
XPC User Guide

For the : SS30G2

Shuttle XPC EMI Test Statement

Shuttle XPC 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: XPC

Status: Sample

Model Name: SS30G2

S/N: N/A

CPU:

External Frequency: 133 MHz

Intel Pentium 4, LGA 775 Processor: 2.80 GHz

Intel Celeron D 356, LGA 775 Processor: 3.3 GHz

External Frequency: 200 MHz

Intel Pentium 4, LGA 775 Processor: 3.4 GHz

Intel Celeron D 930, LGA 775 Processor: 3.0 GHz

Serial Port: one port with 9 pins

VGA Port: one port with 15 pins

Keyboard Port: one port with 6 pins

Mouse Port: one port with 6 pins

USB 2.0 Port: six ports with 4 pins respectively

1394 Port: one port with 4 pins and one port with 6 pins respectively

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

Center/Bass-Out Port: four ports

Mic-In Ports: one port

Line-In Ports: two ports

SPDIF-Out (Coaxial) Port: one port

SPDIF-Out (Optical) Port: one port

SPDIF-In (Optical) Port: one port

Clear CMOS button: one port

DIMM Memory (optional): DDRII 533/667 1GBx2

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

Monitor: CRT

Maximum Resolution: 2048 x 1536 V:75Hz

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	Intel Pentium4 3.4 GHz	Close
2	200MHz	Intel Pentium4 3.4 GHz	Open

3	200MHz	Intel Pentium D 930 3.0 GHz	Close
4	200MHz	Intel Pentium D 930 3.0 GHz	Open
5	133MHz	Intel Pentium4 2.8 GHz	Close
6	133MHz	Intel Pentium4 2.8 GHz	Open
7	133MHz	Intel Celeron D 356 3.3 GHz	Close
8	133MHz	Intel Celeron D 356 3.3 GHz	Open

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

Remedy: N/A

EMI Interference:

Crystal : 14.318MHz(X1)/ 25MHz(X1)/ 32.768KHz(X1)/ 24.576MHz(X2).

Clock Generator: U4, U5

(D) Supported Host Peripherals:

Host Peripheral	Product Name	Model Name
# 1	Case	SS30G2
# 2	Power Supply	PC30I2003
# 3	Serial ATA Seagate	ST312G026A8
# 4	Card Reader	PC12
# 5	DVD Player	P10437007995

(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" 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 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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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

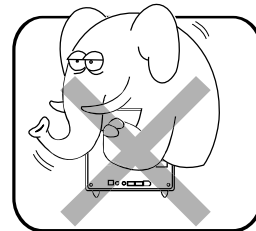
Read the following precautions before setting up a Shuttle XPC.

CAUTION

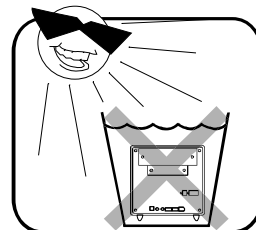
Incorrectly replacing the battery may damage this computer. Replace only with the same or equivalent as recommended by Shuttle. Dispose of used batteries according to the manufacturer's instructions.

Installation Notices

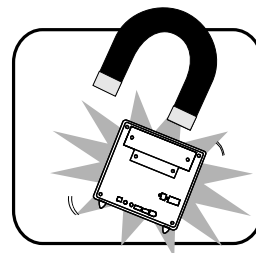
Do not place this device underneath heavy loads or in an unstable position.



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.

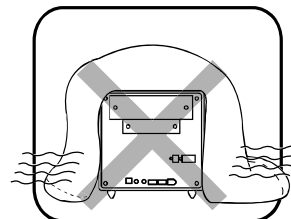


TABLE OF CONTENTS

1 Driver and Software Installation	1
1.1 Mainboard Driver CD	1
1.1.1 Install Mainboard Software	2
Appendix	3
Enter the BIOS	3
THE MAIN MENU	4
Standard CMOS Features	6
Advanced BIOS Features	9
Advanced Chipset Features	13
Integrated Peripherals	15
Power Management Setup	18
PnP/PCI Configurations	22
PC Health Status	24
Frequency/Voltage Control	25
Load Fail-Safe Defaults	26
Load Optimized Defaults	26
Set Supervisor/User Password	26
Save & Exit Setup	27
Exit Without Saving	27

1 Driver and Software Installation

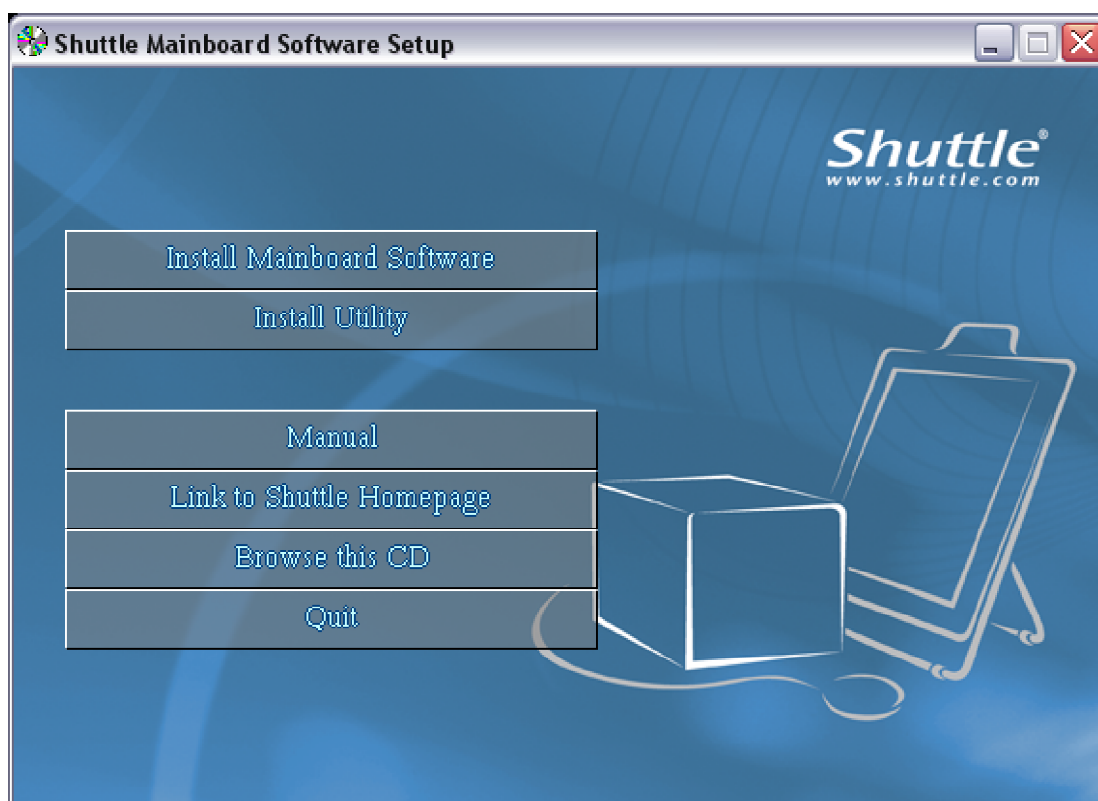
■ 1.1 Mainboard Driver CD

Note : The CD contents attached in SS30G2 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** - SiS VGA Driver, SiS IDE Driver, SiS RAID Driver, SiS LAN Driver, Realtek Audio Driver, SiS USB2.0 Driver, DirectX9 Utility.
- ☞ **Install Utility** - Install Acrobat Reader, WinFlash Utility.
- ☞ **Manual** - SS30G2 user's guide and RAID 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.

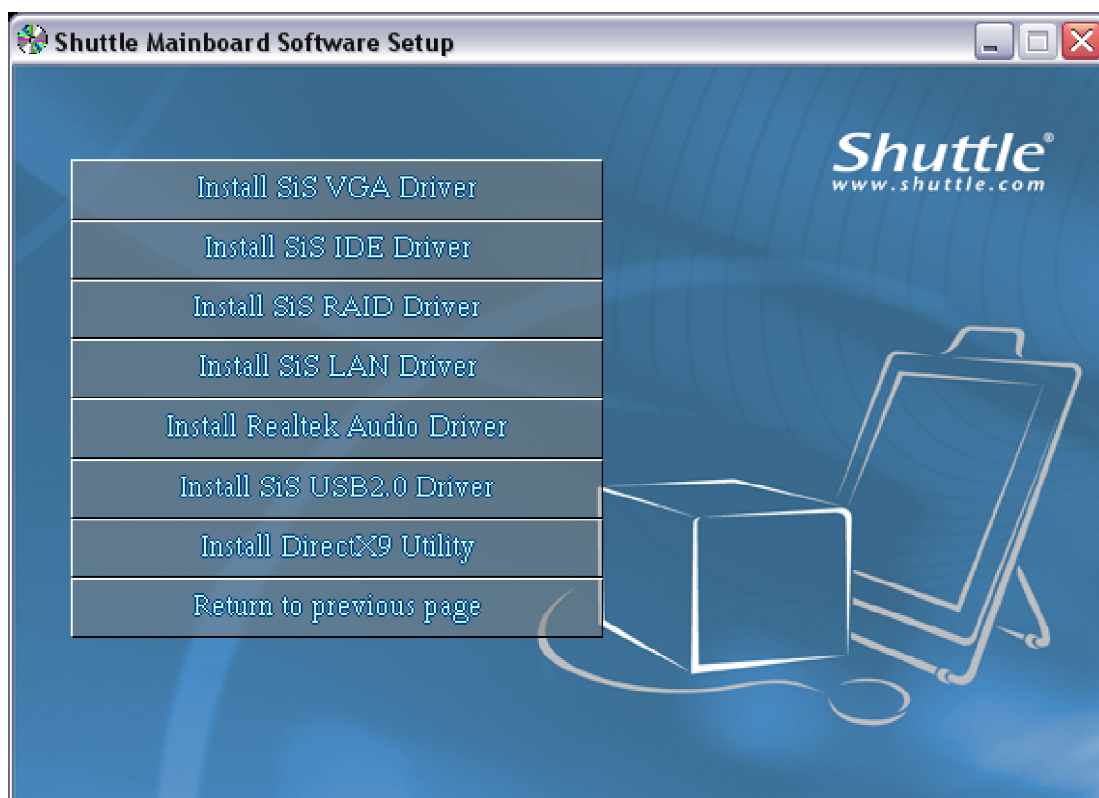


■ 1.1.1 Install Mainboard Software

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 SiS VGA Driver**
- ☞ **Install SiS IDE Driver**
- ☞ **Install SiS RAID Driver**
- ☞ **Install SiS LAN Driver**
- ☞ **Install Realtek Audio Driver**
- ☞ **Install SiS USB2.0 Driver**
- ☞ **Install DirectX9 Utility**



BIOS Settings

The SS30G2 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 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>, keys simultaneously.

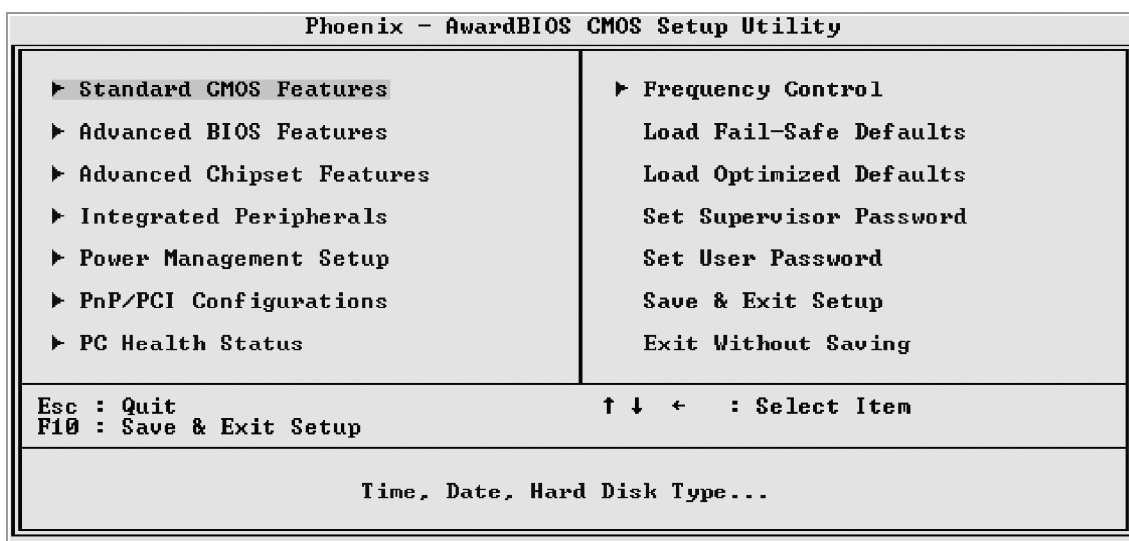
Note 2. If you do not press the keys in time and system does not boot, the screen will prompt an error message, and you will be given the following options:

"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.



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 Control

Use this menu to specify your settings for frequency 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 - AwardBIOS CMOS Setup Utility Standard CMOS Features		
Date <mm:dd:yy>	Thu, Feb 4 1999	Item Help Menu Level ▶ Change the day, month, year and century
Time <hh:mm:ss>	14 : 0 : 4	
▶ IDE Channel 0 Master	[None]	
▶ IDE Channel 0 Slave		
▶ IDE Channel 2 Master		
▶ IDE Channel 3 Master		
Drive A	[1.44M, 3.5 in.]	
Video	[EGA/UGA]	
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/ IDE Channel 2,3 Master

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.

Video

Select the default video device.

- The choice: EGA/VGA, CGA 40, CGA 80, or MONO.

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 Memory

Displays the amount of conventional memory detected during boot up.

- The choice: N/A.

Extended Memory

Displays the amount of extended memory detected during boot up.

- The choice: N/A.

Total Memory

Displays the total memory available in the system.

- The choice: N/A.

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/Slave/ IDE Channel 2,3 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', and Access mode set to CHS.

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 - AwardBIOS CMOS Setup Utility Advanced BIOS Features		
▶ CPU Feature	[Press Enter]	Item Help
▶ Hard Disk Boot Priority	[Press Enter]	Menu Level ▶
BIOS Write Protect	[Disabled]	
CPU L1 & L2 Cache	[Enabled]	
CPU L3 Cache	[Enabled]	
Hyper-Threading Technology	[Enabled]	
CPU L2 Cache ECC Checking	[Enabled]	
Quick Power On Self Test	[Enabled]	
First Boot Device	[CDROM]	
Second Boot Device	[Hard Disk]	
Third Boot Device	[USB-ZIP]	
Boot Other Device	[Enabled]	
Boot Up Floppy Seek	[Disabled]	
Boot Up NumLock Status	[Off]	
Security Option	[Setup]	
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.

Thermal Management

This item is select Thermal Management . Thermal Monitor 1 (On die throttling). Thermal Monitor 2 Ratio & VID transition).

➤ The Choice: Thermal Monitor 1 or Thermal Monitor 2.

TM2 Bus Ratio

Represents the frequency (bus ratio of the throttled performance statethat will be initiated when the on-diesensor gose from not hot to hot.

Note: CPU support TM2, item appear.

TM2 Bus VID

Represents the voltageof the throttled performance statethat will be initiated when the on diesensor gose from not hot to hot.

Note: CPU support TM2, item appear.

Limit CUID MaxVal

Set Limit CUID MaxVal to 3, Should Be "Disabled" for WinXp.

- The Choice: Disabled or Enabled.

Note: Some older O.S.'s (Win98, WinMe..) cannot handle a CUID MaxVal greater than 3. Please choose "Enabled" if you use one of those O.S. If your O.S. is WinXP or Win2000, we suggest you "Disabled" the item.

C1E Function

When disabled, processor can't transition to a lower core frequency and voltage.

- The Choice: Auto or Disabled.

Execute Disable Bit

When disabled, forces the XD feature flag to always return 0.

- The Choice: Enabled or Disabled.

Note: CPU support, Execute Disable Bit item appear.

Virtualization Technology

When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.

- The choice: Enabled or Disabled.

Hard Disk Boot Priority

This item allows you to select Hard Disk Boot 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.

CPU L1&L2 Cache

All processors that can be installed in this mainboard use internal L1 and L2 cache memory to improve performance.

Leave this item at the default value for better performance.

- The choice: Enabled or Disabled.

CPU L3 Cache

This item allows you to enable or disable the CPU L3 Cache.

- The choice: Enabled or Disabled.

Note : CPU support, L3 item appear.

Hyper-Threading Technology

The latest Intel application defines a high-speed calculating ability to optimize your system by two CUPs supported(one virtual, one physical) in a multi-task environment.

- The choice: Enabled, or Disabled.

CPU L2 Cache ECC Checking

This item allows you to enable or disable the CPU L2 Cache ECC Checking.

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

Boot Other Device

If BIOS can't load O.S. from First/Second/Third boot device you select above, BIOS will search other devices and attempt to load O.S..

- The choice: Enabled or Disabled.

Boot Up Floppy Seek

Seeks disk drives during boot-Up. Disabling speed boots up.

- The choice: Enabled or Disabled.

Boot Up NumLock Status

Selects power on state for NumLock.

- The choice: Off or On.

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. Don't 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.

APIC Mode

Via the routing, I/O APIC support a total of 24 interrupts. We recommend to choose [Enabled] for Windows XP and Windows 2000.

- The choice: Enabled or Disabled.

MPS Version Control For OS

Selects the operating system multiprocessor support version.

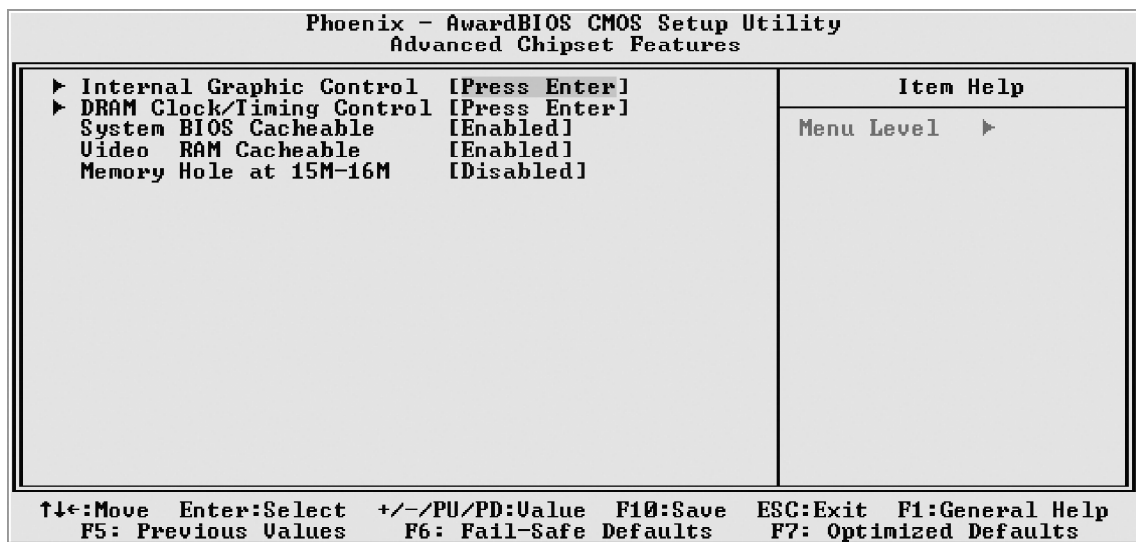
- The choice: 1.1 or 1.4



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.



Internal Graphic Control

Options are in its sub-menu.

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

VGA Share Memory Size

This item allows the user to adjust VGA share memory size.

➤ The Choice: 32MB, 64MB, or 128MB.

DRAM Clock/Timing Control

Options are in its sub-menu.

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

DDR2 CAS Latency

➤ The Choice: SPD, 3T, 4T or 5T.

DRAM Timing Control

This item allows you to select the value in this field, depending on whether the board using which kind of DDR DRAM.

- The Choice: Auto or Manual.

RAS to CAS Delay(tRCD)

- The Choice: 2T, 3T, 4T or 5T.

Precharge Time(tRP)

- The Choice: 2T, 3T, 4T or 5T.

RAS Active Time(tRAS)

- The Choice: 4T ~ 15T.

Write Recovery Time(tWR)

- The Choice: 1T ~ 6T.

DDR2 Additive Latency(tAL)

- The Choice: 0T ~ 4T.

Performance Mode

This item allows you to enable/disable the performance mode.

- The Choice: Enabled, or Disabled.

System BIOS Cacheable

Selecting Enabled allows caching for the system BIOS ROM at F0000h-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.

Video RAM Cacheable

Selecting Enabled allows caching of the video RAM, 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.

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 discusses their memory requirements.

- The Choice: Enabled or Disabled.



Integrated Peripherals

Phoenix - AwardBIOS CMOS Setup Utility		
Integrated Peripherals		
<div> <div> <div>▶</div> <div>SIS OnChip IDE Device</div> </div> <div>[Press Enter]</div> </div> <div> <div> <div>▶</div> <div>SIS OnChip PCI Device</div> </div> <div>[Press Enter]</div> </div> <div> <div>Onboard FDC Controller</div> <div>[Enabled]</div> </div> <div> <div>Onboard Serial Port 1</div> <div>[3F8/IRQ4]</div> </div> <div> <div>Onboard Parallel Port</div> <div>[378/IRQ7]</div> </div> <div> <div>Parallel Port Mode</div> <div>[SPP]</div> </div> <div> <div>ECP Mode Use DMA</div> <div>[3]</div> </div>		<div>Item Help</div> <div>Menu Level ▶</div>
<div> <div> <div>↑↓←→:Move</div> <div>Enter:Select</div> <div>+/-/PU/PD:Value</div> <div>F10:Save</div> <div>ESC:Exit</div> <div>F1:General Help</div> </div> <div> <div>F5: Previous Values</div> <div>F6: Fail-Safe Defaults</div> <div>F7: Optimized Defaults</div> </div> </div>		

SIS Onboard IDE Device

- Options are in its sub-menu.
- Press <Enter> to enter the sub-menu of detailed options.

Internal PCI/IDE

This chipset contains and internal PCI IDE interface with support for two IDE channels.

- The choice: Disabled, or Primary.

IDE 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 UltraDMA

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/133/100, select Auto to enable BIOS support.

- The choice: Auto or Disabled.

SiS Serial ATA Controller

Use these item to enable or disable the SiS Serial ATA Controller.

- The Choice: Enabled or Disabled.

SiS Serial ATA Mode

This item allows you to set the SATA Mode.

- The Choice: IDE Mode, AHCI Mode or Raid Mode.

IDE HDD Block Mode

Select Enabled for automatic detection of the optimal number of block read/write per sector the drive can support.

- The Choice: Enabled or Disabled.

SIS Onboard PCI Device

Options are in its sub-menu.

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

SIS USB Controller

Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have USB peripherals.

- The choice: Enabled or Disabled.

USB 2.0 Supports

Select Enabled if your system contains a Universal Serial Bus 2.0 controller and you have USB peripherals.

- The Choice: Enabled or Disabled.

Audio Controller Select

This item allows you to control the onboard Audio.

- The Choice: AC97 or Disabled.

SIS Ethernet Controller

This item allows you to enable/disable the SIS Ethernet Controller.

- The Choice: Enabled or Disabled.

Onboard LAN Boot ROM

Decide whether to invoke the boot ROM of the onboard LAN chip.

- The choice: Enabled or Disabled.

Onboard FDC Controller

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

- The choice: Enabled or Disabled.

Onboard Serial Port1

Select an address and corresponding interrupt for the first and second serial ports.

- The choice: 3E8/IRQ4, 2E8/IRQ3, 3F8/IRQ4, 2F8/IRQ3, Auto, or Disabled.

Onboard Parallel Port

This item allows you to determine onboard parallel port controller I/O address setting.

- The Choice: 378/IRQ7, 278/IRQ5, 3BC/IRQ7 or Disabled.

Parallel Port Mode

Select an operating mode for the onboard parallel(printer) port. Select Normal, Compatible, or SPP unless you are certain your hardware and software both support one of the other available modes.

- The Choice: SPP, EPP, ECP or ECP + EPP.

ECP Mod Use DMA

Select a DMA channel for the parallel port for use during ECP mode.

- The Choice: 1 or 3.



Power Management Setup

Phoenix - AwardBIOS CMOS Setup Utility		
Power Management Setup		
ACPI function	Enabled	Item Help
ACPI Suspend Type	[S1<POS>]	Menu Level ▶
Power Management	[User Define]	
Suspend Mode	[Disabled]	
Video Off Option	[Susp,Stby -> Off]	
Video Off Method	[DPMS Supported]	
Switch Function	[Break/Wake]	
MODEM Use IRQ	[AUTO]	
HDD Off After	[Disabled]	
Power Button Override	[Instant Off]	
Power State Resume Control	[Always Off]	
▶ PM 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		

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 / Suspend Mode

This item allows you to decide the timing to enter suspend mode.

- The choice: Min Saving / 1 Hour.
Max Saving / 1 Min.
User Define / Disabled, 1Min, 2Min, 4Min, 8Min,
12Min, 20Min, 30Min, 40 Min, 1Hour.

Video Off Option

When enabled, this feature allows the VGA adapter to operate in a power saving mode.

Always On Monitor will remain on during power saving mode.

Suspend --> Off Monitor is blanked when the system enters the Suspend mode.

Susp,Stby -> Off Monitor is blanked when the system enters either Suspend or Standby modes.

All Modes -> Off Monitor is blanked when the system enters any power saving mode.

- The choice: Always On, Suspend -> Off, Susp,stby -> Off, or All Modes -> Off.

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.

Switch Function

Enables you to set the System Management Interrupt (SMI) button function in DOS.

- The choice: Disabled or Break /wake.

MODEM Use IRQ

This determines the IRQ which the MODEM can use.

- The choice: 3, 4, 5, 7, 9, 10, 11, or Auto.

HDD Off After

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, 1 Min ~ 15 Min.

Power Button Override

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: Instant-Off or Delay 4 Sec.

Power State Resume Control

This item enables your computer to automatically restart or return to its last operating status after power returns from a power failure.

- The choice: Always Off, Always On, Keep Pre-state.

PM Wake Up Events

Options are in its sub-menu.

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

IRQ [3-7, 9-15], NMI

When enabled, any event occurring at IRQs 3 through 15 (excluding IRQ 8) will awaken a system, which has been powered down.

➤ The choice: Enabled, Disabled.

IRQ 8 Break Suspend

This field allows you to enable or disable monitoring of IRQ8 so that it does not awaken the system from a suspend mode.

➤ The choice: Enabled, Disabled.

RING Power Up Control

When set to Enabled, the system power will be turned on if there is any modem activity.

➤ The choice: Enabled, Disabled.

MACPME Power Up Control

This item allows you to enable/disable the MACPME Power Up Control.

➤ The Choice: Enabled or Disabled.

MAC Remote WakeUp Control

This item allows you to enable/disable the MAC Remote WakeUp Control.

➤ The Choice: Enabled or Disabled.

PCIPME Power Up Control

When set to Enabled, system power will be turned on if there is any PCI card activity from PCI cards that trigger a PME event, such as LAN or Modem cards.

➤ The choice: Enabled, Disabled.

PS2KB Power Up Control

When Select Password, Please press ENTER key to change Password Max 8 numbers. If Select Password, and press Enter twice It mean KB Power On Function Disable. Hot Key: Alt+Ctrl+ <-

➤ The choice: Hot key, Password, Any key.

PS2MS Power Up Control

This item selects the PS2MS Power Up Control.

➤ The choice: Disabled, Click, Move & Click.

Power Up 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, Disabled.

Month Alarm

This is for specifying the alarm month which system will awaken the system from suspend mode.

- The choice: NA, 1 ~ 12.

Day of Month Alarm

This item selects the alarm date.

- Key in a DEC number: Min = 0, Max = 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.

**** Reload Global Timer Events ****

Global Timer (power management) Events are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such as a mode. In effect, the system remains alert for anything that occurs to a device that is configured as Enabled, even when the system is in a power-down mode.

Primary IDE

When these items are enabled, the system will restart the power-saving timeout counters when any activity is detected on any of the drives or devices on the primary IDE channels.

- The choice: Disabled or Enabled.

FDD,COM,LPT Port

When this item is enabled, the system will restart the power-saving timeout counters when any activity is detected on the floppy disk drive, the serial ports, or the parallel port.

- The choice: Disabled or Enabled.

PCI PIRQ[A-D]#

When this item is disabled, any PCI device set as the Master will not power on the system.

- The choice: Disabled or Enabled.



PnP/PCI Configurations

Phoenix - AwardBIOS CMOS Setup Utility		
PnP/PCI Configurations		
Init Display First	[PCI Slot]	Item Help Menu Level ▶
Reset Configuration Data	[Disabled]	
Resources Controlled By	[Auto(ESCD)]	
▶ IRQ Resources	[Press Enter]	
PCI/UGA Palette Snoop	[Disabled]	
** PCI Express relative items **		
Maximum ASPM supported	[L0s&L1]	
Maximum Payload Size	[4096]	

↑↓: 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.

Init Display First

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

- The choice: PCI Slot or PCIEx/Onboard.

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 ASPM supported

Control maximum level of ASPM supported on the given PCI Express links on the system.

- The choice: L1, L0s&L1, L0, or L0s.

Maximum Payload Size

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

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



PC Health Status

Phoenix - AwardBIOS CMOS Setup Utility													
PC Health Status													
CPU Fan Speed Control [Smart Fan] CPU Voltage Chipset Voltage +3.3V +5V +12V -12V RAM Voltage +5VSB Voltage Battery System Temperature CPU Temperature Fan 1 Speed Fan 2 Speed	Item Help												
	Menu Level ▶ <table border="1"> <thead> <tr> <th>Choice</th><th>Cpu Temp</th><th>Fan Speed</th></tr> </thead> <tbody> <tr> <td><Ultra> Low</td><td>↑80°C ↓80°C</td><td>Full <U>L</td></tr> <tr> <td>Mid</td><td>↑80°C ↓80°C</td><td>Full Mid</td></tr> <tr> <td>Full</td><td>always</td><td>Full</td></tr> </tbody> </table> Smart Fan : base on Cpu Temp to adjust Fan Speed.		Choice	Cpu Temp	Fan Speed	<Ultra> Low	↑80°C ↓80°C	Full <U>L	Mid	↑80°C ↓80°C	Full Mid	Full	always
Choice	Cpu Temp	Fan Speed											
<Ultra> Low	↑80°C ↓80°C	Full <U>L											
Mid	↑80°C ↓80°C	Full Mid											
Full	always	Full											
↑↓:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults													

CPU Fan Speed Control

Set the CPU Fan Speed.

- The choice: Smart Fan, Ultra-Low, Low, Mid, or Full.

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

CPU Voltage

Chipset Voltage

+ 3.3V

+ 5V

+ 12V

- 12V

RAM Voltage

+5VSB

Voltage Battery

System Temperature

CPU Temperature

Fan 1 Speed

Fan 2 Speed

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



Frequency Control

Phoenix - AwardBIOS CMOS Setup Utility		
Frequency Control		
CPU Clock Ratio	[0 %]	Item Help
Auto Detect PCI Clk	[Enabled]	Menu Level ▶
Spread Spectrum	[Enabled]	
CPU Clock	[100]	
CPU:DRAM Frequency Ratio	[SPD]	
DRAM Frequency		
↑↓←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

CPU Clock Ratio

This item allows you to adjust CPU Ratio.

Min: 8X

Max: 50X

- Key in a DEC number: (Between Min and Max.)

Auto Detect DIMM/PCI Clk

This item allows you to enable/disable auto detection DIMM/PCI Clock.

- The choice: Enabled, or Disabled.

Spread Spectrum

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

- The choice: Enabled, or Disabled.

CPU Clock

This item allows the user to adjust CPU Host Clock.

Min: 100

Max: 232

- Key in a DEC number: (Between Min and Max.)

CPU: DRAM Frequency Ratio

This item allows you to adjust CPU and DRAM Ratio.

- The choice: SPD, 3:8, 3:10, 1:4, 3:16, or 3:20.

DRAM Frequency

This item show DRAM frequency.



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 system performance.



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 system performance.



Set Password

Phoenix - AwardBIOS CMOS Setup Utility

▶ Standard CMOS Features ▶ Advanced BIOS Features ▶ Advanced Chipset Features ▶ Integrated Peripherals ▶ Power Management Setup ▶ PnP/PCI Configurati ▶ PC Health Status	▶ Frequency Control Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password Set User Password t Setup ut Saving
--	--

Enter Password:

Esc : Quit
F10 : Save & Exit Setup

↑ ↓ ← : Select Item

Change/Set/Disable Password

This item is to set a supervisor password. Please follow below steps.

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

Press <Enter> on this item to save your changes. The system will ask for confirmation : system

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 will restart.



Exit Without Saving

Press <Enter> on this item to exit without saving changes. The system will ask for confirmation:

Quit without saving (Y/N)? Y

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.