CHYANG FUN INDUSTRY CO., LTD.

CFI-S86

High Performance
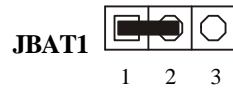
Socket478B Motherboard

User's Guide

WARNING

To make the system work normally, please ensure JBAT1 of the mainboard is set as below. Refer to Fig. 2.1 in this manual for the location JBAT1.

If JBAT1 is shorted to 2-3, no CMOS data can be retained.

CAUTION

The motherboard is an electrostatic sensitive device. Don't open or handle except at a static-free workstation.

If you use 1.4 GHz CPU or above, please ensure to select the Fan that is able to cool the CPU down.

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CHAPTER 1   INTRODUCTION

Preface

CFI-S86 is a 6-layers, Flex-ATX form factor, high-performance Socket478 motherboard. The system core logic is based on VIA P4M266 Chipsets. It is integrated with NEC uPD720100AGM USB 2.0 controller and Realtek RTL8100B Ethernet controller.

Features

CPU:
- ?? Support Intel Socket 478 Pentium 4 processor

Chipset:
- ?? VIA P4M266 chipsets
- ?? Winbond W83627HF LPC controller
- ?? Realtek RTL8100B Ethernet controller
- ?? NEC uPD720100AGM USB 2.0 controller

Architecture:
- ?? IBM PC and PCI 2.1/2.2 compatible
- ?? 400MHz Quad-pumped Front Side Bus

Main Memory:
- ?? Two 184-pin DIMM sockets
- ?? Support DDR200/266 SDRAM up to 2GB

VGA:
- ?? Integrated S3 ProSavage8 Graphics controller in North Bridge
- ?? Support 3D/2D enhancements
- ?? Support AGP8X bandwidth. Max. Bandwidth 2.1GB/sec
- ?? VT1621 TV Encoder, TV-out supported

Audio:
- ??AC-Link with AC'97 2.2 compliant
- ??Software audio with VT1612A 4-channel AC'97 codec

USB 2.0:
- ?? NEC uPD720100AGM USB 2.0 controller
- ?? Compliant with USB 2.0 specification
- ?? Support Hi-speed, Full-speed and Low-speed data transfer rate. Max. Bandwidth 480Mbits/s
- ?? The USB 2.0 driver supported

Ethernet:
??   Realtek RTL8100B 10/100Base-T Ethernet controller
??   Full-Duplex supported
??   WFM 2.0 compliant

I/O Interface：
??   Winbond W83627HF LPC controller
??   Two enhanced PCI IDE channels which support up to 4 IDE devices with ATA-133 transfers up to 133MB/sec
??   Build in FDC supports 1.2M/1.44M/2.88M FDD

Back Panel I/O Output:
??   PS/2 mouse and keyboard connectors
??   2 Type A USB connectors, 1 RJ-45 LAN port
??   1 S connector, 1 Composite connector
??   2 fast serial ports, 1 D-type 15-pin VGA connector
??   Line-in, MIC-in, Speaker-out

System BIOS:
??   Award BIOS with 2MB EEPROM
??   Built-in Trend？ ChipAway Anti-Virus Program
??   ACPI/PnP supported

Expansion Slots:
??   1 PCI slot, 1 AGP4X slot

Form Factor:
??   Flex-ATX @ 262 mm (L) $\times$ 180 mm (W), 6 Layers

Front Panel I/O Output Board:
??   1 IR port, IrDA 1.0/FIR supported
??   2 Type A USB connectors, 1 PS/2 mouse connector
??   Line-in, MIC-in, Speaker-out, Game port and Volume control
??   Board size @ 30 mm (L) x 180 mm (W)

Fig. 1.1　　Key Components of the Motherboard

CHAPTER 2   JUMPER SETTINGS

2.1   JUMPER PRESENTATION

Pins 1 and 2 are shorted with a jumper cap.

1   2   3

Pins 2 and 3 are shorted with a jumper cap.

1   2   3

The jumper is shorted when the jumper cap is placed over the

two

pins of the jumper.

The jumper is opened when the cap is removed from jumper.

2.2   GRAPHICAL DESCRIPTION OF JUMPER SETTINGS
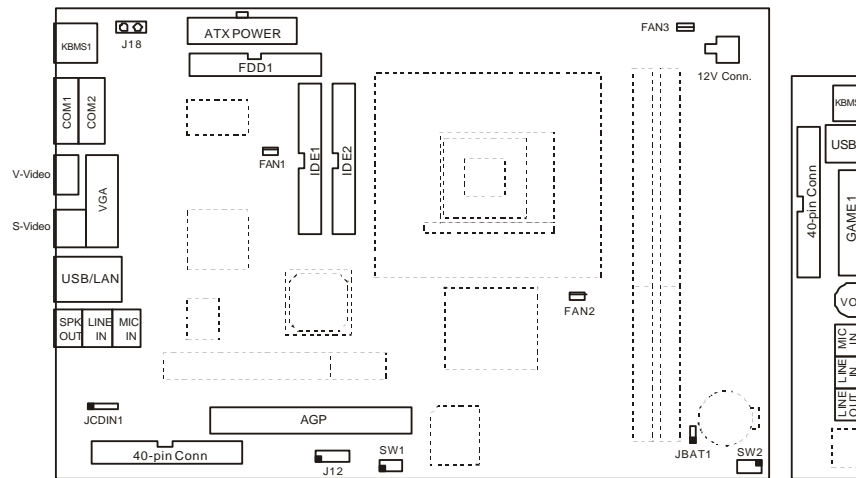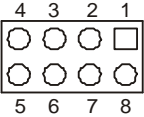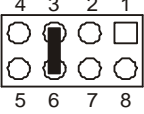
Fig. 2.1   Jumper /Connector Location of the mainboard

2.3   CLEAR CMOS DATA

JBAT1 is used to clear the CMOS Data in the RTC (build in ICH chip).
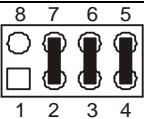
JBAT1	Description
▭◼◉○ 1	Normal
□◉◼◼ 1	Clear CMOS

2.3   CPU FREQUENCY SETTING

SW2	Description
4 3 2 1 ○ ○ ○ □ ○ ○ ○ ○ 5 6 7 8	133MHz
4 3 2 1 ○ ◼ ○ □ ○ ◼ ○ ○ 5 6 7 8	100MHz

Note: P4M266 only support 100MHz * 4 Front Side Bus, SW2 must set at [3,6].

2.4   FACTORY SETTING

SW1	Description
8 7 6 5 ○ ◼ ◼ ◼ □ ◼ ◼ ◼ 1 2 3 4	SB Default

Note: SW1 is SB default setting, cannot be changed.

CHAPTER 3   CONNECTOR CONFIGURATION

Once the mainboard has been fastened into system case, the next step is to connect the internal cables. The internal cables are wire leads with plastic female connectors that attach to the connectors. The mainboard connectors have the various numbers of pins and are the contact points between the mainboard and other parts of the computer.

Refer to Fig. 2.1 for the location of the connectors.

3.1   U1 – SOCKET478

U1 is the Socket478 CPU socket which can support Intel Pentium 4 processor.
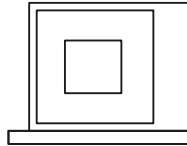
3.2   FAN CONNECTORS

FAN1, FAN2, FAN3 are fan connectors of case or CPU.
J18 is a +12V Case FAN Connector.

3.3   J12 – MULTIPLE FUNCTION JUMPER

J12 is a front panel multi-function jumper. The pin definition is as following figure.
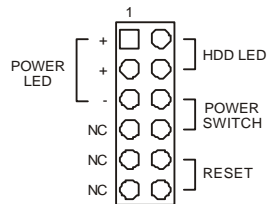
3.4   JCDIN1 – CD-IN CONNECTOR

3.5   CN4 – ATX 12V Connector

3.6   ATX POWER SUPPLY CONNECTOR

	1	11	
+3.3VDC	○	○	+3.3VDC
+3.3VDC	○	○	-12VDC
GND	○	○	GND
+5VDC	○	○	Power Switch
GND	○	○	GND
+5VDC	○	○	GND
GND	○	○	GND
Power Good	○	○	-5VDC
+5V Standby	○	○	+5VDC
+12VDC	○	○	+5VDC
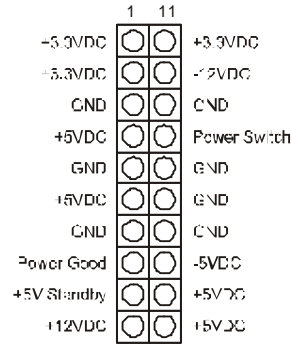
3.7   Rear Panel Connector

CN1 and CN2 is the V-port and S-port of Video connector.

MOUSE   COM   VGA   LAN   MIC IN
KEYBOARD   COM   LINE IN
                    SPK OUT
V-Port S-Port USB
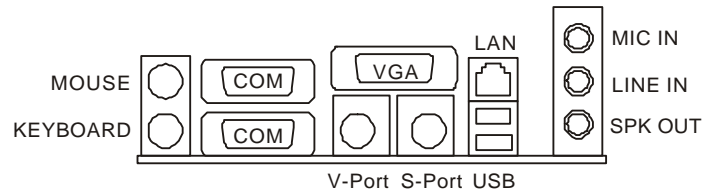
3.8   Front Panel Connector

VOL is the volume knob.
IrDA is an infrared transceiver module.

LINE LINE MIC
OUT   IN   IN   USB   MOUSE
IrDA   VOL   GAME
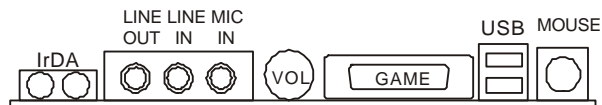
CHAPTER 4   AWARD BIOS DESCRIPTION

4.1   ENTERING SETUP

Power on the computer, when the following message briefly appears at the bottom of the screen during the POST (Power On Self Test), press <Del> key or simultaneously press the <Ctrl> + <Alt> + <Esc> keys, to enter the AWARD BIOS CMOS Setup Utility.

Press <Del> to enter SETUP

Once you have entered, the Main Menu (Fig. 4.1) appears on the screen. The main menu allows you to select from eleven setup functions and two exit choices. Use the arrow keys to select the item and press <Enter> to accept or enter the sub-menu.

Phoenix – AwardBIOS CMOS Setup Utility	
? Standard CMOS Features	? Frequency/Voltage Control
? Advanced BIOS Features	Load Fail – Safe Defaults
? Advanced Chipset Features	Load Optimized Defaults
? Integrated Peripherals	Set Supervisor Password
? Power Management Setup	Set User Password
? PnP/PCI Configurations	Save & Exit Setup
? PC Health Status	Exit Without Saving
Esc: Quit F9: Menu in BIOS ??? ? : Select Item F10: Save & Exit Setup	
Load Optimized Defaults	

Load Optimized Defaults

The Optimized Defaults are common and efficient. It is recommended to load the optimized defaults at first, and then modify the needed configuration settings.

4.2   STANDARD CMOS FEATURES SETUP

Use the arrow keys to highlight the item, and then use the <PgUp> or <PgDn> to select the value desired in each item.

```
┌──────────────────────────────────────────────────────────────┐
│            Phoenix – AwardBIOS CMOS Setup Utility              │
│                 Standard CMOS Features                         │
├──────────────────────────────────────────┬───────────────────┤
│  Date (mm:dd:yy)        Tue. Jan 01 2002   │                   │
│  Time (hh:mm:ss)        11:23:33           │     Item Help     │
│                                            │                   │
│ ?  IDE Primary Master                      │                   │
│ ?  IDE Primary Slave                       │  Menu Level   ?   │
│ ?  IDE Secondary Master                    │                   │
│ ?  IDE Secondary Slave                     │  Change the day,  │
│                                            │  month, year and  │
│  Drive A                [1.44M, 3.5 in.]   │  century          │
│  Drive B                [None]             │                   │
│                                            │                   │
│  Video                  [EGA/VGA]          │                   │
│  Hal On                 [All, But Keyboard]│                   │
│  Select Display Device  [CRT]              │                   │
│  Select TV mode         [NTSC]             │                   │
│                                            │                   │
│  Base Memory            640K               │                   │
│  Extended Memory        63488K             │                   │
│  Total Memory           64512K             │                   │
├──────────────────────────────────────────┴───────────────────┤
│ ??? ? :Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help │
│    F5: Previous Values    F6: Fail - Save Defaults    F7: Optimized Defaults    │
└──────────────────────────────────────────────────────────────┘
```

Data: Set the day, month, year and century.

Time: Set the internal clock.

IDE Primary/Secondary Master/Slave: Press **Enter** to enter the detail settings of hard drive.
IDE HDD Auto-Detection: Press Enter to detect the HDD's status automaticly.
IDE Primary Slave: *Auto, Manual, None*
Access Mode: *Auto, CHS, LBA, Large*

Drive A/B: Set the floppy drive type. None; 350K, 5.25in; 1.2M,5.25in.; 720K, 3.5in.;1.44M, 3.5in.;2.88M, 3.5in

Video [EGA/VGA]
Select the type of video display card installed in your system.
EGA/ VGA: For EGA, VGA, SEGA, SVGA, or PGA monitors adapters.

CGA 40: Color Graphic Adapter, powering up in 40-column mode.

CGA 80: Color Graphic Adapter, powering up in 80-column mode.

MONO: Monochrome adapter, including high-resolution monochrome adapters.

Halt On [All, But Keyboard]

This field determines whether the system will stop if an error is detected during powering up.

All errors: Stop and prompt whenever the BIOS detect a non-fatal error.

No errors: The system boot will not stop for any error that may be detected.

All, But Keyboard: Stop and prompt for all other errors but a keyboard error.

All, But Diskette: Stop and prompt for all other errors but a diskette error.

All, But Disk/Key: Stop and prompt for all other errors but a keyboard or disk error.

Select Display Device: *CRT, TV, CRT+TV, AUTO*

Select TV mode: *NTSC, PAL*

Memory: This field displays the amount of memory detected during the boot process.

4.3   ADVANCED BIOS FEATURES

Phoenix – AwardBIOS CMOS Setup Utility Advanced BIOS Features		
Virus Warning	[Disabled]	Item Help
CPU L1 & L2 Cache	[Enabled]	
CPU L2 Cache ECC Checking	[Enabled]	Menu Level ?
Quick Power On Self Test	[Enabled]	
First Boot Device	[Floppy]	Allows you to choose
Second Boot Device	[HDD – 0]	the VIRUS warning
Third Boot Device	[LS120]	feature for IDE Hard
Boot Other Device	[Enabled]	Disk boot sector
Swap Floppy Drive	[Disabled]	protection. If this
Boot Up Floppy Seek	[Enabled]	function is enabled and
Boot Up Numlock Status	[On]	someone attempt to
Typematic Rate Setting	[Disabled]	write data into this area,
* Typematic Rate (Chars/Sec)	6	BIOS will show a
* Typematic Delay (Msec)	250	warning message on
Security Option	[Setup]	screen and alarm beep
OS Select For DRAM > 64MB	[Non – OS2]	
Video BIOS Shadow	[Enabled]	
Small Logo(EPA) Show	[Disabled]	
??? ? :Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail - Save Defaults F7: Optimized Defaults		

Virus warning*:* Allows you to choose the VIRUS warning feature for IDE hard disk boot sector protection. If it is enabled and someone attempt to write data into the sector, BIOS will show a warning message on screen and alarm beep. *Enabled, Disabled*

CPU L1 & L2 Cache *Enabled, Disabled*

CPU L2 Cache ECC Checking *Enabled, Disabled*

Quick Power On Self Test: Allows the system to skip some tests while booting. *Disabled* is Normal POST. *Enabled, Disabled:*

First (Second, Third) Boot Device*:* Select Your Boot Device Priority.
Floppy, LS120, HDD-0, SCSI, CD-ROM, HDD-1, HDD-2, HDD-3, ZIP100, LAN, *Disabled.*

Boot Other Device: Enable boot from other device.

Swap Floppy Drive If the system have two floppy drives, choose *Enabled* to assign physical drive B to logical drive A and vice-versa. *Disabled, Enabled*

Boot Up Floppy Seek*:* Tests the tracks of floppy drives to determine whether they have 40 or 80 tracks. *Enabled, Disabled*

Boot Up NumLock Status: Selects power on state for NumLock. *On, Off*

Typematic Rate Setting*:* Keystrokes repeat at a rate determined by the keyboard controller, When enabled, you can configure the following two items. *Enabled, Disabled*

Typematic Rate (chars/sec)*:*The rate at which character repeats when you hold down a key.

Typematic Delay (Msec)*:* The delay before keystrokes begin to repeat.

Security Option*:* Determine whether the password is required every time the system boots or only when you enter setup. *Setup, System*

OS Select For DRAM>64MB*:* Selects *OS2* only if you are running OS/2 operating system with more than 64MB RAM. *Non-OS2, OS2*

Video BIOS Shadow Enabled copies Video BIOS to shadow RAM to improves performance. *Enabled, Disabled*

Small Logo(EPA) show: *Disabled, Enabled*

4.4   ADVANCED CHIPSET FEATURES SETUP

Phoenix – AwardBIOS CMOS Setup Utility
Advanced Chipset Features

		Item Help
? DRAM Clock/Drive Control	[Press Enter]	
? AGP & P2P Bridge Control	[Press Enter]	
? CPU & PCI Bus Control	[Press Enter]	Menu Level ?
Memory Hole	[Disabled]	
System BIOS Cacheable	[Disabled]	
Video RAM Cacheable	[Disabled]	
Delay Prior to Thermal	[16 Min]	
VGA Share Memory Size	[32M]	
FB Address Conversion	[Enabled]	
FB Page Close Prediction	[Enabled]	

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

DRAM Clock/Drive Control: Press <Enter> to enter the submenu.
DRAM Clock: *By SPD, 100MHz, 133MHz*
DRAM Timing: *By SPD, Manual.*
When choose "Manual", the following six items will display.
SDRAM CAS Latency: *2, 2.5*
Bank Interleave: *Disabled, 2 Bank, 4 Bank*
Precharge to Active(Trp): *3T, 2T*
Active to Precharge(Tras): *6T, 5T*
Active to CMD(Trcd): *3T, 2T*
DRAM Command Rate: *2T Command, 1T Command*
DRAM Burst Len: *4, 8*
CPU read DRAM Mode: *Fast, Medium, Slow*

AGP & P2P Bridge Control: Press <Enter> to enter submenu. Default setting is recommended.
AGP Aperture Size: *64M, 32M, 16M, 8M, 4M, 256M,128M*
AGP Mode: *4X, 2X, 1X*
AGP Driving Control: *Auto, Mnaual*
When choose *Manual*, the following one item can be modified.
AGP Driving Value: DA, *00~FF*
AGP Fast Write: *Disabled, Enabled*
AGP Master 1WS Write: *Disabled, Enabled*
AGP Master 1 WS Read: *Disabled, Enabled*

CPU & PCI Bus Control: Press <Enter> to enter submenu
CPU to PCI Write Buffer: *Enabled, Disabled*
PCI Master 0 WS Write: *Enabled, Disabled*
PCI Delay Transaction: *Disabled, Enabled*

Memory Hole Set the memory hole reserved for expanded ISA card. *Disabled, 15M-16M*

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System BIOS Cacheable: Besides conventional memory, the system BIOS area is also cacheable. *Enabled, Disabled:*

Video RAM Cacheable*:* Besides conventional memory, video RAM area is also cacheable. *Enabled, Disabled*

Delay Prior to Thermal: *16 Min, 32 Min, 4 Min, 8 Min*

VGA Share Memory Size: *32M, Disabled, 8M, 16M*

FB Address Conversion: *Enabled, Disabled*

FB Page Close Prediction: *Enabled, Disabled*

4.5   INTEGRATED PERIPHERALS

```
                 Phoenix – AwardBIOS CMOS Setup Utility
                         Integrated Peripherals
 ┌─────────────────────────────────────────────┬──────────────────────┐
 │  ?  VIA OnChip IDE Device     [Press Enter]   │  Item Help           │
 │  ?  VIA OnChip PCI Device     [Press Enter]   ├──────────────────────┤
 │  ?   SuperIO Device           [Press Enter]   │                      │
 │     Init Display First        [PCI Slot]      │  Menu Level    ?     │
 │     USB Keyboard Support      [Disabled]      │                      │
 │     IDE HDD Block Mode        [Enabled]       │                      │
 ├─────────────────────────────────────────────┴──────────────────────┤
 │ ??? ? :Move  Enter:Select  +/-/PU/PD:Value  F10:Save ESC:Exit F1:General Help │
 │      F5: Previous Values    F6: Fail - Save Defaults   F7: Optimized Defaults │
 └──────────────────────────────────────────────────────────────────────────────┘
```

VIA OnChip IDE Device: Press <Enter> to enter submenu.
OnChip IDE Channel0/1: *Enabled, Disabled*
IDE Prefetch Mode: *Enabled, Disabled*
Primary/Secondary Master/Slave PIO: *Auto, Mode 0~4*
Primary/Secondary Master/Slave UDMA: *Auto, Disabled*

VIA OnChip PCI Device: Press <Enter> to enter submenu.
VIA -3058 AC97 Audio: *Auto, Disabled*
VIA –3068 MC97 Modem: *Auto, Disabled*

Supper IO Device: Press <Enter> to enter submenu.
Onboard FDC Controller: *Enabled, Disabled*
Onboard Serial Port 1/2: Defines the onboard serial port address and IRQ number. *3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Auto, Disabled.*
UART Mode Select: *Normal, IrDA, ASKIR*
RxD, TxD Active: *Hi,Lo; Lo,Hi; Lo,Lo; Hi,Hi*
IR Transmission Delay: *Enabled, Disabled*
UR2 Duplex Mode: *Half, Full*
Use IR Pins: *IR-Rx2Tx2; RxD2,TxD2*
Onboard Parallel Port: Defines onboard parallel port address and IRQ number. *378/IRQ7, 278/IRQ5, 3BC/IRQ7, Disabled*.
Parallel Port Mode: *SPP, EPP, ECP, ECP+EPP, Normal*
EPP Mode Select: *EPP1.7, EPP1.9*
ECP Mode Use DMA: *3,1*
Game Port Address: *201, 209, Disabled*
Midi Port Address: *Disabled, 330, 300, 290*
Midi Port IRQ: *5, 10*

Init Display First *PCI Slot, AGP.*

USB Keyboard Support: Support USB Keyboard under DOS status. *Disabled, Enabled*

IDE HDD Block Mode: . If your IDE hard drive supports block mode, select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support.
Enabled, Disabled.

4.6   POWER MANAGEMENT SETUP

```
┌──────────────────────────────────────────────────────────────────────┐
│              Phoenix – AwardBIOS CMOS Setup Utility                    │
│                    Power Management Setup                              │
├──────────────────────────────────────┬───────────────────────────────┤
│  ACPI Function              [Enabled] │  Item Help                    │
│  Power Management Option [User Define]│                               │
│  HDD Power Down            [Disabled] │                               │
│  Suspend Mode              [Disabled] │  Menu Level    ?              │
│  Video Off Option      [Suspend -> Off]│                              │
│  Video Off Method     [V/H SYNC+Blank]│                               │
│  MODEM Use IRQ                    [3] │                               │
│  Soft – Off by PWRBTN   [Instant – Off]│                              │
│  PWRON After PWR-Fail         [Off]   │                               │
│ ?  IRQ/Event Activity Detect [Press Enter]│                           │
├──────────────────────────────────────┴───────────────────────────────┤
│ ??? ? :Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help │
│      F5: Previous Values    F6: Fail - Save Defaults    F7: Optimized Defaults  │
└──────────────────────────────────────────────────────────────────────┘
```

ACPI function *Enabled, Disabled.*

Power Management Option:
User Define: Users can configure their own Power Management Timer.
Min Saving - defined timer values are used. All timers are in their MAX values.
Max Saving - defined timer values are used. All timers are in their MIN values.

HDD Power Down
Disabled: HDD's motor will not be off by timer.
1 - 15 Min: Set the HDD idle time before the HDD enters power saving mode (motor off).

Suspend Mode
Disabled: The system never enters Suspend mode by timer.
1 Min ~ 1Hr: Defines the continuous idle time before the system enters Suspend mode. If any items defined in "PM Events" are on and activated, the system will be woken up.

Video Off Option *Suspend -> Off, MODEM Use IRQ, Always On*

Video Off Method
V/H SYNC+Blank: In addition to Blank Screen, BIOS will also turn off the V-SYNC & H – SYNC signals from VGA card to monitor.
DPMS Support: This function is enabled only for VGA cards supporting DPMS.
Blank Screen: The system BIOS will only blank off the screen when disabling video.
Note: When the green monitor does not detect the V/H-SYNC signals, the electron gun will be turned off.

MODEM Use IRQ: Special wake-up event for Modem. *3, 4, 5, 7, 9, 10*, *11 NA.*

Soft-Off by PWRBTN
Instant-Off The system will immediately power off once the power button is pressed.
Delay 4 sec The system will power off when power button is pressed for 4 seconds.

IRQ/Event Activity Detect: Press Enter to <enter> submenu.
VGA: *OFF, ON*
LPT & COM: *LPT/COM, NONE, LPT, COM*
HDD & FDD: *ON, OFF*
PCI Master: *OFF, ON*
PowerOn by PCI Card: *Disabled, Enabled*
Wake Up On LAN/Ring: *Disabled, Enabled*
RTC Alarm Resume: *Disabled, Enabled*
When choose Enabled, the following two items can be modified.
Date (of Month): *0~31*
Resume Time (hh:mm:ss): *00: 00 : 00*
IRQs Activity Monitoring: Press <Enter> to enter submenu.
    Primary INIR: *ON, OFF*.
    When choose ON, the following items can be set to *Disabled* or *Enabled*.
    IRQ3 (COM 2)
    IRQ4 (COM 1)
    IRQ5 (LPT 2)
    IRQ6 (Floppy Disk)
    IRQ7 (LPT 1)
    IRQ8 (RTC Alarm)
    IRQ9 (IRQ2 Redir)
    IRQ10 (Reserved)
    IRQ11 (Reserved)
    IRQ12 (PS/2 Mouse)
    IRQ13 (Coprocessor)
    IRQ14 (Hard Disk)
    IRQ15 (Reserved)

4.7   PNP/PCI CONFIGURATION SETUP

```
+------------------------------------------------------------------+
|                Phoenix – AwardBIOS CMOS Setup Utility            |
|                     PnP/PCI Configuration                        |
+--------------------------------------------+---------------------+
| PNP OS Installed            [No]           | Item Help           |
| Reset Configuration Data    [Disabled]     |                     |
|                                            +---------------------+
| Resources Controlled By     [Auto (ESCD)]  | Menu Level    ?     |
| *IRQ Resource               Press Enter    |                     |
|                                            |                     |
| PCI/VGA Palette Snoop        [Disabled]     |                     |
| Assign IRQ For VGA           [Enabled]      |                     |
| Assign IRQ For USB           [Enabled]      |                     |
| INT Pin 1 Assignment         [Auto]         |                     |
| INT Pin 2 Assignment         [Auto]         |                     |
| INT Pin 3 Assignment         [Auto]         |                     |
| INT Pin 4 Assignment         [Auto]         |                     |
+--------------------------------------------+---------------------+
| ??? ? :Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help |
|      F5: Previous Values    F6: Fail - Save Defaults    F7: Optimized Defaults   |
+------------------------------------------------------------------+
```

PNP OS Installed: Select *Yes* if you are using a Plug and Play capable operation system; Select No if you need the BIOS to configure non-boot devices. *No, Yes*

Reset Configuration Data: Default is *Disabled*. Select *Enabled* to reset ESCD when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot. *Enabled/ Disabled*

Resources Controlled By BIOS can automatically configure all the boot and PnP compatible devices. If you choose *Auto*, you cannot select IRQ DMA and memory base address fields, because BIOS automatically assigns them. *Auto(ESCD), Manual.*

PCI/VGA Palette Snoop *Disabled* is default setting. *Enabled* Non-standard VGA cards such as graphics accelerators or MPEG video cars may not show colors properly. Enabling this item can solve this problem.

Assign IRQ For VGA/USB: *Enabled, Disabled*

INT Pin 1/2/3/4 Assignment: *Auto, 3, 4, 5, 7, 9, 10, 11, 12, 14, 15*

4.8   PC HEALTH STATUS

```
┌──────────────────────────────────────────────────────────────────────┐
│           Phoenix – AwardBIOS CMOS Setup Utility                       │
│                    PC Health Status                                    │
├────────────────────────────────────────────┬─────────────────────────┤
│  CPU Warning Temperature      [Disabled]    │                         │
│  Current System Temp.                       │      Item Help          │
│  Current CPU1 Temperature                   │                         │
│  Current CPUFAN1 Speed                      │   Menu Level    ?       │
│  Current CPUFAN2 Speed                      │                         │
│  Current CPUFAN3 Speed                      │                         │
│  IN0 (V)                                    │                         │
│  IN1 (V)                                    │                         │
│  IN2 (V)                                    │                         │
│  +5 V                                       │                         │
│  +12 V                                      │                         │
│  -12 V                                      │                         │
│  -5 V                                       │                         │
│  UBAT (V)                                   │                         │
│  5VSB (V)                                   │                         │
│  Shutdown Temperature         [Disabled]    │                         │
├────────────────────────────────────────────┴─────────────────────────┤
│  ??? ? :Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help │
│        F5: Previous Values    F6: Fail - Save Defaults    F7: Optimized Defaults │
└──────────────────────────────────────────────────────────────────────┘
```

CPU Warning Temperature: Enabled an beep alarm when the CPU temperature is over this value. *Disabled,*.Enabled

Shutdown Temperature Set the shutdown temperature.

4.9   FREQUENCY/VOLTAGE CONTROL

```
┌──────────────────────────────────────────────────────────────────────┐
│           Phoenix – AwardBIOS CMOS Setup Utility                       │
│                  Frequency/Voltage Control                             │
├────────────────────────────────────────────┬─────────────────────────┤
│  CPU Clock Ratio              [8 X]         │                         │
│  Auto Detect PCI/DIMM Clk     [Enabled]     │      Item Help          │
```

```
                                              Menu Level   ?
```

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

CPU CLOCK Ratio: Selects the multiplication of processor core frequency. If a Ratio locked processor installed, this item will be hidden. This item is only for users who understand all the CPU parameters, i.e. system bus frequency, "66MHz" and multiplication of processor core frequency for system bus frequency "x3, x3.5, x4, x4.5, x5, x5.5, x6, x6.5, x7, x7.5, x8". Selects the CPU speed according to your CPU brand and type. *8X~49X,*

Auto detect DIMM/PCI Clk *Enabled* Close empty DIMM or PCI clock to reduce EMI. *Disabled* Does not close empty DIMM or PCI clock.
Warning: Be sure your selection is right. CPU over speed will be dangerous!

Spread spectrum: *Disabled, Enabled*

CPU Host/AGP/PCI Clock:
Default, 100/66/33Mhz, 102/68/34Mhz, 105/70/35Mhz, 108/72/36Mhz, 114/76/38Mhz, 117/78/39Mhz, 120/80/40Mhz.

4.10   PASSWORD SETTING

When you select "Set User Password" or "Set Supervisor Password" and press **Enter**, the following message will appear at the center of the screen:
ENTER PASSWORD
Type the password, up to eight characters, and press **Enter**. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press **Enter**. You may also press **Esc** to abort the selection.

To disable password, just press **Enter** when you are prompted to enter password. A message as below will confirm the password being disabled. Once the password is disabled, the system will boot and you can enter BIOS Setup freely.
PASSWORD DISABLED
If you have selected **"Syste**m" in "Security Option" of "BIOS Features Setup" menu, you will be prompted for the password every time the system reboots or any time you try to enter BIOS Setup.
If you have selected **"Setu**p" at "Security Option" from "BIOS Features Setup" menu, you

will be prompted for the password only when you enter BIOS Setup.

Supervisor Password has higher priority than User Password. You can use Supervisor Password when booting the system or entering BIOS Setup to modify all settings. Also you can use User Password when booting the system or entering BIOS Setup but can not modify any setting if Supervisor Password is enabled.

4.11   EXIT SETUP

Save & Exit Setup
After finish modifying the values, choose this item to save the changes to the CMOS RAM. A confirmation message will appear, type "Y" and press **Enter** to save and exit Setup.

Exit Without Saving
If you do not want to save the changes, choose this item to exit Setup without saving changes. A confirmation message will appear, type "Y" and press **Enter** to save and exit Setup.

4.12   BOOT WITH BIOS DEFAULTS

If you have made all the changes to CMOS values and the system cannot boot with the CMOS values selected in setup, clear CMOS after power-down, then power on again. System will boot with BIOS default settings.

APPENDIX A   QUICK GUIDE

The table below summaries the functions and settings of each jumper of the motherboard.

Function		Jumper Settings	
Clear CMOS Data	Normal	JBAT1	1-2
	Clear	JBAT1	2-3
CPU Frequency	133 MHz	SW1.2, SW2.3	Open
	100 MHz	SW1.2, SW2.3	Short