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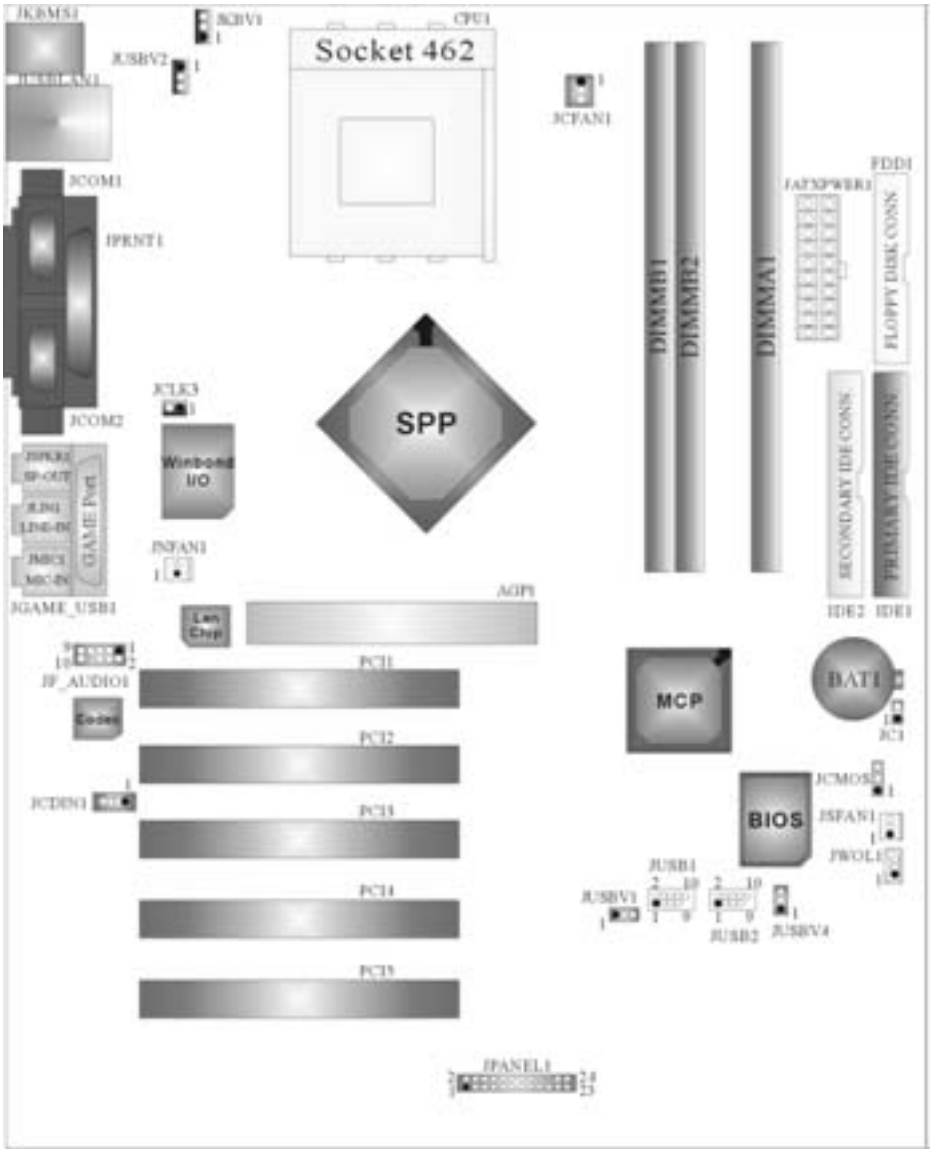
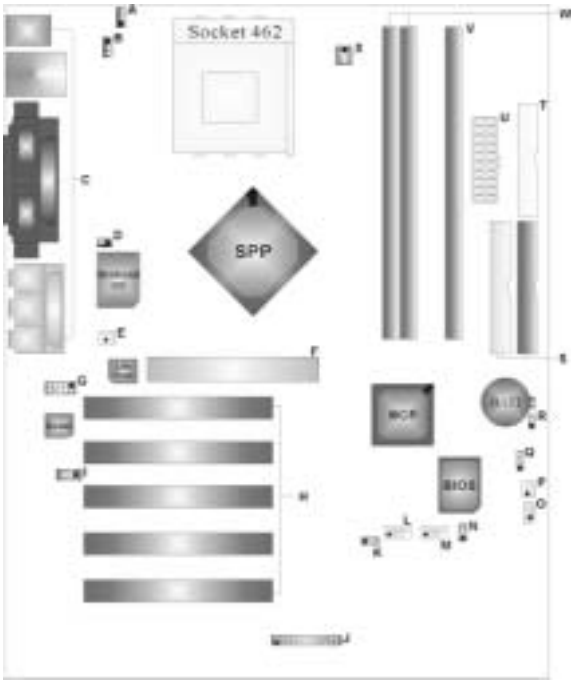
Layout of M7NCD Pro



※NOTE: ●represents the first pin.

Component Index



A. 5V/5VSB Selection for Keyboard and mouse (JKBV1)
B. Power Source Selection for USB (JUSBV2)
C. Back Panel Connector
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T. Floppy Disk Connector (FDD1)
U. ATX Power Connector (JATXPWER1)
V. DIMM Modules (DIMMA1)
W. DIMM Modules (DIMMB1-2)
X. CPU Fan Connector (JCFAN1)

English

M7NCD Pro Features

A. Hardware

CPU
- Provides Socket-462.
- Supports the AMD® processor up to XP 3200+.
- Front Side Bus at 266/333/400 MHz.

Chipset
- North Bridge: nFORCE2 SPP.
- South Bridge: ❶MCP.
  ❷High Speed 800Mb/s Hyper-Transport interface to the MCP.

Main Memory
- Supports up to 3 DDR devices.
- Supports 266/333/400MHz (without ECC) DDR devices.
- High performance 128 bit DDR400 Twin Bank Memory Architecture.
- Maximum memory size of 3GB.

Super I/O
- Chip: Winbond W83627HF.

Slots
- Five 32- PCI bus master slots.
- One AGP: ❶AGP3.0 8X interface at 533Mb/s.
  ❷Supports AGP 2X, 4X, 8X.

On Board IDE
- Supports four IDE disk drives.
- Supports PIO Mode 4, Master Mode and Ultra DMA 33/66/100/133 Bus Master Mode.

On Board AC'97 Sound Codec
- Chip: ALC650.
- Compliant with AC'97 specification.
- AC99 2.2/2.3 interface.
- Supports 6 channels.

On Board Peripherals
a. Rear side
- 2 serial ports.
- 1 parallel port. (SPP/EPP/ECP mode)
- Audio ports in horizontal position.
- 1 LAN port. (optional)

- PS/2 mouse and PS/2 keyboard.
- 2 USB2.0 ports.

b. Front Side

- 1 floppy port supports 2 FDDs with 360K, 720K, 1.2M, 1.44M and 2.88Mbytes.
- 4 USB2.0 ports.
- 1 front audio header.

Dimensions

- ATX Form Factor: 24.4cm X 30.4cm (W X L)

B. BIOS & Software

BIOS

- Award legal Bios.
- APM1.2.
- ACPI.
- USB Function.

Software

- Supports CPU Savior™, 9th Touch™, FLASHER™, WinFlasher™, StudioFun!™ (optional) and Watchdog™.
- Offers the highest performance for Windows 98 SE, Windows 2000, Windows Me, Windows XP, SCO UNIX etc.

Package contents

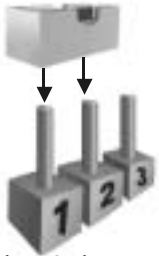
- HDD Cable X1
- FDD Cable X1
- User's Manual X1
- USB Cable X1 (optional)
- Rear I/O Panel for ATX Case X1 (optional)
- Fully Setup Driver CD X1
- StudioFun! Application CD X1 (optional)

How to setup Jumper

The illustration shows how jumpers are setup. When the Jumper cap is placed on pins, the jumper is "***close***". If no jumper cap is placed on the pins, the jumper is "***open***". The illustration shows a 3-pin jumper whose pin 1and 2 are "***close***" when jumper cap is placed on these 2 pins.

Jumper close

Jumper open



Pin1-2 close

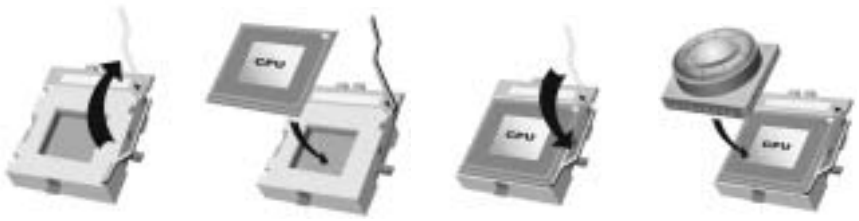
CPU Installation

Step1: Pull the lever sideways away from the socket and then raise the lever up to a 90-degree angle.

Step2: Look for the white dot/cut edge. The white dot/cut edge should point towards the lever pivot. The CPU will fit only in the correct orientation.

Step3: Hold the CPU down firmly, and then close the lever.

Step4: Put the CPU fan on the CPU and buckle it. Connect the CPU fan power cable to the JCFAN1. This completes the installation.



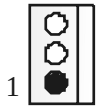
Step1 **Step2** **Step3** **Step4**

CPU Fan Header: JCFAN1

JCFAN1

Pin No.	Assignment
1	Ground
2	+12V
3	Sense

System Fan Header: JSFAN1



JSFAN1

Pin No.	Assignment
1	Ground
2	+12V
3	Sense

North Bridge Fan Header: JNFAN1

1 JNFAN1	Pin No.	Assignment
	1	Ground
	2	+12V

DDR DIMM Modules: DIMMB1-2, DIMMA1

■ ***For Dual-channel DDR (128-bit) high performance, at least 2 or more DIMM modules must be installed. (It has to be the combination of DIMMA and DIMMB.) With only one DIMM installed, the memory performs only at 64-bit***

DRAM Access Time: 2.5V Unbuffered DDR 266/333/400 MHz Type required.

DRAM Type: 64MB/ 128MB/ 256MB/ 512MB/ 1GB DIMM Module (184 pin)

Total Memory Size with Unbuffered DIMMs

DIMM Socket Location	DDR Module	Total Memory Size (MB)
DIMMB1	64MB/128MB/256MB/512MB/1GB *1	Max is 3GB
DIMMB2	64MB/128MB/256MB/512MB/1GB *1	
DIMMA1	64MB/128MB/256MB/512MB/1GB *1	

Only for reference

Installing DDR Module

1. Unlock a DIMM slot by pressing the retaining clips outward. Align a DIMM on the slot such that the notch on the DIMM matches the break on the slot.

2. Insert the DIMM firmly and vertically into the slot until the retaining chip snap back in place and the Dimm is properly seated.

Jumpers, Headers, Connectors & Slots

Floppy Disk Connector: FDD1

The motherboard provides a standard floppy disk connector that supports 360K, 720K, 1.2M, 1.44M and 2.88M floppy disk types. This connector supports the provided floppy drive ribbon cables.

Hard Disk Connectors: IDE1/ IDE2

The motherboard has a 32-bit Enhanced PCI IDE Controller that provides PIO Mode 0~4, Bus Master, and Ultra DMA 33/ 66/ 100/ 133 functionality. It has two HDD connectors IDE1 (primary) and IDE2 (secondary).
The IDE connectors can connect a master and a slave drive, so you can connect up to four hard disk drives. The first hard drive should always be connected to IDE1.

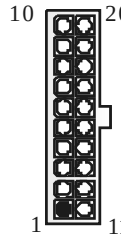
Peripheral Component Interconnect Slots: PCI 1-5

This motherboard is equipped with 5 standard PCI slots. PCI stands for Peripheral Component Interconnect, and it is a bus standard for expansion cards. This PCI slot is designated as 32 bits.

Accelerated Graphics Port Slot: AGP1

Your monitor will attach directly to that video card. This motherboard supports video cards for PCI slots, but it is also equipped with an Accelerated Graphics Port (AGP). An AGP card will take advantage of AGP technology for improved video efficiency and performance, especially with 3D graphics.

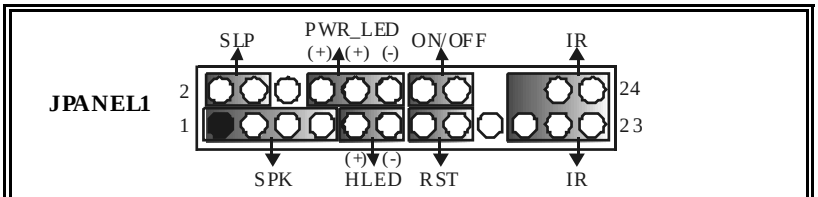
Power Connectors: JATXPWER1



JATXPWER1

PIN	Assignment	PIN	Assignment
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	Ground	13	Ground
4	+5V	14	PS_ON
5	Ground	15	Ground
6	+5V	16	Ground
7	Ground	17	Ground
8	PW_OK	18	-5V
9	+5V_SB	19	+5V
10	+12V	20	+5V

Front Panel Connector: JPANEL1



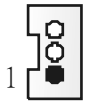
Pin	Assignment	Function	Pin	Assignment	Function
1	+5V	Speaker Connector	2	Sleep Control	Sleep Button
3	NA		4	Ground	
5	NA		6	NA	NA
7	Speaker		8	Power LED (+)	POWER LED
9	HDD LED (+)	Hard Drive LED	10	Power LED (+)	
11	HDD LED (-)		12	Power LED (-)	
13	Ground	Reset Button	14	Power Button	Power-on Button
15	Reset Control		16	Ground	
17	NA		18	KEY	
19	NA	IrDA Connector	20	KEY	IrDA Connector
21	+5V		22	Ground	
23	IRTX		24	IRRX	

Front USB Header: JUSB1/2

JUSB1/2

Pin	Assignment	Pin	Assignment
1	+5V(fused)	2	+5V(fused)
3	USBP4-	4	USBP5-
5	USBP4+	6	USBP5+
7	Ground	8	Ground
9	KEY	10	NA

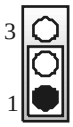
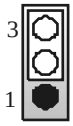
Wake On LAN Header: JWOL1



JWOL1

Pin	Assignment
1	+5V_SB
2	Ground
3	Wake up

Power Source Selection for Keyboard/ Mouse: JKBV1

JKBV1	Assignment	Description
 Pin 1-2 close	+5V	+5V for keyboard and mouse
 Pin 2-3 close	+5V Standby Voltage	PS/2 Mouse and PS/2 Keyboard are powered with +5V standby voltage

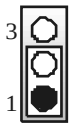
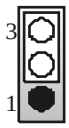
Note: In order to power-on keyboard and mouse function, "JKBV1" jumper cap should be placed on pin 2-3.

Power Source Selection for USB: JUSBV1/ JUSBV2/ JUSBV4

JUSBV1/JUSBV2/ JUSBV4	Assignment	Description
 Pin 1-2 close	+5V	JUSBV1: 5V for JUSB1 port JUSBV2: 5V for JUSBLAN1 port JUSBV4: 5V for JUSB2 port
 Pin 2-3 close	+5V Standby Voltage	JUSBV1: JUSB1 port powered with standby voltage of 5V JUSBV2: JUSBLAN1 port powered with standby voltage of 5V JUSBV4: JUSB2 port powered with standby voltage of 5V

Note: In order to power-on USB devices function, "JUSBV1/JUSBV2/ JUSBV4" jumper cap should be placed on pin 2-3 respectively.

Clear CMOS Jumper: JCMOS

JCMOS	Assignment
 Pin 1-2 Close	Normal Operation (default)
 Pin 2-3 Close	Clear CMOS Data

The following procedures are for resetting the BIOS password. It is important to follow these instructions closely.

※ Clear CMOS Procedures:

1. Remove AC power line.
2. Set the jumper to "Pin 2-3 Close".
3. Wait for five seconds.
4. Set the jumper to "Pin 1-2 Close".
5. Power on the AC.
6. Reset your desired password or clear the CMOS data.

Case Open Connector: JC1

 JC1	Pin	Assignment
	1	Case Open Signal
	2	Ground

CD-ROM Audio-In Header: JCDIN1

 JCDIN1	Pin	Assignment
	1	Left Channel Input
	2	Ground
	3	Ground
	4	Right Channel Input

Front Panel Audio Header: JF_AUDIO1

JF_AUDIO1

Pin	Assignment	Pin	Assignment
1	Mic In/ Center	2	Ground
3	Mic Power/ Bass	4	Audio Power
5	Right Line Out/ Speaker Out Right	6	Right Line Out/ Speaker Out Right
7	Reserved	8	Key
9	Left Line Out/ Speaker Out Left	10	Left Line Out/ Speaker Out Left

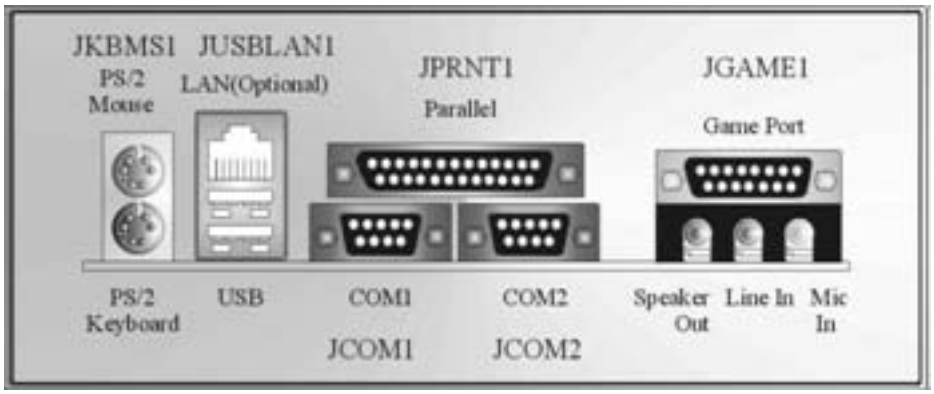
System Operation Mode: JCLK3

JCLK3	Assignment
 Pin 1-2 Close	User Mode (default) (133/ 166 MHz)
 Pin 1-2 Open	Safe mode (100 MHz)

Note: When overclock function failed and system is unable to boot-up, please follow the instruction below:

1. Turn off the system.
2. Closed the JCLK3 jumper.
3. Turn on the system.
4. Enter CMOS setup menu and load defaults settings.
5. Turn off the system.
6. Open the JCLK3 jumper.
7. Turn on the system.

Back Panel Connectors



Deutsch

Spezifikationen von M7NCD Pro

A. Hardware

CPU
- Unterstützung für Sockel 462.
- Unterstützung für den AMD® Prozessor bis zu XP 3200+.
- FSB mit 266/333/400 MHz.

Chipsatz
- Northbridge: nFORCE2 SPP.
- Southbridge: MCP.

Hauptspeicher
- Unterstützung für 3 DDR Geräte.
- Unterstützung für 266/333/400MHz (ohne ECC) DDR Geräte.
- 128-Bit High-Performance DDR400 mit der Twin-Bank Architektur.
- Die maximale Speichergröße ist 3GB.

Super I/O
- Chip: Winbond W83627HF.

Slots
- Fünf 32-Bit PCI-Bus-Slots.
- Ein AGP-Slot: ❶ AGP3.0 8X Interface bei 533Mb/s.
  ❷ Unterstützung für AGP2.0 2X, 4X und 8X.

Onboard-IDE
- Unterstützung für vier IDE Diskettenlaufwerke.
- Unterstützung für PIO Modus 4, Master Modus und Ultra DMA 33/66/100/133 Bus Master Modus.

On-board AC'97 Sound Codec
- Chip: ALC650.
- Entspricht die Spezifikation von AC'97.
- AC99 2.2/2.3 Interface.
- Unterstützung für 6-Kanal.

Onboard-Peripheriegeräte
a. Rückwand
- 2 Seriell-Ports.
- 1 parallele Schnittstelle. (SPP/EPP/ECP-Modus)
- 1 horizontales Audio-Port.
- 1 LAN-Port. (optional)
- Unterstützung für PS/2-Maus und PS/2-Tastatur.

- 2 USB2.0-Ports.

b. Vorderseite

- 1 Floppy-Port mit Unterstützung für 2 Diskettenlaufwerke.(360KB, 720KB, 1.2MB, 1.44MB und 2.88MB)
- 4 USB2.0-Ports.
- 1 Audio-Header für die Vonderseite

Abmessungen

- ATX Form-Factor: 24.4 X 30.4cm (W X L)

B. BIOS & Software

BIOS

- Award legal Bios.
- APM1.2.
- ACPI.
- USB Funktion.

Software

- Unterstützung für CPU Savior™, 9th Touch™, FLASHER™, WinFlasher™, StudioFun!™ (optional) and Watchdog™.
- Unterstützung für die am meisten verbreiteten Betriebsysteme wie Windows 98SE, Windows 2000, Windows ME, Windows XP and SCO UNIX usw.

Verpackungsinhalt

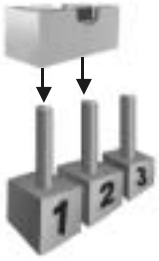
- HDD Kable X1
- FDD Kable X1
- Benutzer Handbuch X1
- USB Kable X1 (optional)
- I/O-Rückwand für ATX Gehäuse X1 (optional)
- Treiber CD für Installation X 1
- StudioFun! Anwendung CD X1 (optional)

Einstellung der Jumper

Die Abbildung verdeutlicht, wie Jumper eingestellt werden. Pins werden durch die Jumper-Kappe verdeckt, ist der Jumper "***geschlossen***". Keine Pins werden durch die Jumper-Kappe verdeckt, ist der Jumper "***geöffnet***". Die Abbiildung zeigt einen 3-Pin Jumper dessen Pin1 und Pin2 "***geschlossen***" sind, bzw. es befindet sich eine Jumper-Kappe auf diesen beiden Pins.

Jumper geschlossen

Jumper geöffnet



Pin1-2 geschlossen

Installation der CPU

Schritt 1: Ziehen Sie den Hebel seitlich vom Sockel weg. Heben Sie den Hebel dann in 90-Grad-Winkel nach oben.

Schritt 2: Suchen Sie nach der scharfen Kante, die auf Drehpunkt des Hebels weisen muss. Die CPU passt nur, wenn sie richtig ausgerichtet ist.

Schritt 3: Drücken Sie die CPU fest in den Sockel und schließen Sie den Hebel.

Schritt 4: Stecken Sie Ihren CPU-Lüfter auf die CPU. Schließen Sie die Stromversorgungsstecker für CPU-Lüfter an JCFAN1 an. Dann beenden Sie die Installation.

Schritt 1

Schritt 2

Schritt 3

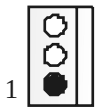
Schritt 4

CPU-Lüfter Headers: JCFAN1

JCFAN1

Pin	Belegung
1	Masse
2	+12V
3	Sensor

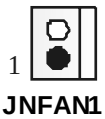
System-Lüfter Headers: JSFAN1



JSFAN1

Pin	Belegung
1	Masse
2	+12V
3	Sensor

Northbridge-Lüfter Header: JNFAN1



JNFAN1

Pin	Belegung
1	Masse
2	+12V

DDR-DIMM-Modules: DIMMB1-2, DIMMA1

■ **Für Dual-Kanal DDR (128-Bit) High-Performance, muss man mindestens 2 oder mehr DIMM-Module installieren. (Es ist unbedingt, daß man DIMMA mit DIMMB als ein Paar benutzt.) Wenn man nur ein DIMM installiert, funktioniert der Spreicher nur 64-Bit.**

DRAM-Zugriffszeit: 2.5V nicht registrierter DDR 266/333/400 MHz Typ erforderlich.

DRAM Typen: 64MB/ 128MB/ 256MB/ 512MB/ 1GB DIMM-Module (184-Pin)

Gesamt Speichergröße von nicht registrierter DIMMs

DIMM-Sockel Standort	DDR-Modul	Speichergröße
DIMMB1	64MB/128MB/256MB/512MB/1GB *1	maximal 3GB
DIMMB2	64MB/128MB/256MB/512MB/1GB *1	
DIMMA1	64MB/128MB/256MB/512MB/1GB *1	

Nur als Referenz*

Installation von DDR-Modul

1. Öffnen Sie einen DIMM-Slots, indem Sie die seitlich Chips nach außen drücken. Richten Sie das DIMM-Modul so über dem Slot aus, dass das Modul mit der Kerbe in den Slot passt.

2. Drücken Sie das DIMM-Modul in den Slot, bis die seitlichen Clips zuschnappen und das Modul fest sitzt.

Jumpers, Headers, Anschlüsse & Slots

Diskettenanschluss: FDD1

Das Motherboard enthält einen standardmäßigen Diskettenanschluss, der 360K-, 720K-, 1.2M-, 1.44M- und 2.88M-Disketten unterstützt. Dieser Anschluss unterstützt die mitgelieferte Bandkabel des Diskettenlaufwerks.

Festplattenanschlüsse: IDE1 und IDE2

Das Mainboard hat einen 32-Bit Enhanced PCI IDE-Controller, der die Modi PIO0~4, Bus Master sowie die Ultra DMA/33/66/100/133- Funktion zur Verfügung stellt. Dieser ist mit zweii HDD-Anschlüssen versehen IDE1 (primär) und IDE2 (sekundär).
Die IDE-Anschlüsse können eine Master- und eine Slave-Festplatte verbinden, so dass bis zu 4 Festplatten angeschlossen werden können. Die erste Festplatte sollte immer an IDE1 angeschlossen werden.

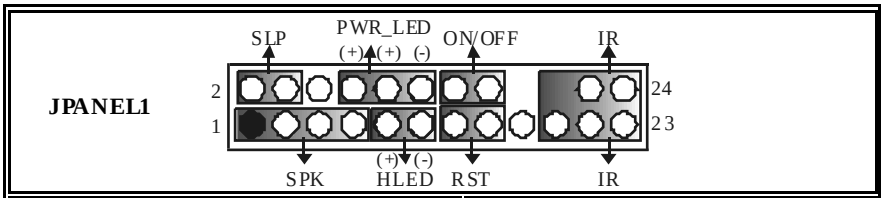
Peripheral Component Interconnect Slots: PCI1-5

Dieses Motherboard ist mit 5 standardmäßigen PCI-Slots ausgestattet. PCI steht für Peripheral Component Interconnect und bezieht sich auf einem Busstandard für Erweiterungskarten, der den älteren ISA-Busstandard in den meisten Schnittstellen ersetzt hat. Dieser PCI-Slot ist für 32 bits vorgesehen.

Accelerated Graphics Port Slot: AGP1

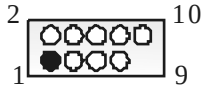
Ihr Monitor wird direkt an die Grafikkarte angeschlossen. Dieses Motherboard unterstützt Grafikkarten für PCI-Slots, aber es ist auch mit einem Accelerated Graphics Port ausgestattet. AGP-Karten verwenden die AGP-Technologie, um die Wirksamkeit und Leistung von Videosignalen zu verbessern, besonders wenn es sich um 3D-Grafiken handelt.

Anschlüsse für die Vorderseite: JPANEL1



Pin	Belegung	Funktion	Pin	Belegung	Funktion
1	+5V	Lautsprecher Anschluss	2	Sleep Control	Schlafen-Knopf
3	Kein		4	Masse	
5	Kein		6	Kein	Kein
7	Lautsprecher		8	Power LED (+)	Power-LED
9	HDD LED (+)	Festplatte LED	10	Power LED (+)	
11	HDD LED (-)		12	Power LED (-)	
13	Masse	Zurücksetzn-Knopf	14	Power-Knopf	Power-On Knopf
15	Reset Control		16	Masse	
17	Kein		18	Schlüsse	Kein Pin
19	Kein	IrDA-Anschluss	20	Schlüsse	IrDA Anschluss
21	+5V		22	Masse	
23	IRTX		24	IRRX	

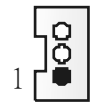
Front USB Header: JUSB1/2



JUSB1/2

Pin	Belegung	Pin	Belegung
1	+5V(geschmelzt)	2	+5V(geschmelzt)
3	USBP4-	4	USBP5-
5	USBP4+	6	USBP5+
7	Masse	8	Masse
9	Schlüsse	10	Kein

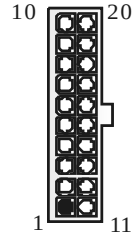
Wake On LAN Header: JWOL1



JWOL1

Pin	Belegung
1	+5V_SB
2	Masse
3	Wake-up

Stromversorgungsanschluss: JATXPWER1



JATXPWR1

PIN	Belegung	PIN	Belegung
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	Masse	13	Masse
4	+5V	14	PS_ON
5	Masse	15	Masse
6	+5V	16	Masse
7	Masse	17	Masse
8	PW_OK	18	-5V
9	+5V_SB	19	+5V
10	+12V	20	+5V

Auswahl von Stromversorgungsmodi für Tastatur/Maus: JKBV1

JKBV1	Beschreibung	Funktion
 Pin 1-2 geschlossen	+5V	5V für Tastatur und Maus
 Pin 2-3 geschlossen	+5V reservierte Spannung	PS/2-Maus und PS/2-Tastatur werden durch 5V reservierte Spannung aktiviert

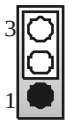
Anmerkung: Um die "power-on by Keyboard and Mouse" Funktion zu behandeln, sollen Pin2-3 durch die Jumperkappe verdeckt werden.

Auswahl von Stromsversorgungsmodi für USB: JUSBV1/ JUSBV2/JUSBV4

JUSBV1/JUSBV2/ JUSBV4	Beschreibung	Funktion
 Pin 1-2 geschlossen	+5V	JUSBV1: 5V für JUSB1 JUSBV2: 5V für JUSBLAN1 JUSBV4: 5V für JUSB2
 Pin 2-3 geschlossen	+5V_SB	JUSBV1: JUSB1 ist aktiviert durch die reservierte 5V Spannang JUSBV2: JUSBLAN1 ist aktiviert durch die reservierte 5V Spannang JUSBV4: JUSB2 ist aktiviert durch die reservierte 5V Spannang

Anmerkung: Um die "power-on by USB-Geräte" Funktion zu behandeln, sollen pin2-3 von JUBV1/ JUBV2/ JUSBV4 durch die.

Jumper zum Löschen CMOS: JCMOS

JCMOS	Beschreibung
 Pin 1-2 geschlossen	Normale Operation (Default)
 Pin 2-3 geschlossen	CMOS-Daten Löschen

Die folgende Schritte leiten Sie, das Kennwort für BIOS-System zurückzusetzen. Es ist wichtig, die Anweisung zu folgen.

※ Prozeß zum Löschen des CMOS:

1. Ausschalten Sie den AC-Netzstecker.
2. Lassen Sie Pin 2-3 von JCOMS1 geshclossen sein.
3. Bitte warten Sie 15 Sekunden.
4. Lassen Sie Pin 1-2 von JCOMS1 geshclossen sein.
5. Schließen Sie den AC-Netzstecker an.
6. Zurücksetzen Sie das Kennwort nach ihrem Wille oder löschen Sie die CMOS-Daten.

Anschluss für Gehäuse-Öffnen: JC1

JC1

Pin	Belegung
1	Gehäuse Öffnen Signal
2	Masse

CD-ROM Audio-In Header: JCDIN1

JCDIN1

Pin	Belegung
1	Link-Kanal Eingabe
2	Masse
3	Masse
4	Recht-Kanal Eingabe

Front Panel Audio Header: JF_AUDIO1

JF_AUDIO1

Pin	Belegung	Pin	Belegung
1	Mikrofon-Eingang	2	Masse
3	Mikrofon-Betriebsspannung	4	Audio-Spannung
5	Recht Line-Out	6	Recht Line-Out
7	Reserviert	8	Schlüsse
9	Link Line-Out	10	Link Line-Out

*Reserviert: Nicht in Gebrauch

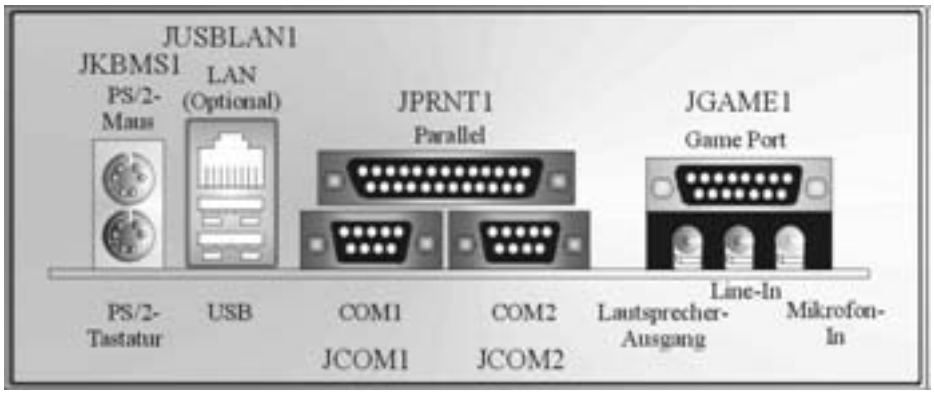
System Operation Modus: JCLK3

JCLK3	Assignment
 Pin 1-2 Geöffnet	Benutzer Modus (default) (133/ 166 MHz)
 Pin 1-2 Geschlossen	Sicherheit Modus (100 MHz)

Anmerkung: Wenn "Überspannng Funktion" nicht gelungen ist folgen Sie bitte die Instruktion darunter:

1. Bitte vausschalton Sie den AC-Notzstecker.
2. Lassen Sie Pin 1-2 v on JCLK3 geschlossen sein.
3. Schließen Sie den AC-Notzstecker an.
4. Betreten Sie "CMOS Setup Menü" und wählen sie Default-Setting.
5. Ausschalten Sie den AC-Netzstecker wieder.
6. Lassen Sie Pin 1-2 v on JCLK3 geöffnet sein.
7. Schließen Sie den AC-Netzstecker wieder.

Anschlüsse für die Rückwand



Watchdog Technology

It is important to know that when overclocking, the system can be at a vulnerable state. Therefore, the BIOSTAR Watchdog Technology was designed to protect your PC under dangerous over-clock situations. Any over-clocking that reaches the threshold settings, the Watchdog Technology will disable your system from rebooting in the BIOS setting. Under this circumstance, please power off your PC. After that, press <Insert> and power on your system simultaneously to restart your system. This user-friendly design can save you from squandering your time on opening the case just to clear the CMOS. In the end, thanks to the Watchdog Technology, everything is back at a safe and sound!

StudioFun!

Introduction

StudioFun! is a media-player based on optimized GNU/Linux distribution It plays DVD,

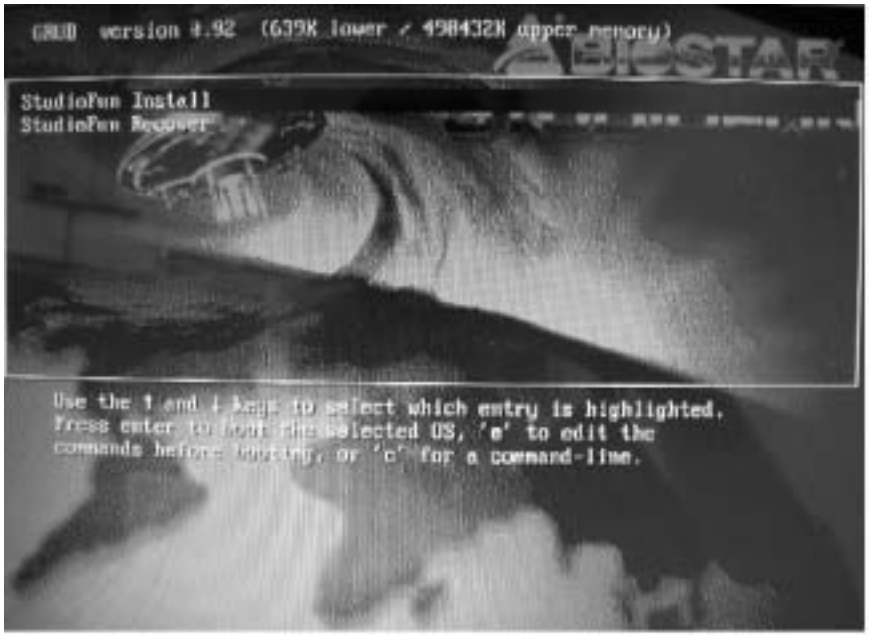
VCD, MP3, Audio CD and various other known file formats. You can take snapshots of video and customize the saved images as screensavers. You can also store the images on USB mass storage devices like flash disks and USB floppy disks.

Hardware Requirements

The supported hardware list of StudioFun! grows up every day. So please check the hwreq.txt located in the root of StudioFun! Installation CD to get the most updated information.

Installation Procedure

Insert the StudioFun! Installation CD in a CD/DVD ROM drive and let the system boot through the CD. The disk will boot and bring up the grub boot loader installation menu. Two options are specified.



Installation

This option will do the basic installation of the distribution. The installation works on pre-installed windows or GNU/Linux distribution.

On selecting the 'installation' option the installer boots and displays a dialog box indicating the space required and waits for a confirmation. Selecting Ok will continue the installation while selecting Cancel will terminate the installation and reboot the machine.

If Windows or GNU/Linux is the only OS installed on the hard disk with no free space, it will resize the partition, either NTFS or FAT32 or ext2, and install StudioFun!. In case the hard disk has a 128MB of free space available, the installation will use the free space.

After installing the base system you will be prompted to select the resolution from the following choices

1. 1024x768 (recommended)
2. 800x600
3. 640x480

Select the desired resolution. The default is 1024x768 for high-end graphics.

Next you will be prompted to choose the DVD area/region selection code. Choose this based on the type of DVDs you will be playing.

The installation procedure will then probe for the type of mouse installed. The distribution currently supports PS/2, USB and Serial mice. In case of serial mouse you will have to move the mouse when prompted. The other two are probed and installed automatically.

The installation procedure will now finish, the CD is ejected and a dialog box prompting to reboot the machine is displayed. Press OK button and enjoy StudioFun!.

3.1.1 Error Messages

1. Media corrupted!! Please check the media! The CD-ROM is corrupted
2. Extraction of base system failed!! Please try again later!! The CD-ROM is corrupted.
3. Unsupported hardware found, Aborting.. If you try to install StudioFun! on an unsupported and undocumented hardware the above error message is popped.
4. No device found! This error message is given if there is no hard disk in the system.

Recovery

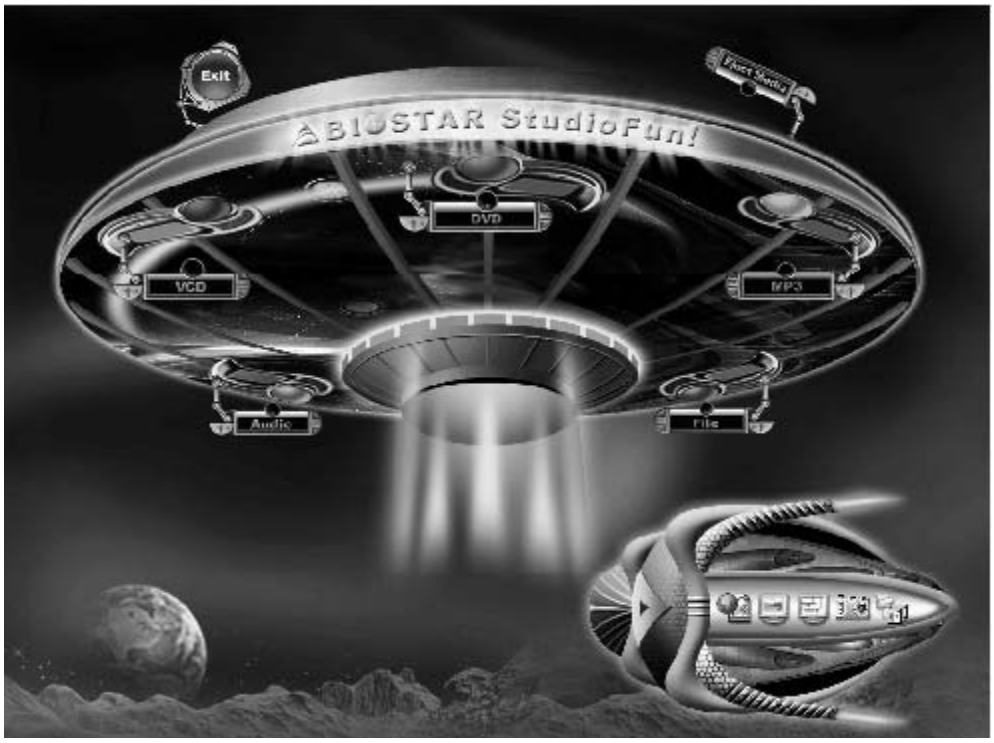
In case of a MBR corruption, this option should be used. It will automatically probe the hard disk master boot record and find out the installed operating system(s). On success it will re-install the boot loader with correct options in the MBR. Any custom boot loader option specified from other GNU/Linux installations will get over written by the newly probed one.

Booting to StudioFun!

After Installation is over, remove the CD from the CD-ROM and restart the machine. After the machine reboots, you will get the GRUB boot loader menu screen. Select the StudioFun option to boot to the StudioFun! partition.

After complete boot up, you get to the main Desktop screen. The following section is a complete description of the Desktop application.

Desktop



This is the main shell of the StudioFun software. It basically comprises of two categories, one is the main "media control" part and the other is the "control panel".

Media control

The media control part of the Desktop has the following controls:

1. VCD

This control will glow whenever a VCD is detected in a DVD/CD-ROM drive. The VCD will be auto-played only when it is put into the drive when the Desktop (StudioFun! shell) is up and running, otherwise, the control will simply glow to inform the user about a VCD

present in the DVD/CD-ROM drive.

2. DVD

This cortrol will glow whenever a DVD is detected in a DVD drive. The DVD will be auto-played only when it is put in to the drive when the Desktop (StudioFun! shell) is up and running, otherwise, the control will simply glow to inform the user about a DVD present in the DVD/CD-ROM.

3. MP3

This control will glow whenever a MP3 is detected in a DVD/CD-ROM drive. The MP3 will be auto-played only when it is put in to the drive when the Desktop (StudioFun! shell) is up and running, otherwise, the control will simply glow to inform the user about a MP3 present in the DVD/CD-ROM drive.

4. AUDIO

This control will glow whenever a AUDIO is detected in a DVD/CD-ROM drive. The AUDIO will be auto-played only when it is put in to the drive when the Desktop (StudioFun! shell) is up and running, otherwise, the control will simply glow to inform the user about a AUDIO present in the DVD/CD-ROM drive.

5. FILE

This control will glow whenever a File CD (CDs with other media type files) is detected in a DVD/CD-ROM drive. The File CD will be auto-played only when it is put in to the drive when the Desktop (StudioFun! shell) is up and running, otherwise, the control will simply glow to inform the user about a File CD present in the DVD/CD-ROM drive.

6. EJECT MEDIA

This cortrol when clicked will eject any MP3 or File CDs from any of the DVD/CDROM drives. In case there were no MP3 or File CDs it will eject the default medium, (i.e.), the CD-ROM drive in case if the user has both DVD/CD-ROM drive or else it will eject the default DVD/CD-ROM drive.

7. EXIT

This is the "Power on/off" control of the Desktop (StudioFun! shell).

Control Panel

Control panel part has five icons, which are shortcuts to other applications present in the StudioFun software. Tool tips are provided on the icons when the mouse is rolled over them.

1. Select Region

Clicking this icon will invoke the application for selection DVD region settings. Refer to section 5.2 Select DVD Region application for more details.

2. Screensaver

Clicking this icon will invoke the screensaver application. Refer to section 5.3 **Screensaver** for more details.

3. Display Settings

Clicking this icon will invoke the application for changing the screen resolutions. Refer to section 5.4, **Display Settings** for more details.

4. File Manager

Clicking this icon will invoke the file manager. Refer to section 5.6 **File manager** for more details.

When user has a DVD and a CD-ROM Drive:

If user has both DVD and a CD-ROM drive, DVD drive will be given the preference when both the drives hold valid media in them, i.e., if the CD-ROM drive has a media and a DVD drive also has a media, and the StudioFun! is started, then the media inside the DVD drive will be played.

If in case the media in CD-ROM takes a longer time to get recognized than the media inside the DVD drive, the media in the CD-ROM will be played, once if it is recognized.

Other general user scenarios

When a user clicks on any of the media-controls when it is not glowing, except eject media and exit, the media-player will just come up and wait for user input.

NO DUPLICATE INSTANCE OF ANY APPLICATION WILL BE ALLOWED TO

RUN.

Software Details

XINE

XINE is a multimedia player. It plays back Audio CD, DVD, and VCD. It also decodes multimedia files like AVI, MOV, WMV, and MP3 from local disk drives. It interprets many of the most common multimedia formats available - and some of the uncommon formats, too.

- **Features of Xine**
    a. Skinnable GUI
    b. Navigation controls (seeking, pause, fast, slow, next chapter, etc)
    c. On Screen Display (OSD) features
    d. DVD and external subtitles
    e. DVD/VCD menus (requires external plugin)
    f. Audio and subtitle channel selection
    g. Closed Caption support
    h. Brightness, contrast, audio volume, hue, saturation adjusting requires hardware/driver support)
    i. Playlists
    j. Image snapshot
    k. Audio resampling
    l. Software de-interlacing algorithms
    m. Configuration dialog
    n. Aspect ratio changing
    o. Fullscreen display

- **Supported File formats**
    a. Video CD
    b. MPEG program streams (.mpg, .mpeg)
    c. ogg (.ogg) avi (.avi)
    d. asf (.asf, .wmv)
    e. QuickTime (.mov)

f. MPEG-Video (.mpv, .m2v)
g. MPEG-Audio (.mp2, .mp3)
h. WAV (.wav) Video Codecs
i. MPEG 1/2
j. MPEG 4 (aka OpenDivX)
k. MS MPEG 4

a. Chapter 5: Software Details 10
l. Windows Media Video 7
m. Motion JPEG

- **Remote Control support.**
  a. Infrared interface
  b. User-friendly

- **Usage of StudioFun! with CelomaChrome skin**
  a. Select VCD button to play a VCD disc
  b. Select DVD button to play a DVD disc
  c. Select CDDA button to play a Audio cd
  d. Select next chapter or MRL (>>|) button to play next track in Audio CD, VCD and MP3 songs and to play next chapter in DVD
  e. Select previous chapter or MRL (|<<) button to play previous track in Audio CD, VCD and MP3 songs and to play previous chapter in DVD
  f. Select slow motion (<<) button to play the video / audio in slow motion (Select play button after reaching the required position)
  g. Select fast motion (>>) button to play the video / audio in fast motion (Select play button after reaching the required position)
  h. Select subs + / - button to select the appropriate subtitle (Usable while playing
  i. Select audio + / - button to select the appropriate audio track (For example when
  j. The DVD contains one audio track in English and the other with some other language,
  k. Usable while playing DVD's)

l. j. Select hide button to hide the control panel of the player
m. k. Select menu button to use menu's while playing DVD
n. l. Select control button to adjust brightness / color
o. Select setup button to modify the settings of the player
p. Select f.scr button to show the video output of the player in full screen mode
q. Select snap button to take a snapshot of the currently playing video
r. Select plist button to add / remove / manage playlist
s. Select mrl button to add new file to play

Error Messages

- ✧ The following error message is given if an unknown file format is selected through Xine MRL browser and played.
- ✧ While playing mp3 files, if the user stops playing and tries to select the DVD button, then the following error message is shown

Select Region

Overview

Select region is a utility to set a DVD region. With the help of this application user can set or change a DVD region. Only one region can be set at a time.

About Select Region

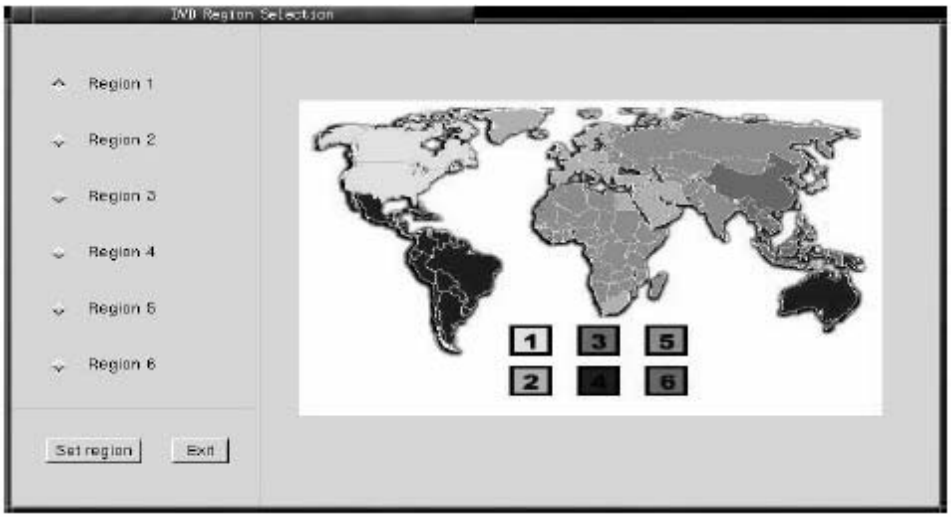
With the help of this application you can set a region for DVD. Only one region can be set at a time. If you keep the mouse pointer on any region, you can view the countries, which comes under that region.

Ok - Click to set the selected region.
Cancel - Click to quit the application.

How to select DVD region

You can select only one region at a time. You can change your selection by clicking on any other region.

• A snapshot of the application is shown below:



Screensaver

Screensaver

The xscreensaver daemon waits until the keyboard and mouse have been idle for a period, and then runs a graphics demo chosen at random. The demo is terminated as soon as there is any mouse or keyboard activity.
The xscreensaver-demo program is the graphical user interface to xscreensaver. It lets you tune the various parameters used by the xscreensaver daemon, and browse through the graphics demos.
StudioFun! comes with xscreensaver when you click on the screensaver icon the application comes up. Then user can choose various graphics demos like chbg, halo, hypercube or hyperball.

Screensaver comes with various options

• Preview Option: When a user selects a particular graphics demo and clicks on preview button the demo comes up.

• Blank After Option: The screensaver will blank the screen after the keyboard and mouse have been idle default time is 1 minute and user can change the settings.

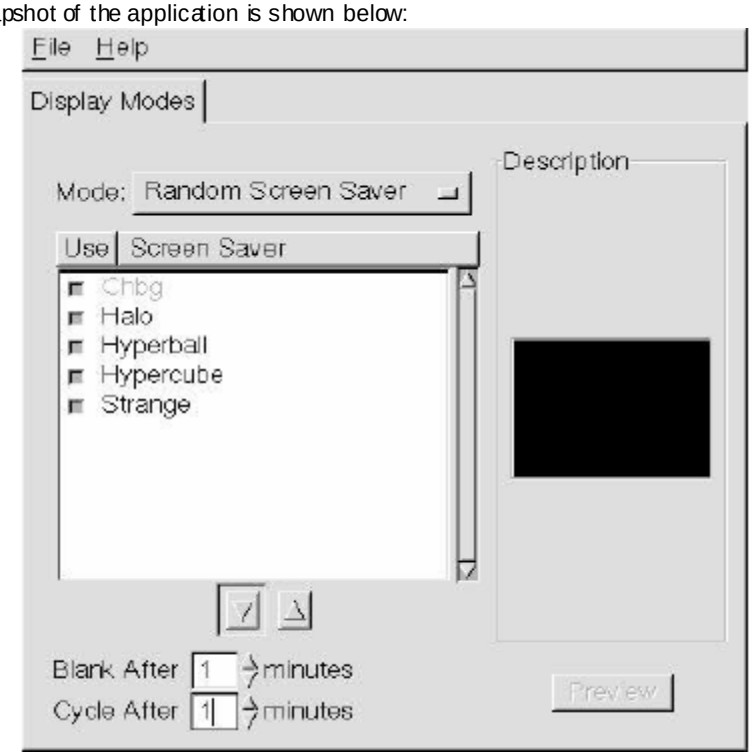
• Cycle After Option: When screensaver is running this cycle time defines the time limit for each screensaver.

• Mode Screensaver comes with various modes:
1. Random Screen Saver: When user chooses this option, Screensaver cycles through various graphics demos randomly

2. Only one Screen Saver: When user chooses this option, screensaver displays only one graphics demo.
3. Blank Screen Only: When user chooses this option, screensaver only blanks the screen instead of displaying the graphics demo.
4. Disable Screen Saver: When user chooses this option, screensaver is disabled.

• Various Graphics Demos
XScreensaver comes with various screensaver
Chbg: This screensaver displays the images stored in StudioFun! the time gap between images is 5 seconds.
Hyperball
Hypercube
Halo
Strange

• A snapshot of the application is shown below:



Display Settings

Display Settings

Display setting is a program to change the current resolution settings of the Display.
By default user of StudioFun will be given a choice to select between any of the following

three resolutions.
• 640x480
• 800x600
• 1024x768
The current resolution of the Display will be selected by default. It requires restart of the StudioFun to reflect the changes made.

File Manager

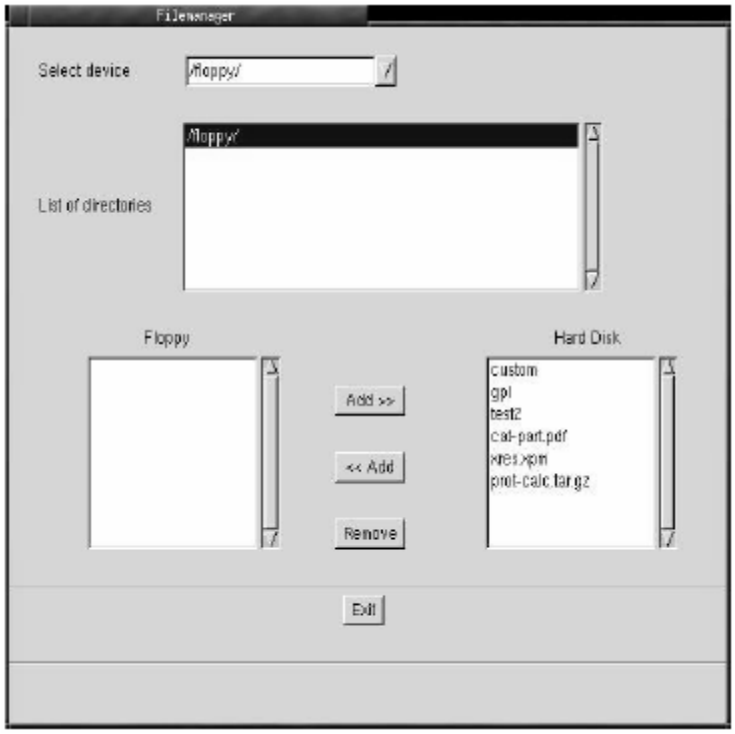
Overview

File manger is an utility to copy files from deferent devices to hard disk and vice versa. User can copy files from devices such as, floppy, cdrom and flashdisk to hard disk. And also from hard disk to floppy and flashdisk.

About File manager

The hard disk files are stored in a directory called "/studiofun" on the hard disk. You can also delete files from hard disk, but you cannot delete files from any device.

- ✧ Select device - Contains the device names /floppy, /cdrom and /flashdisk. Select a device from/to which you want to copy files. **Please double click the device option twice to mount the device.**
- ✧ List Directories - Shows the list of directories of the selected device after double clicking it.
- ✧ Floppy/cdrom/Flashdisk - Shows the contents of the selected directory from the "List directories" field after double clicking it.
- ✧ Hard disk - Shows the contents of a directory called "/studiofun".
- ✧ Add (>>) - Click to copy selected files from a device to hard disk.
- ✧ Add (<<) - Click to copy selected files from hard disk to a device.
- ✧ Remove - Click to delete files from hard disk.
- ✧ Exit - Click to quit the application.


FileManager
Select device
/floppy/
/floppy/
List of directories
Floppy
Hard Disk
custom
gpl
test2
cat-part.pdf
xres.xpm
prot-calc.tar.gz
Add >>
<< Add
Remove
Exit

Trouble Shooting

PROBABLE	SOLUTION
No power to the system at all Power light don't illuminate, fan inside power supply does not turn on. Indicator light on keyboard does not turn on	* Make sure power cable is securely plugged in * Replace cable * Contact technical support

PROBABLE	SOLUTION
System inoperative. Keyboard lights are on, power indicator lights are lit, hard drive is spinning.	* Using even pressure on both ends of the DIMM, press down firmly until the module snaps into place.

PROBABLE	SOLUTION
System does not boot from hard disk drive, can be booted from CD-ROM drive.	* Check cable running from disk to disk controller board. Make sure both ends are securely plugged in; check the drive type in the standard CMOS setup. * Backing up the hard drive is extremely important. All hard disks are capable of breaking down at any time.

PROBABLE	SOLUTION
System only boots from CD-ROM. Hard disk can be read and applications can be used but booting from hard disk is impossible.	* Back up data and applications files. Reformat the hard drive. Re-install applications and data using backup disks.

PROBABLE	SOLUTION
Screen message says "Invalid Configuration" or "CMOS Failure."	* Review system's equipment . Make sure correct information is in setup.

PROBABLE	SOLUTION
Cannot boot system after installing second hard drive.	* Set master/slave jumpers correctly. * Run SETUP program and select correct drive types. Call drive manufacturers for compatibility with other drives.

Problemlösung

MÖGLICHE URSACHE	LÖSUNG
Das System hat keine Spannungsversorgung. Die Stromanzeige leuchtet nicht, der Lüfter im Inneren der Stromversorgung wird nicht eingeschaltet. Tastaturleuchten sind nicht an.	* Versichern Sie sich, dass das Stromkabel richtig angebracht ist * Ersetzen Sie das Stromkabel * Wenden Sie sich an Ihre Kundendienststelle

MÖGLICHE URSACHE	LÖSUNG
Das System funktioniert nicht. Die Tastaturleuchten sind an, die Stromanzeige leuchtet, die Festplatte dreht sich.	* Drücken Sie das DIMM-Modul bei gleichem Druck an beide Seiten, bis es einrastet.

MÖGLICHE URSACHE	LÖSUNG
Das System wird von der Festplatte nicht hochgefahren, vom CD-ROM-Treiber aber ja.	* Überprüfen Sie das Kabel zwischen Festplatte und Festplatten-Controller. Versichern Sie sich, dass beide Enden richtig angebracht sind; überprüfen Sie den Laufwerktyp in der standardmäßigen CMOS-Einrichtung. * Ein Backup der Festplatte ist sehr wichtig. Alle Festplatten können irgendwann beschädigt werden.

MÖGLICHE URSACHE	LÖSUNG
Das System wird nur von der CD-ROM hochgefahren. Die Festplatte wird gelesen und die Anwendungen sind funktionsfähig, aber es ist nicht möglich, das System von der Festplatte zu starten.	* Machen Sie eine Sicherungskopie von allen Daten und Anwendungsdateien. Formatieren Sie die Festplatte und reinstallieren Sie die Anwendungen und Daten mit Hilfe von Backup-Disks.

MÖGLICHE URSACHE	LÖSUNG
Auf dem Bildschirm erscheint die Meldung "Ungültige Konfiguration" oder "CMOS Fehler."	* Überprüfen Sie die Systemkomponenten und versichern Sie sich, das diese richtig eingerichtet sind.

MÖGLICHE URSACHE	LÖSUNG
Das System kann nach der Installation einer zweiten Festplatte nicht hochgefahren werden.	* Setzen Sie die Master/Slave-Jumper richtig ein. * Führen Sie das SETUP-Programm aus und wählen Sie die richtigen Laufwerktypen. Wenden Sie sich an den Laufwerkhersteller, um die Kompatibilität mit anderen Laufwerken zu überprüfen.

05/21/2003

M7NCD Pro BIOS Setup

BIOS Setup.....1

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BIOS Setup

Introduction

This manual discussed 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 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 AMD® 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 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 AWARD BIOS supports the Plug and Play Version 1.0A specification. ESCD (Extended System Configuration Data) write is supported.

EPA Green PC Support

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

APM Support

These 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 AWARD BIOS.

PCI Bus Support

This AWARD BIOS also supports Version 2.1 of the Intel PCI (Peripheral Component Interconnect) local bus specification.

DRAM Support

DDR SDRAM (Double Data Rate Synchronous DRAM) are supported.

Supported CPUs

This AWARD BIOS supports the AMD® 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.

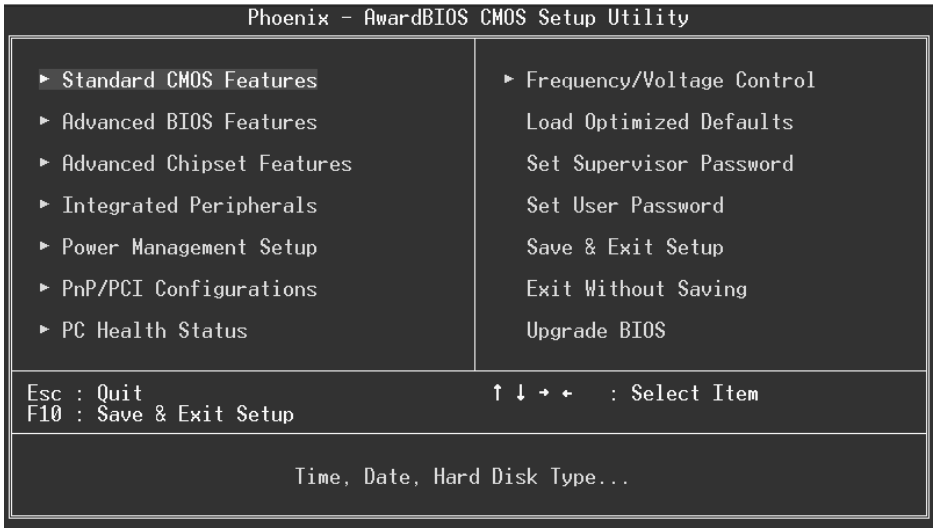
Keystroke	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left (menu bar)
Right arrow	Move to the item on the right (menu bar)
Move Enter	Move to the item you desired
PgUp key	Increase the numeric value or make changes
PgDn key	Decrease the numeric 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 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

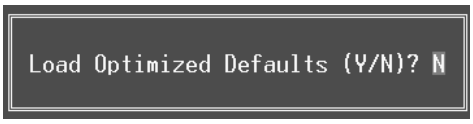
This submenu allows you to monitor the hardware of your system.

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 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.

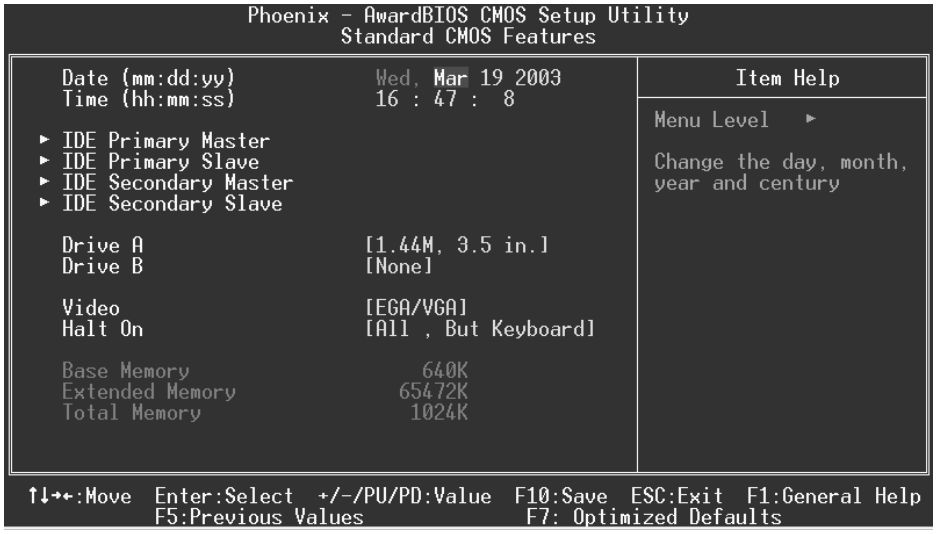
Upgrade BIOS

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

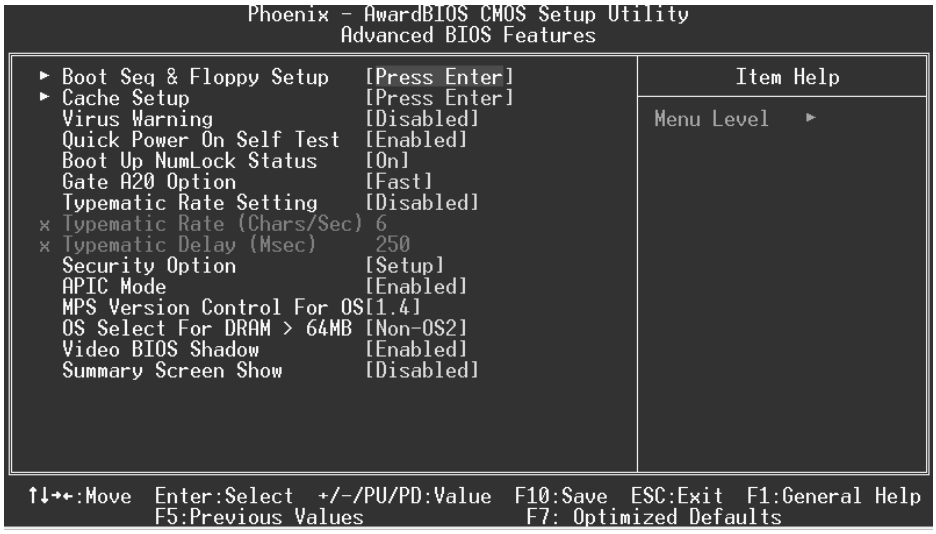
This table shows the selections that you can make on the Main Menu.

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 Primary Master	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options
IDE Primary Slave	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options.
IDE Secondary Master	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options.
IDE Secondary Slave	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.
Video	EGA/VGA CGA 40 CGA 80 MONO	Select the default video device.

Item	Options	Description
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**



Boot Seq & Floppy Setup

First/ Second/ Third/ Boot Other Device
These BIOS attempt to load the operating system from the device in the sequence selected in these items.
The Choices: Floppy, LS120, HDD-0, SCSI, CDROM, HDD-1, HDD-2, HDD-3, ZIP100, USB-FDD, USB-ZIP, USB-CDROM, USB-HDD, LAN, HPT370, Disabled, Enabled.

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).

Cache Setup

CPU Internal Cache
Depending on the CPU/chipset in use, you may be able to increase memory access time with this option.
The Choices:

Enabled (default)	Enable cache.
Disabled	Disable cache.

External Cache
This option you to enable or disable "Level 2" secondary cache on the CPU, which may improve performance.
The Choices:

Enabled (default)	Enable cache.
Disabled	Disable cache.

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.

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.

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

Boot Up NumLock Status

Selects the NumLock. State after power on.

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

Gate A20 Option

Select if chipset or keyboard controller should control Gate A20.

Normal	A pin in the keyboard controller controls Gate A20.
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 key down.

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)**,** 500,750,1000.

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

By selecting Enabled enables ACPI 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.

Video BIOS Shadow

Determines whether video BIOS will be copied to RAM for faster execution.

The Choices:

Enabled (default)	Optional ROM is enabled.
Disabled	Optional ROM is disabled.

Summary Screen Show

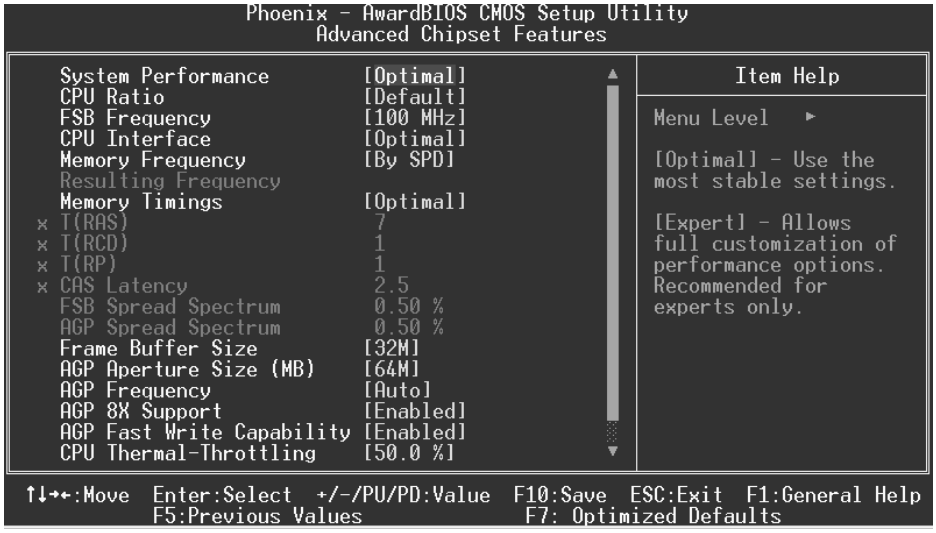
This item allows you to enable/ disable display the Summary Screen Show.

The Choices: Disabled (default), Enabled.

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**



System Performance

Optimal (Default)
This item allows you to use the most stable settings.

Expert
This item allows full customization of performance.

Aggressive
This item allows you to use the overclocked settings for higher performance but with higher risk of inestability.

Turbo

FSB Frequency

This item allows you to select the FSB Frequency.
The Choices: 100MHz (Default), 133MHz, 166MHz, 200MHz.

CPU Interface

Optimal (Default)
This item allows you to use the most stable CPU/ FSB parameters.

Aggressive
This item allows you to use overclocked CPU/ FSB parameters.

Turbo

Memory Frequency

Select "Auto" for best performance.
The Choices: By SPD (Default), 50%, 60%, 66%, 75%, 80%, 83%, 100%, 120%, 125%, 133%, 150%, 166%, 200%, Auto.

Memory Timings

Optimal (Default)
This item allows you to use the most stable settings.

Expert
This item allows you to enter timings manually.

Turbo

T(RAS)

This item allows you to set System Performance to "Optimal" to use the delay recommended by the DIMM's manufacturer.
The Choices: 7 (Default), 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15.

T(RCD)

This item allows you to set System Performance to "Optimal" to use the delay recommended by the DIMM's manufacturer.
The Choices: 1 (Default), 2, 3, 4, 5, 6, 7.

T (RP)

This item allows you to set System Performance to "Optimal" to use the delay recommended by the DIMM's manufacturer.
The Choices: 1 (Default), 2, 3, 4, 5, 6, 7.

CAS Latency

This item allows you to set System Performance to "Optimal" to use the delay recommended by the DIMM's manufacturer.

The Choices: 2.5 (Default), 2.0, 3.0.

FSB Spread Spectrum

This item allows you to select the FSB Spread Spectrum.

The Choices: 0.50% (Default).

AGP Spread Spectrum

This item allows you to select the AGP Spread Spectrum.

The Choices: Disabled (Default).

Frame Buffer Size

This item allows you to select the Frame Buffer Size.

The Choices: 32M (Default), 8M, 16M, 64M, 128M, Disabled.

AGP Aperture Size (MB)

Select the size of the Accelerated Graphics Port (AGP) aperture. The apertures is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation.

The Choices: 64 (default), 4, 8, 16, 32, 128, 256.

AGP Frequency

This item allows you to select the AGP Frequency.

The Choices: Auto (Default), 50MHz, 66MHz, 67MHz, 68MHz, 69MHz, 70MHz, 71MHz, 72MHz, 73MHz, 74MHz, 75MHz, 76MHz, 77MHz, 78MHz, 79MHz, 80MHz, 81MHz, 82MHz, 83MHz, 84MHz, 85MHz, 86MHz, 87MHz, 90MHz, 93MHz, 95MHz, 97MHz, 100MHz.

AGP 8X Support

This item allows you to enable or disable AGP 8X Support.

The Choices: Enabled (Default), Disabled.

AGP Fast Write Capability

This item allows you Enabled or Disabled AGP Fast Write Capability.

The Choices: Enabled (Default), Disabled.

CPU Thermal Throttling

This item allows you to select the CPU Thermal Throttling.

The Choices: 50% (Default), Disabled, 87.5%, 75%, 62.5%, 37.5%, 25%,

12.5%.

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, **Disabled** (default).

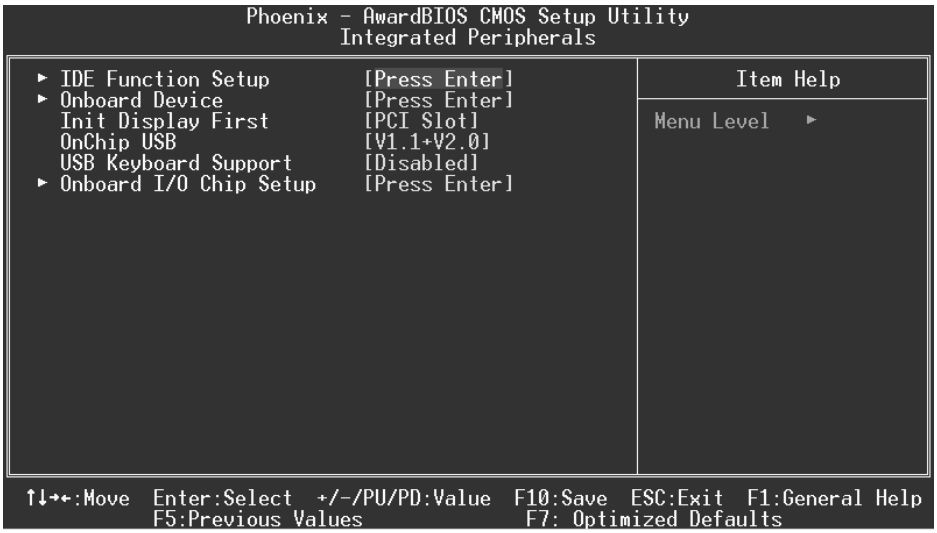
Video RAM Cacheable

Enabling this option allows caching of the video RAM, resulting a better system performance. However, if any program writes to this memory area, a system error may result.

The Choices: Disabled (default), Enabled.

5 Integrated Peripherals

■ **Figure 5. Integrated Peripherals**



IDE Function Setup

The chipset contains a PCI IDE interface with support for two IDE channels.
Select "Enabled" to activate the first and / or second IDE interface. If you install a primary and / or secondary add-in IDE interface, select "Disabled" to deactivate an interface. If you highlight the literal "Press Enter" next to the "Onchip IDE Control" label and then press the enter key, it will take you a submenu with the following options:

OnChip IDE Channel 0/1
The motherboard chipset contains a PCI IDE interface with support for two IDE channels. Select "Enabled" to activate the first and/or second IDE interface. Select "Disabled" to deactivate an interface if you are going to install a primary and/or secondary add-in IDE interface.
The Choices: Enabled (default), Disabled.

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 through 4 provides successively increased performance. In Auto mode, the system automatically determines the best mode for each device.
The Choices: Auto (default), Mode0, Mode1, Mode2, Mode3, 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.

IDE Prefetch Mode
The "onboard" IDE drive interfaces supports IDE prefetching for faster drive access. If the interface does not support prefetching. If you install a primary and/or secondary add-in IDE interface, set this option to "Disabled".
The Choices: Enabled (default), 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 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.

Onboard Device

AC97 Audio
This item allows you to decide to enable/ disable to support AC97 Audio.
The Choices: Auto (default), Disabled.

AC97 Modem
This item allows you to decide to enable/ disable to support AC97 Modem.
The Choices: Auto (default), Disabled.

MAC LAN (nVIDIA)
This item allows you to select MAC LAN.
The Choices: Auto (Default), Disabled.

Machine MAC (NV) Address
This item allows you to enable or disable Machine MAC Address.
The Choices: Disabled (Default), Enabled.

MAC (NV) Address Input

Onchip 1394 Chip
This item allows you to set the Onchip 1394 Chip.
The Choices: Auto (Default), Disabled.

Init Display First

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

OnChip USB

This item allows you to set the onchip USB.
The Choices: V1.1+V2.0 (default), Disabled, V1.1.

USB Keyboard Support

The default value is Disabled.

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

Onboard I/O Chip Setup

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: 3F8/IRQ4 (default), Disabled, Auto, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3.

Onboard Serial Port2
Select an address and corresponding interrupt for the first and second serial ports.
The Choices: Disabled, 3F8/IRQ4, **2F8/IRQ3** (default), 3E8/IRQ4, 2E8/IRQ3, Auto.

UART Mode Select
This item allows you to determine which Infra Red (IR) function of onboard I/O chip.
The Choices: Normal, ASKIR, **IrDA** (default).

RxD, TxD Active
This item allows you to determine which Infrared (IR) function of onboard I/O chip.
The Choices: Hi / Lo (default), Hi / Hi, Lo / Hi, Lo / Lo.

IR Transmission Delay
This item allows you to enable/disable IR transmission delay.
The Choices: Enabled (default), Disabled.

UR2 Duplex Mode
Select the value required by the IR device connected to the IR port. Full-duplex mode permits simultaneous two-direction transmission. Half-duplex mode

permits transmission in one direction only at a time.
The Choices: Half (default), Full.
Use IR Pins
Consult your IR peripheral documentation to select the correct setting of the TxD and RxD signals.
The Choices: IR-Rx2Tx2 (default), RxD2, TxD2.

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.

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.

EPP Mode Select
Select EPP port type 1.7 or 1.9.
The Choices: EPP 1.7(default), EPP1.9.

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

Game Port Address
Game Port I/O Address.
The Choices: 201 (default), 209, Disabled.

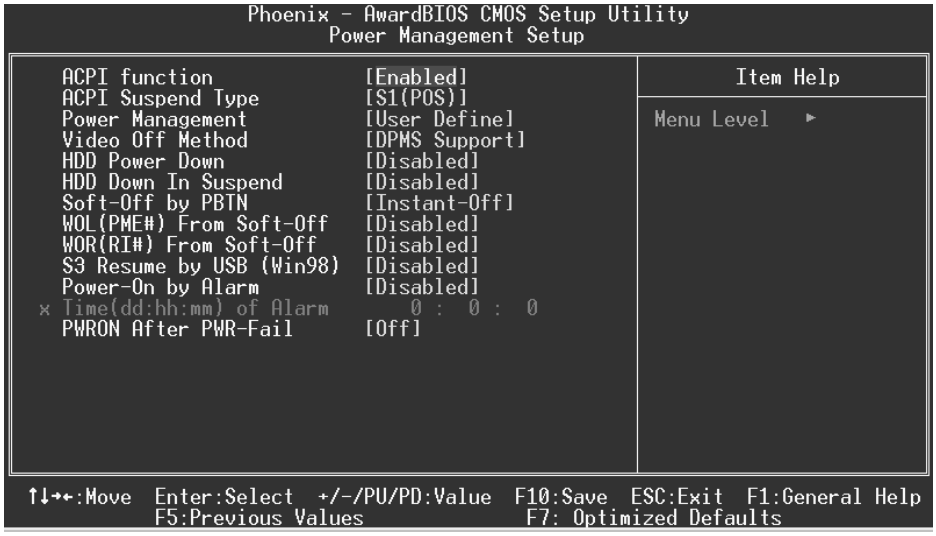
Midi Port Address
Midi Port Base I/O Address.
The Choices: 330 (default), 300, 290, Disabled.

Midi Port IRQ
This determines the IRQ in which the Midi Port can use.
The Choices: 10 (default), 5

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 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

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. Power Saving

Minimum power management.
Suspend Mode = 1 hr.
HDD Power Down = 15 min

Max. Power Saving

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

User Defined (default)

Allows you to set each mode individually.
When not disabled, each of the ranges are 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.

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 Support (default)

Initial display power management signaling.

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, 15Min.

HDD Down In Suspend

This item allows you to enable or disable HDD Down In Suspend.
The Choices: Disabled (Default), Enabled.

Soft-Off by PWR-BTTN

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).

WOL (PME#) From Soft-Off

This item allows you to enable or disable the WOL (PME#) From Soft-Off.
The Choices: Disabled (Default), Enabled.

WOR (RI#) From Soft-Off

This item allows you to enable or disable the WOR (RI#) From Soft-Off.
The Choices: Disabled (Default), Enabled.

S3 Resume by USB (Win98)

This item allows you to enable or disable S3 Resume by USB (Win98).
The Choices: Disabled (Default), Enabled.

Power-On by Alarm

This item allows you to enable or disabled power on by alarm.
The Choices: Disabled (Default), Enabled.

PWRON After PWR-Fail

This field determines the action the system will automatically take when power is restored to a system that had lost power previously without any subsequent manual intervention. There are 3 sources that provide current to the CMOS area that retains these Power-On instructions; the motherboard battery (3V), the Power Supply (5VSB), and the Power Supply (3.3V). While AC is not supplying power, the motherboard uses the motherboard battery (3V). If AC power is supplied and the Power Supply is not turned on, 5VSB from the Power Supply is used. When the Power Supply is eventually turned on 3.3V from the Power Supply will be used.
There are 3 options: "Former-Sts", "On", "Off".

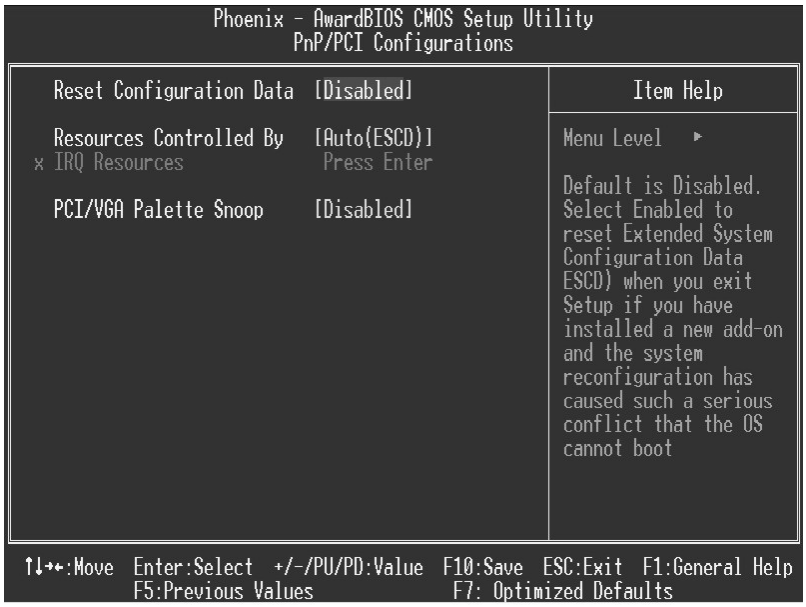
"Former-Sts"	Means to maintain the last status of the CMOS when AC power is lost.
"On"	Means always set CMOS to the "On" status when AC power is lost
"Off" (default)	Means always set CMOS to the "Off" status when AC power is lost.

For example: If set to "Former-Sts" and AC power is lost when system is live, then after AC power is restored, the system will automatically power on. If AC power is lost when system is not live, system will remain powered off.

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**



Reset Configuration Data

The system BIOS supports the PnP feature which requires the system to record which resources are assigned and protects resources from conflict. Every peripheral device has a node, which is called ESCD. This node records which resources are assigned to it. The system needs to record and update ESCD to the memory locations. These locations (4K) are reserved in the system BIOS. If the Disabled (default) option is chosen, the system's ESCD will update only when the new configuration varies from the last one. If the Enabled option is chosen, the system is forced to update ESCDs and then is automatically set to the "Disabled" mode.

The above settings will be shown on the screen only if "Manual" is chosen for the resources controlled by function.
Legacy is the term, which signifies that a resource is assigned to the ISA Bus and provides

non-PnP ISA add-on cards. PCI / ISA PnP signifies that a resource is assigned to the PCI Bus or provides for ISA PnP add-on cards and peripherals.

The Choices: Disabled (default), Enabled.

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.

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 which 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.

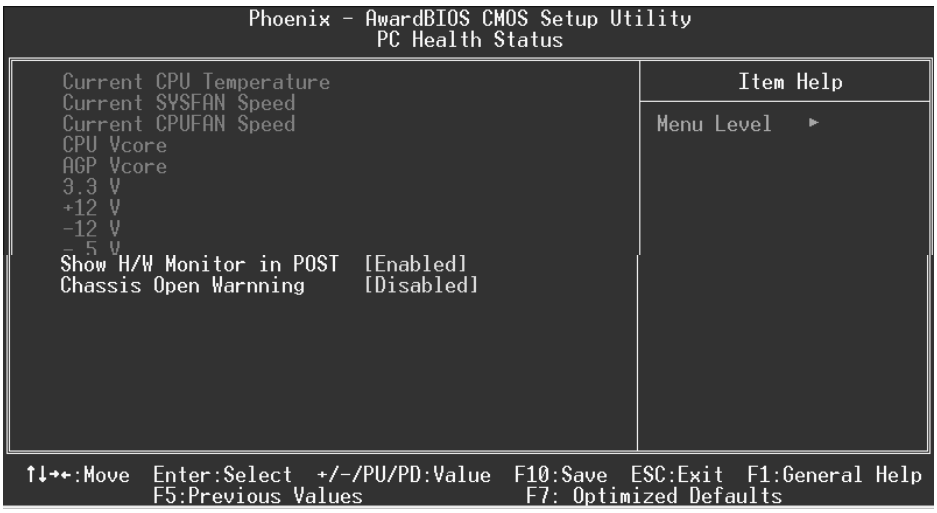
However, the color information coming from the VGA controller is drawn from the palette table inside the VGA controller to generate the proper colors, and the graphic controller needs to know what is in the palette of the VGA controller. To do this, the non-VGA graphic controller watches for the Write 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)	Disables the function.
Enabled	Enables the function.

8 PC Health Status

■ **Figure 8. PC Health Status**



Current CPU Temperature

Show you the current CPU temperature.

Current SYSFAN Speed

This field displays the current SYSFAN speed.

Current CPUFAN Speed

This field displays the current CPUFAN speed.

CPU Vcore/ AGP Vcore/ +3.3V/ +12V/ -12V/ -5V

Detect the system's voltage status automatically.

Show H/W Monitor in POST

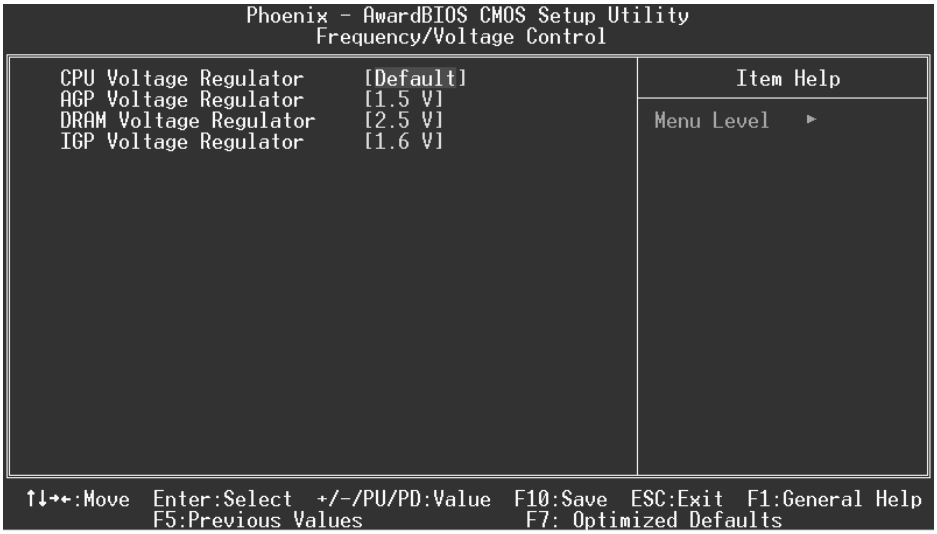
If you computer contain a monitoring system, it will show PC health status during POST stage. The item offers several delay time to select you want.
The Choices: Enabled (default), Disabled.

Chassis Open Warning

This item allows you to enable or disable Chassis Open Warning beep.
The Choices: Disabled (Default), Enabled.

9 Frequency Control

■ **Figure 9. Frequency Control**



CPU Voltage Regulator

This item allows you to select CPU Voltage Regulator.
The Choices: Default (default), -0.025V, -0.050V, -0.075V, -0.100V, +0.025V, +0.050V, +0.075V.

AGP Voltage Regulator

This item allows you to select AGP Voltage Regulator.
The Choices: 1.5V (Default), 1.6V, 1.7V, 1.8V.

DRAM Voltage Regulator

This item allows you to select DRAM Voltage Regulator.
The Choices: 2.5V (Default), 2.6V, 2.7V, 2.8V.

IGP Voltage Regulator

This item allows you to select IGP Voltage Regulator.
The Choices: 1.6V (Default), 1.7V, 1.8V, 1.9V.