock Multiplier

This item allows you to auto enable/disable a CPU Clock Multiplier.

➢ The choice: Auto or 4.0x~25.5x.

CPU Frequency

This item allows you to enable or disable the spread spectrum modulation.

➢ The choice: 200~300.

****** Spectrum******

CPU Spread Spectrum

This item allows you to enable or disable the CPU spread spectrum.

➢ The Choice: Enabled or Disabled.

PCIE Spread Spectrum

This item allows you to enable or disable the PCIE spread spectrum.

➢ The Choice: Enabled or Disabled.

SATA Spread Spectrum

This item allows you to enable or disable the SATA spread spectrum.

➢ The Choice: Enabled or Disabled.

HT Spread Spectrum

This item allows you to enable or disable the HT spread spectrum.

➢ The Choice: Enabled or Disabled.

****** **Voltage** ******

CPU Voltage

This item allows you to set CPU Voltage.

➢ The choice: 0.800V ~ 1.525V or Auto.

RAM Voltage

This item allows you to set RAM Voltage.

➢ The choice: Auto, 1.90V, 1.95V or 2.00V.

ChipSet Voltage set

This item allows you to set ChipSet Voltage.

➢ The choice: Auto, 1.55V or 1.60V.

✍ *Load Fail-Safe Defaults*

When you press <Enter> on this item, you will get a confirmation dialog box with a message similar to:

Load Fail-Safe Defaults (Y/N) ? N

Pressing 'Y' loads the BIOS default values for the most stable, minimal performance system operations.

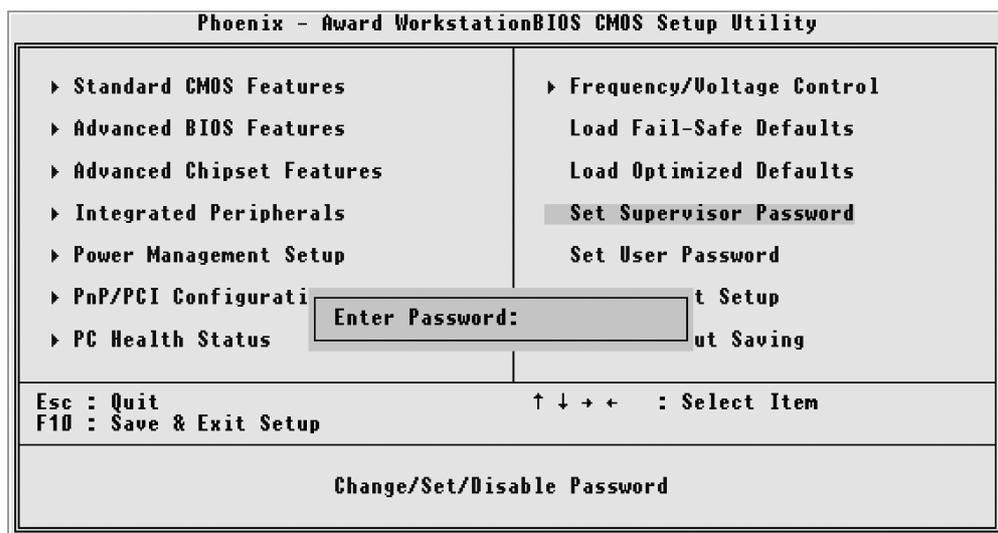### ✍ *Load Optimized Defaults*

When you press <Enter> on this item, you will get a confirmation dialog box with a message similar to:

Load Optimized Defaults (Y/N) ? N

Pressing 'Y' loads the default values that are factory-set for optimal performance system operation.

✍ *Set Supervisor/User Password*

```
╔════════════════════════════════════════════════════════════════╗
║         Phoenix - Award WorkstationBIOS CMOS Setup Utility       ║
╠════════════════════════════════════════════════════════════════╣
║  ▶ Standard CMOS Features        ▶ Frequency/Voltage Control     ║
║  ▶ Advanced BIOS Features           Load Fail-Safe Defaults      ║
║  ▶ Advanced Chipset Features        Load Optimized Defaults      ║
║  ▶ Integrated Peripherals           Set Supervisor Password      ║
║  ▶ Power Management Setup            Set User Password            ║
║  ▶ PnP/PCI Configurati┌──────────────────────────┐ t Setup      ║
║  ▶ PC Health Status   │ Enter Password:          │ ut Saving     ║
║                       └──────────────────────────┘               ║
╠════════════════════════════════════════════════════════════════╣
║  Esc : Quit                      ↑ ↓ → ←  : Select Item          ║
║  F10 : Save & Exit Setup                                         ║
╠════════════════════════════════════════════════════════════════╣
║                   Change/Set/Disable Password                    ║
╚════════════════════════════════════════════════════════════════╝
```

Steps to set supervisor/user password are described as follows:

New Password Setting:

1. Press the <Enter> key. A dialog box appears to ask you to "Enter password: ".

2. Key in a new password.

   The password can not be over eight characters or numbers.

3. The system will then request you to confirm the new password by asking you to key in the new password again.

4. Once the confirmation is completed, new code is in effect.

No Password Setting:

5. If you want to delete the password, just press the <Enter> key instead of typing a new password. Follow the procedure as above.

If You Forget Password:

6. If you forget your password, you must turn off the system and clear CMOS.

   Please refer to the tech notes at the end of section two for more information.

Save & Exit Setup

Pressing <Enter> on this item asks for confirmation:

SAVE to CMOS and EXIT (Y/N)? Y

Pressing "Y" stores the selections made in the menus of CMOS - a special section of memory that stays on after you turn your system off. The next time you boot your computer, the BIOS configures your system according to the Setup selections stored in CMOS. After saving the values the system is restarted again.

Exit Without Saving

Pressing <Enter> on this item asks for confirmation:

Quit Without Saving (Y/N)? N

This allows you to exit from Setup without storing in CMOS any change. The previous selections remain in effect. This exits from the Setup utility and restarts your computer.