6A815EP

User's Manual Version 1.0

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Introduction

How This Manual is Organized

This manual is divided into the following sections:

Chapter 1   **Introduction**   : Manual information and checklist.
Chapter 2   **Features**   : Information and Specifications concerning this mainboard.
Chapter 3   **Installation**   : Instructions on setting up the board.

Package Checklist

Please check that your package is coplete . If you discover any item damged or issing , please contact with your retailer imdiately.

- ⧗ The 6A815EP minboard.

- ⧗ 1 x IDE UDMA100 ribbon cable.

- ⧗ 1 x COM2 cable.

- ⧗ 1 x Floppy ribbon cable.

- ⧗ 6A815EP support software:
     CD driver and utilites.
     -Intelinf (Intel(R) chipset software to system containing 815E
     chipset)
     -Security (Intel(R) security driver)
     -Uatadrv (Intel(R) ultra ATA storage setup)
     -Sound (on board sound driver)

- ⧗ This user's Manual

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Features

Features of the 6A815EP Mainboard

The 6A815EP is designed for the PC user who want any new key features processed by the fastest CPU in a econom package. This mainboard :

- ⌛ **New general CPU support :**
  - Socket 370 for Intel PPGA/FC-PGA PII/PIII processor.
  - Socket 370 Celeron (300MHz~733MHz) or higher processor.
  - Socket 370 VIA Cyrix III 500~600MHz processor.
  - Socket 370 Copperine (500MHz~1GHz) or higher processor.

⌛ **Chipset :**
  -MCH Chipset :Intel 815EP support a 66/100/133 FSB.
  -ICH Chipset :Intel ICH2 .

⌛ **Biggest memory capacity :**
  6A815EP is equipped with three DIMM socket to support (16MB, 32MB, 64MB, 128MB.256MB) 168 pin 3.3v SDRAM SPD(Special Presence Detect).Maximum memory up to 512MB.

  > **-Supports up to 3 double sided DIMMs at 100MHz system memory bus.**
  > **-Supports up to 2 double sided or 3 single sided DIMMs at 133MHz system memory bus.**

⌛ **AGP for fast VGA solution :**
  -AGP specification compliant.
  -AGP 66 MHz 3.3v/1.5v for 1X/2X/4X device support.

⌛ **PCI Expansion Slot :**
  Provide five 32 bit PCI slots.

⌛ **On-Board IDE :**
  -An IDE controller on the ICH2 chipset provides IDE HDD/ CD-ROM with PIO,Bus Master and Ultra DMA 33/66/100 operation modes.
  -Can connect up to four IDE device.

⌛ **On-Board Peripherals:**
  -1 floppy port supports 2 FDD with 360K,720K,1.2M, 1. 44M and 2.88M byte.
  -2 serial ports (COM1+COM2 (10pin)).
  -4 USB ports.
  -1 parallel port supports SPP/EPP/ECP mode.
  -1 RJ-45 connector. **(option)**

⌛ **Audio:**
  - ICH2 chip integrated.
  - AC'97 CODEC on board ,support 3D sound effect.

- ❖ **BIOS:**
  - The mainboard BIOS provides "Plug & Play" BIOS which detects the peripheral devices and expansion cards of the board automatically.
  - The mainboard provides a Desktop Management Interface (DMI) function which records your mainboard specifications.
  - BIOS support CD-ROM, SCSI, LAN BOOT, Temperature sensor, Wake on modem, LAN, Alarm Bus CLK setup with BIOS.

- ❖ **Intel Accelerated Hub Architecture :**
  Features a dedicated high speed hub link between the ICH2 and GMCH with a bandwidth of 266MB/sec-twice the maximum bandwidth of the PCI bus.

- ❖ **CNR Support :**
  Two Communication and Networking Riser(CNR) slots provide interface to support very affordable multichannel audio,V.90 analog modem, HomePNA, 10/100 Ethernet networking,USB hub, as well as future technologies such as XDSL .

- ❖ **Fan Status Monitoring and Alarm Temperature Monitoring/Voltage Monitoring and Alert.**

- **Support Ring on by modem/Alarm on :**
  Support System power up from Modem ring up or timer
  of System. Required enabled in Ring on by modem and
  Alarm on in BIOS.

- **PC Health Monitoring :**
  Provides an easy way to examine and manage system
  status information, such as CPU and system voltages,
  temperatures, and fan status through the onboard hardware.

- **Suspend and G :**
  Suspend-to-RAM (str) provides maximum power savings
  as an alternative to leaving the computer ON and Quickstart
  so that you do not have to wait for a long time for system
  boot.

- **Dual Function Power Button :**
  Through BIOS, the power button can be defined as the
  "Stand by" button or as the Soft-Off button.

The 6A815EP Mainboard layout
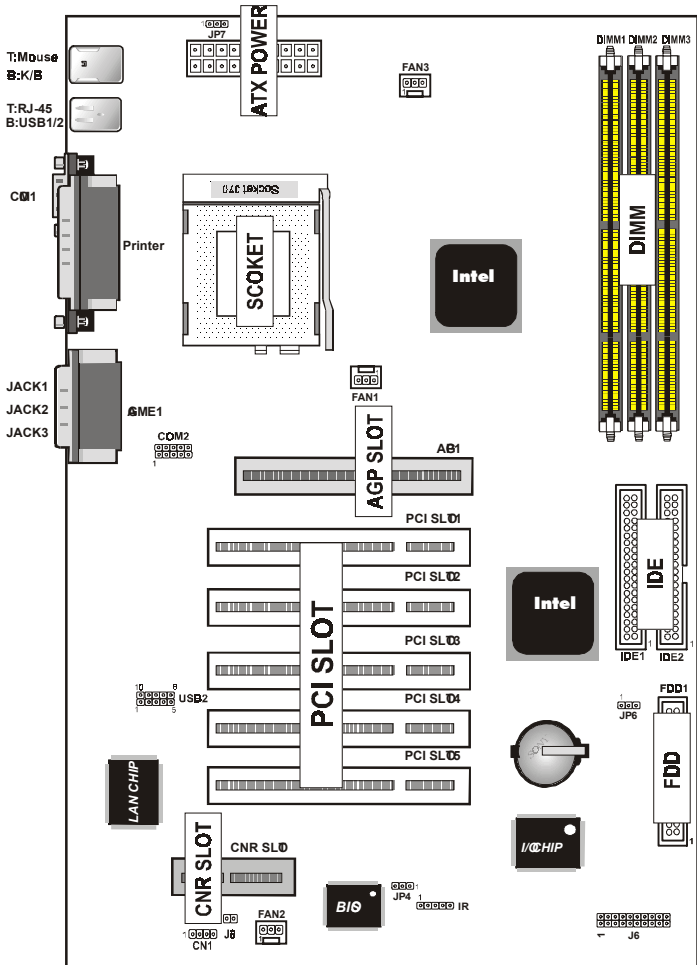
Chapter 3

3

Installation

Jumper

Expansion Slot   Which page

Connectors   Refer to page

System Installation Setup

Before using your computer, you must finish the following steps:

1. Set jumpers on mainboard
2. Install SDRAM module.
3. Install the Processor.
4. Connect Ribbon Cables, Cabinet Wires, and Power supply.
5. Install Add on Cards.
6. Setup the BIOS software.
7. **Make sure your ATX Power Supply the 5VSB output has 1 Ampere or more.**
8. **First turn off the ATX Power Supply when you setup the SDRAM Module.**

Static Electricity Precaution

- Keep the mainboard and other system components in their anti-static packaging until you are ready to install them

- Do all preparative work on a static-free surface with the main board components facing up.

- Unplug your computer when working on the inside.

- Wear an Anti-static wrist strap.

- Hold the system components, boards or cards by its edges only. Be careful not to touch any of IC chips, circuitry, contacts or connections, especially gold contacts on the mainboard.

Jumper Settings

Jumpers

Several hardware setting are made through the use of jumper caps to connect jumper pins (Jxx) on the mainboard. See " Map of the mainboard" for locations of jumpers.

The jumper settings will be described numerically such as [----], [1-2], [2-3] for no connection, connect pins 1 &2, and connect pins 2 &3 respectively. Pin 1 for our mainboard is always on top one or on the left when holding the mainboard with the keyboard away from yourself. "P1" is written besides pin 1 on jumper with three pins. The jumpers will also be shown graphically such as ⬛⬛⚪ to connect pin 1&2 and ⚪⬛⬛ connect 2&3. Jumpers with two pins will be shown as ⬛⬛ for Short (on)and ⚪⚪ for Open (off).For manufacturing simplicity it may be sharing pins from other groups. Use the diagrams in this manual instead of following the pin layout on the board. Settings with two jumper numbers require that both jumpers be moved together. To connect the pin, simply place a plastic jumper cap over the two pins as diagramed.

Real Time Clock (RTC) RAM - JP6 :

The CMOS RAM is powered by the onboard button cell battery. To clear the RTC data:

(1)Turn off your computer, (2) Move this jumper to "2-3Pin Clear Data", (3) Move the jumper back to "Default", (4) Turn on your computer, (5) Hold down <Delete > during bootup and enter BIOS setup to re-enter user Preferences.
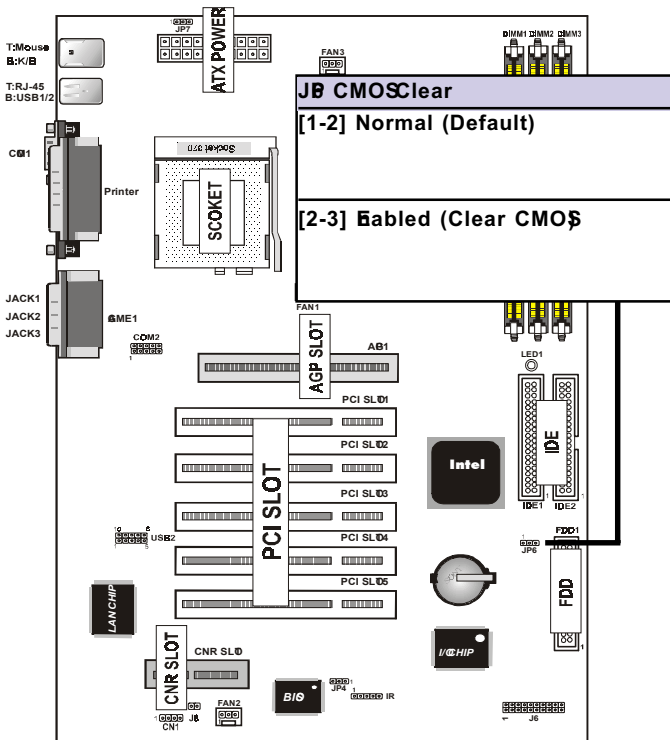
System Memory (DIMM Module)

This **6A815EP** main board supports three 168 pin DIMM of 16 MB, 32 MB, 64 MB, 128 MB ,256MB to form memory size between 16MB to 256MB.

The DRAM can be either 45ns,50ns,or60ns SDRAMs.

Install memory in any or all Banks in Cobination:

Note:
-Supports up to 3 double sided DIMMs at 100MHz system memory bus.
-Supports up to 2 double sided or 3 sided DIMMs at 133MHz system memory bus.

Bank	Memory module
DIMM 1	16MB,32MB,64MB,128MB,256MB
(Bank 0-1)	168 pin,3.3v SDRAM
DIMM 2	16MB,32MB,64MB,128MB,256MB
(Bank 2-3)	168 pin 3.3v,SDRAM
DIMM 3	16MB,32MB,64MB,128MB,256MB
(Bank 4-5)	168 pin 3.3v,SDRAM
Total System Memory(Max 512MB)	

Note :

- **The DIMM Slot does not support any 5V EDO DIMM module.**
- **The DIMM Slot does not support any 5V SDRAM DIMM module.**
- **Memory speed setup is required through "Auto Configuration" in BIOS chipset Setup of BIOS SOFTWARE. If several speed memories are used, You must set Auto Configuration to low. Example If both 50ns, 60ns are used, Please set Auto configuration to 60ns.**
- **It's allowed any DIMM module put in any DIMM slot. It's allowed there are different capacity DIMM module in all DIMM slot.**
- **Please shut down the ATX Power when you setup the DIMM Module.**

DIMM Memory Installation

Insert the module (s) as shown. Because the number pins are different on either side of the breaks, the module will only fit in the orientation as shown. SDRAM DIMM modules have different pin contacts on each side and therefore have a higher pin density.
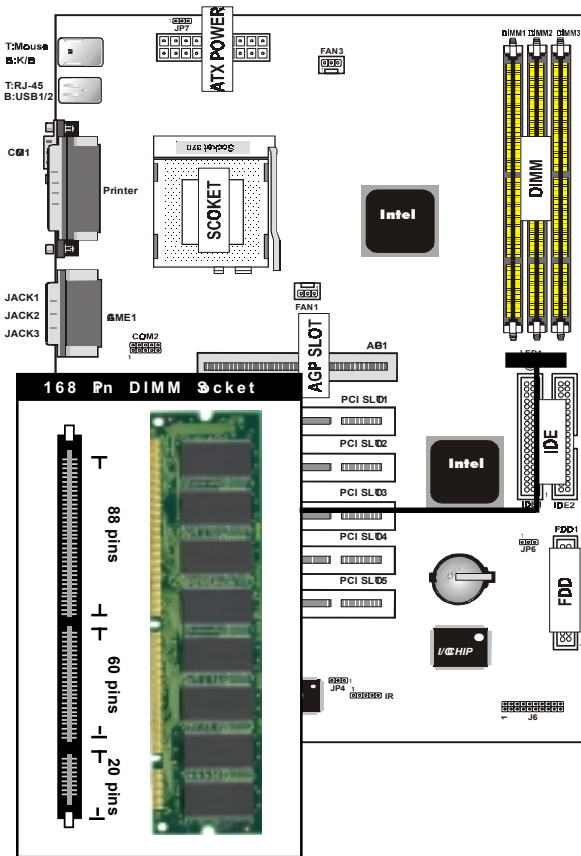
The Dual Inline Memory Module (DIMM) memory module must be 3.3v . You can identify the type of DIMM module by the illustration below:

RFU   Unbuffered   5.0V   Reserved

Buffered   3.3V

DRAM Key Position   **Voltage Key Position**
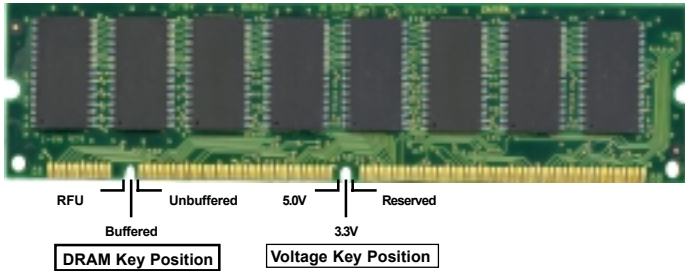
168 Pin DRAM DIMM Notch Key Definitions

The notch on the DIMM module will shift between left, center, or right to identify the type and also to prevent the wrong type to be inserted into the DIMM slot on the Mainboard. You must ask your retailer for Specifications before purchasing.

Four clock signals are supported on this mainboard

CPU Installation

The motherboard provides a ZIF socket 370. The CPU that came with the motherboard should have a fan attached to it to prevent overheating . If this is not the case then purchase a fan before you turn on your system

To install a CPU , first turn off your system and remove its cover. Locate the ZIF socket and open it by first pulling the lever sideways away from the socket then upwards to a 90-degree right angle. Insert the CPU with the correct orientation shown . The notched corner should point towards the end of the lever. Because the CPU has a corner pin for two of the four corners, the CPU will only fit in the orientation as shown.
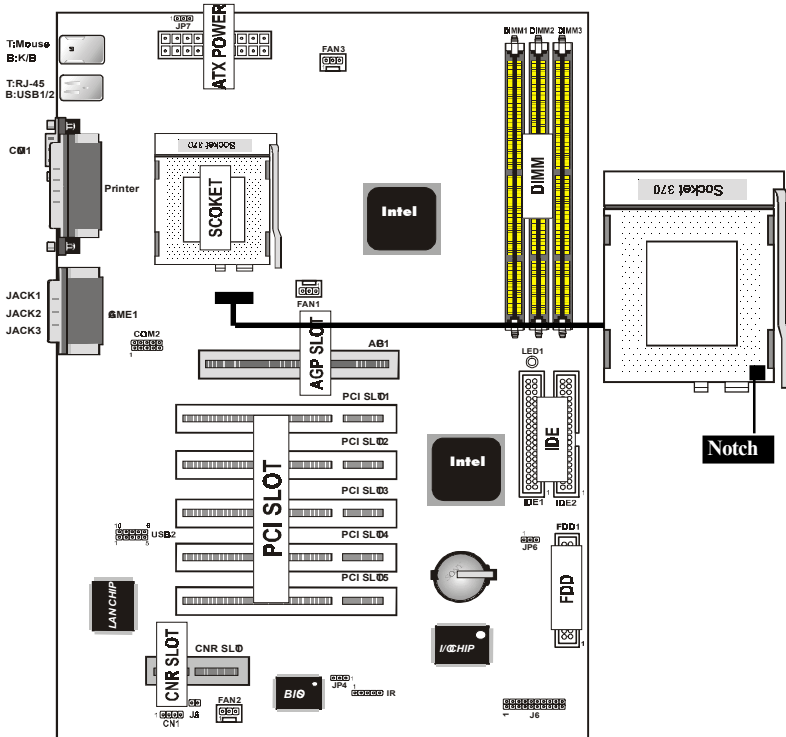
Selecting the CPU Frequency

CPU voltage auto-detection and allow user to set CPU frequency through BIOS setup, no juper or switch is needed. The correct CPU information is saved into EPROM, with these technologies, the disadvantages of Pentium base juper-less design are elimated. There will be no worry of wrong CPU voltage detection and no need to re-open the housing if CMOS battery loss. The CPU frequency selection is set by going into:

Choose "**CPU SPEED SETTING**" from the BIOS and a screen with frequency/voltage control items appears.

CPU Clock Ratio
This item lets you select the ratio of Core/Bus frequency. Have the following selection: 3x, 3.5x, 4x, 4.5x, 5x, 5.5x, 6x, 6.5x, 7.0x, 7.5x,8.

CPU Bus/PCI Clock/PC133
This item lets you set external clock (bus clock). The possible settings are 66,100 and 133 MHZ....

Clearance Requirements

To maintain proper airflow once the processor is installed on the mainboard, the processor and fan heatsink require certain space clearances. The clearance above the processor must be at least 0.3 inches. The clearance on at least 3 of 4 sides of the processor and fan heatsink must be at least 0.2 inches. All cables (for Floppy drive, Hard drive,CD-ROM,and so on) must be routed clear of the processor and its airspace.

Fan Exhaust

The processor must be kept cool by using a processor with heatsink and fan attached . The temperature of the air filled with the fan/ heatsink cannot exceed 45 ^{o}C(113 ^{o}F) . The ambient or room temperature must be below 37 ^{o}C (99 ^{o}F) .

EXTERNAL CONNECTORS

Both Ribbon cable and Connectors on board are with direction signs to avoid that user insert wrong directions. On the other hand, the ribbon cables should always be connected with the red stripe on the pin 1 of side of the connector.

2 RJ-45 (option)
PS/2 Mouse

6

Parallel (Printer) Port
(25-pin Female)

4

MIDI/(GAME) Port
(15-pin Female)

1 PS/2 Keyboard
(6-pin Female)

5 USB1/2

3 COM1

Serial Port

SPEAKER

LINE IN

MIC

T:Mouse
B:K/B

T:RJ-45
B:USB1/2

COM1

Printer

JACK1
JACK2
JACK3

GAME1

3 COM2

5 USB3/4

IR Port

10 CD Audio
Connector

13

JP7

ATX POWER

SCOKET

Socket 370

SCOKET

Intel

AGP SLOT

AGP1

PCI SLOT1

PCI SLOT2

PCI SLOT3

PCI SLOT4

PCI SLOT5

Intel

USB2

LAN CHIP

CNR SLOT

CNR SLO

FAN2

BIOS

JP4

IR

CN1

DIMM1 DIMM2 DIMM3

DIMM

12 ATX Power
Connector

FAN1

9 FAN 1,2,3
Connector

LED1

IDE

IDE1 IDE2

8 IDE Connec-
tor

FDD1

JP6

FDD

I/O CHIP

Floppy
Driver Connec-

7

J6

11 PANEL

18 / Chapter 3 Installation

1. **PS/2 Keyboard port**
   This connection is for a standard keyboard using an PS/2 plug
   (mini DIN) . This connector will not allow standard at AT size
   (large DIN) keyboard plugs. You may use a DIN to mini DIN
   adapter on standard AT keyboards.

2. **PS/2 Mouse port**
   This system will direct IRQ12 to PS/2 mouse.

3. **Serial Port COM 1 and COM 2 port**
   The one serial ports can be used for pointing devices or other
   serial devices. See "Onboard Serial Port" in chipset Feature Setup
   of the BIOS SOFTWARE.Serial port COM 2 Header**(1-10pin)**.

   NOTE:

   > **Serial {D-type 9pin (F) } must be connected to the
   > serial port.**

4. **Parallel Printer port**
   You can enable the parallel port and choose the IRQ through "
   Onboard Parallel Port" in Chipset. Feature Setup of the BIOS
   SOFTWARE.

5. **-   Universal Serial BUS Ports 1,2**
      Two USB ports are available for connecting USB devices.
   -   Universal Serial BUS Ports 3,4
      Two USB ports are available on the back panel.Therefore,we
      provide a 10 pin ribbon cable with bracket to connect Built-
      in on-board USB header.
      USB 3,4

VCC	1	10
P0-	2	9 GND
P0+	3	8 P1+
GND	4	7 P1-
	5	6 VCC
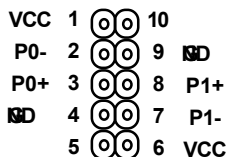
6. **RJ-45 Connector (option)**

   Onboard 10/100MB PCI Fast Ethenet Network.
   The RJ-45 connectors at the time of purchase and is located on
   top of the USB connectors.The connector allows the
   motherboard to connect to a Local Area Network (LAN) through
   a network hub .

7. **Floppy drive connector**

   This connector supports the provided floppy drive ribbon cable.
   After connecting the single end to the board, connect the two
   plus on the other end to the floppy drives.

8. **Primary / Secondary IDE connectors (Two 40-pin Blocks)**

   These connectors support the provided IDE hard disk ribbon
   cable. After connecting the single end to the board, connect the
   two plugs at the other end to your hard disk no space(s) . If you
   install two hard disks, you must configure the second drive to
   Slave mode by setting its jumper settings. BIOS now supports
   SCSI device or IDE CD-ROM boot up (see "HDD Sequence SCSI/
   IDE First" &Boot Sequence" in the BIOS Features Setup of the
   BIOS SOFTWARE) (Pin 20 is removed to prevent inserting in
   the wrong orientation when using ribbon cables with pin 20
   plugged) .

   Tip   :

   > **You may configure two hard disks to be both Master
   > using one ribbon cable on the primary IDE connector.
   > You may install one operating system on an IDE drive
   > and another on a SCSI drive and select one of the two
   > through BIOS Feature Setup.**

9. **FAN1 , FAN2 , FAN3 CPU Cooling Fan (FAN/PWR)**
These connectors support cooling fans of 500mAmp (6Watt) or less. Orientate the fans so that the heatsink fins allow airflow to go across the onboard heat sink(s) instead of the expansion slots. Depending on the fan manufacturer, the wiring and plug may be different. The red wire should be positive, while the black should be ground. Connect the fan's plug to the board taking into consideration the polarity of this connector.
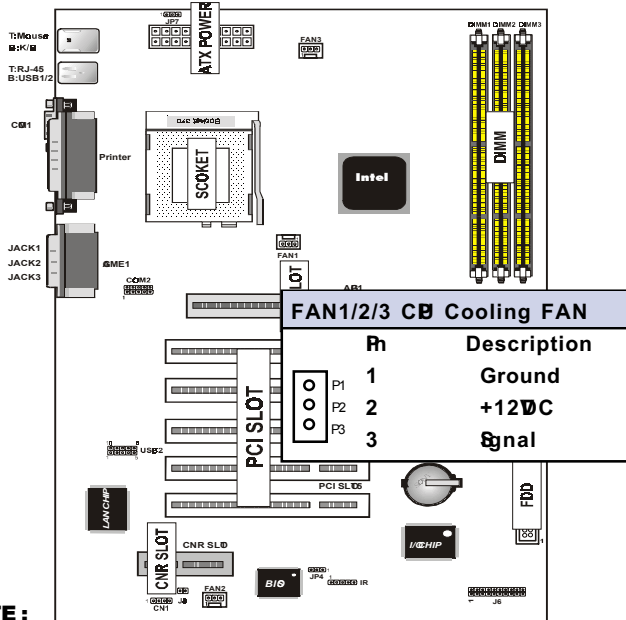
NOTE :

The "Rotation" signal is to be used only by a specially designed fan with rotation signal.

WARNING :

The CPU and/or motherboard will overheat if there is no air flowing across the CPU and onboard heatsinks. Damage may occur to the motherboard and/or the CPU fan if these pins are incorrectly used. These are not jumpers, do not place jumper caps over these pins.

10. **IrDA / Fast IR-Compliant infrared module connector - IR**
This connector supports the optional wireless transmitting and receiving infrared module. This module mounts to a small opening on system cases that support this feature. You must also configure the setting through UART2 Use Infrared" in Chipset Feature Setup to select whether UART2 is directed for use with COM2 or IrDA. Use the five pins as shown on the Back View and connect a ribbon cable from the module to the motherboard according to the pin definitions.

IrDA/Fast IR Connector

Pin	Description
1	VCC
2	IR4_MODE
3	IRRXA
4	GND
5	IRTXA

11. **J6**


```
                    J6 PANEL Connector

                         SPEAK
                       +
        2   ⊙⊙⊙⊙⊙⊙⊙⊙⊙⊙
        1   ⊙⊙⊙⊙⊙⊙⊙⊙⊙⊙
       PW_BN      +          +      RST
               PW_LED      HD_LED
```
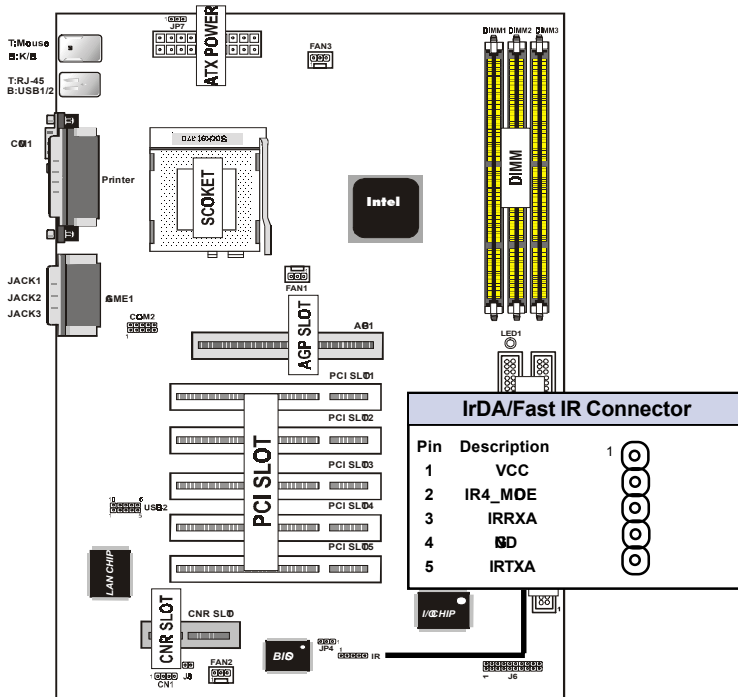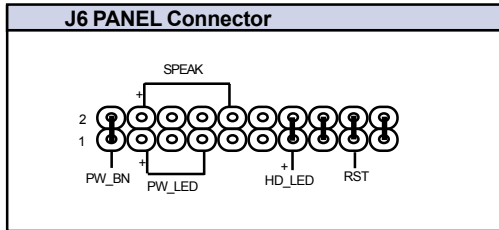
a. **IDE activity LED (HD-LED)**

This connector supplies power to the cabinet's IDE activity LED. Read and write activity by devices connected to the Primary or Secondary IDE connectors will cause the LED to light up.

b. **Power LED Lead (PW_LED)**

The system power LED lights when the system's power is on.

c. **Reset Switch Lead (RST)**

This 2-pin connector connects to the case-mounted reset switch for rebooting your computer without having to turn off your power switch. This is a preferred method of rebooting in order to prolong the life of the system's power supply.

d. **Speaker Connector (SPEAKER)**

This 4-pin connector connects to the case-mounted speaker.

e. **ATX Power Switch (PW_BN)**

The system power is controlled by a momentary switch connected to this lead. Pushing the button once will switch the system ON. The system power LED lights when the system power is on.

12. **ATX Power Supply Connector (20-pin block) - PW1**

This connector connects to a ATX power supply. The plug from the power supply will only insert in one orientation because of the different hole sizes. Find the proper orientation and push down firmly making sure that the pins are aligned.

IMPORTANT:

> **Make sure that the ATX power supply can take at least 10mAmp load on the 5Volt standby lead (5VSB). You may experience difficulty in powering on your system without this.**

Pin	Description	Pin	Description
1	3.3V	2	3.3V
3	GND	4	5V
5	GND	6	5V
7	GND	8	PW-OK
9	5VSB	10	12V
11	3.3V	12	-12V
13	GND	14	PS-ON
15	GND	16	GND
17	GND	18	-5V
19	5V	20	5V

13. **CD Audio Connector- CN1**

The 4-pin connectors enable the system to receive the audio output from the CD-ROM.

CN1	Description
1	CD-R
2	GND
3	GND
4	CD-L
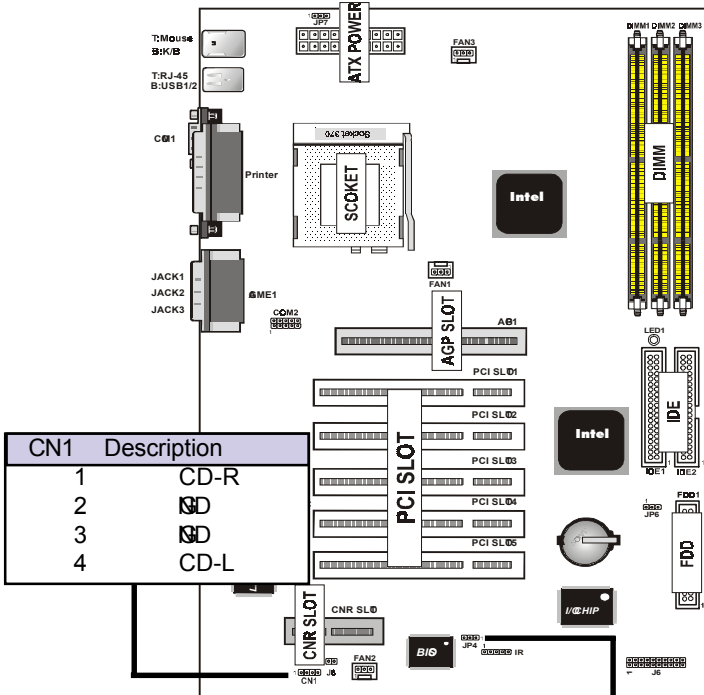
JP4 BIOS Boot Block Flash		
[1-2] UnLocked (Default)		
[2-3] Locked		

14. **BIOS Boot Block Flash Jumper-JP4**

The Jumper is used to locked/unlocked BIOS Boot Block Flash.

This Jumper should be unlock when flashing/programing the BIOS.

15. **Keyboard Wake up Setting- JP7**

The Jumper is used to Keyboard boot setting.

JP7 Keyboard Wake up Setting	
[1-2] Disabled	
[2-3] Enabled (Default) Keyboard Boot	

Pin J8	Assignment
	Close:secondary (Default)
	Open :primary
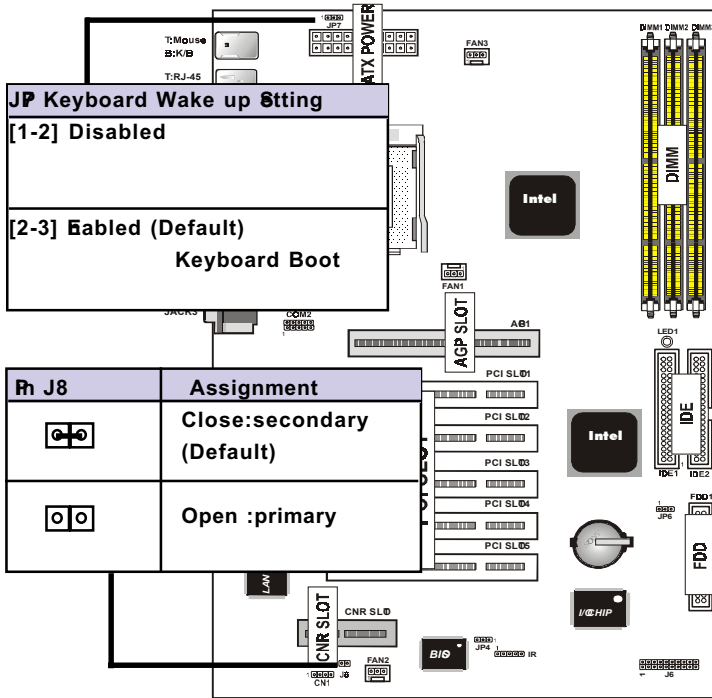
16. **CNR Card Use Setting-J8**

The Jumper is used to CNR Card use setting.

17. **STR LED-LED1**

The LED is used to STR ON/OFF state.

4

Award BIOS Setup

Introduction

This chapter discusses the Award Setup program built into the ROM BIOS. The Setup program allows user 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. The BIOS provides critical low-level support for standard devices such as disk drives and serial and parallel ports.

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

Plug and Play Support

This 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&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 specification.

DRAM Support

SDRAM (Synchronous DRAM) are supported.

Support CPU

This AWARD BIOS supports the Intel Celeron/Copperime PII/PIII Processor.

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 navi gate in the Setup program by using the keyboard.

Kystroke	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)
Esc	Main Menu:Quit without saving changes Submenus:Exit Current page to the next higher level menu
Move Enter	Move to 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
F6 Key	Load the fail-safe defaults from BIOS default table
F7 Key	Load the optimized defaults
F10 Key	Save all the CMOS changes and exit

4.1 Main Menu

Once you enter AWARD BIOS CMOS Set up Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup function. 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 1,2,3,4,5,6,7,8,9,10,11,12,13,14)is just for reference,please refer to the BIOS installed on the board for update information.*

◎ Figure 1. Main Menu

CMOS Setup Utility-Copyright(C) 1984-2000 Award Software

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 Configuration	Save & Exit Setup
PC Health Status	Exit Without Saving

Esc : Quit   ←→↑↓: Select Item
F10 : Save & Exit Setup
Time , Date , Hard Disk Type ...

Standard CMOS Features

This setup page includes all the item in standard compatible BIOS.

Advanced BIOS Features

This setup page includes all the item of BIOS special enchanced features.

Advanced Chipset Features

This setup page includes all the item of Chipset special enchanced features.

Integrated Peripherals

This selection page includes all the item of IDE hard drive and Program and Input/Output features.

Power Management Setup

This setup page includes all the item of power management features.

PnP/PCI Configuration

This setup page includes IRQ Setting by user define or default.

PC Health Status

This page shows the hardware Monitor information of the system

Frequency / Voltage Control

This setup page is control CPU's clock and frequency ratio.

Load Fail-Safed Defaults

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

Load Optimized Defaults

These settings are more likely to configure a workable computer when something is wrong. If you cannot boot the computer seccessfully, select the BIOS Setup options and try to diagnose the problem after the computer boots. These settings do not provide optional performance.

Set Supervisor Password

Change, set , or, disable password. It allows you to limit access to the system and Setup, or just to Setup.

Set User Password

You can specify both a User and a Supervisor password. When you select either password option, you are prompted for a 1-6 character password. Enter the password and then retype the password when prompted.

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

4.2 Standard CMOS Features

This item in Standard CMOS Setup Menu is divided into 10 categories. Each category includes no, one or more than one setup item. 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 Features**

CMOS Setup Utility-Copyright(C) 1984-2000 Award Software standard CMOS Features

```
┌─────────────────────────────────────────────────┬─────────────────┐
│ Date(mm:dd:yy)            Tue,Jun 6 2000          │ Item Help       │
│ Time (hh:mm:ss)           11:26:10                ├─────────────────┤
│                                                   │ Menu Level      │
│ IDE Primary Master        Press Enter None        │                 │
│ IDE Primary Slave         Press Enter None        │ Change the day, │
│ IDE Secondary  Master     Press Enter None        │ month,year      │
│ IDE Secondary Master      Press Enter None        │ and century.    │
│                                                   │                 │
│ Drive A                   1.44M,3.5 in            │                 │
│ Drive B                   None                    │                 │
│ Floppy 3 Mode Support     Disabled                │                 │
│                                                   │                 │
│ Video                     EGA/VGA                 │                 │
│ Halt On                   All,But Keyboard        │                 │
│                                                   │                 │
│ Base Memory               640K                    │                 │
│ Extended Memory           391168K                 │                 │
│ Total                     392192K                 │                 │
└─────────────────────────────────────────────────┴─────────────────┘
```

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

Main Menu Selections

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

Item	Options	Description
Date	Month DD YYYY	Set the system date.note that the 'Day' automatically changes when you set the data.
IDE Primary Master	Options are in its sub menu.	Press<Enter> to enter the sub menu of detailed.
IDE Primary Slave	Options are in its sub menu.	Press<Enter> to enter the sub menu of detailed.
IDE Secondary Master	Options are in its sub menu.	Press<Enter> to enter the sub menu of detailed.
IDE Secondary Slave	Options are in its sub menu.	Press<Enter> to enter the sub menu of detailed.
Drive A Drive B	None 360K,5.25in 1.2M,5.25in 720K,3.5in 1.44M,3.5in 2.88M,3.5in	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.
Base Memory	N/A	Displays the amount of conventional memory detected during boot up.
Extended Memory	N/A	Displays the amount of conventional memory detected during boot up.
Total Memory	N/A	Displays the total memory available in the system

4.3 Advanced BIOS Features

◎ **Figure 3. Advanced BIOS Features**

CMOS Setup Utility-Copyright(C) 1984-2000 Award
Software advanced BIOS Features

		Item Help
Virus Warning	Disabled	
CPU Internal Cache	Enabled	
External Cache	Enabled	Menu Level
CPU L2 Cache ECC Checking	Enabled	
Processor Number Feature	Enabled	Allows you to
Quick Power On Self Test	Enabled	choose the
First Boot Device	Floopy	VIRUS warning
Second Boot Device	HDD-0	feature for IDE
Third Boot Device	LS120	Hard Disk boot
Boot Other Device	Enabled	sector protection.
Swap Floppy Device	Disabled	If this function
Boot Up Floppy Seek	Enabled	is enabled and
Boot Up NumLock Status	On	someone attempt
Gate A20 Option	Fast	to write data into
Typematic Rate Setting	Disabled	this area,BIOS
Typematic Rate (Chars/Sec)	6	will show a
Typematic Delay (Msec)	250	warning message
Security Option	Setup	on screen and
OS Select For DRAM >64MB	Non-OS2	alarm beep
HDD S.M.A.R.T. Capability	Disabled	
Report No FDD For WIN 95	No	

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

Virus Warning

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

The Choices:Disabled(default),Enabled.

CPU Internal Cache

These two categories speed up memory access.However,it depends on CPU/chipset design.

Enabled(default)   Enabled cache.
Disabled   Disabled cache.

External Cache

This fields allow you to Enable or Disable the CPU'S "Level 2" secondary cache.Caching allows better performance.

Enabled(default)   Enabled cache.
Disabled   Disabled cache.

CPU L2 Cache ECC Checking

The item allows you to enable/disable CPU L2 Cache ECC Checking.

The Choices:Enabled(default),Disabled.

Processor Number Feature

The item will show up when you install the Pentium III processor.

Enabled(default)   Pentium Processor Number
                         Feature.
Disabled   Disabled.

Quick Power On Self Test

This category seeds up Power on self-Test(POST) after you power up the computer. If it is set to Enable, BIOS will shorten or skip some check items during POST.

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

First/Secondary/Third/Boot Other Device

> These BIOS attempts to load the operating system from
> the devices in the sequence selected in these items.
> **The Choices:** Floppy, LS120, HDD-0, HDD-1, HDD-2,
> HDD-3, SCSI, CDROM, Enabled, ZIP, LAN, Disabled.

Swap Floppy Seek

> If the system has two floppy drives, you can swap the
> logical drive name assignments.
> **The Choices:Enabled**, Disabled(default).

Boot Up Floppy Seek

> Seek disk drives during boot up. Disabled speeds boot-up.
> **The Choices:Enabled**(default), Disabled.

Boot Up NumLock Status

> Select power on state for Numlock.

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

Enabled	Enabled this option to adjust the keystroke repeat rate.
Disabled(default)	Disabled.

Typematic Rate (Char/Sec)

> Range between 6**(default)** and 30 characters per second.
> This option controls the speed of repeating keystrokes.

Typematic Delay (Msec)

This option sets the time interval for displaying the first and the second characters.

The Choices:250(default) ,500,750,1000

Security Option

This category allows you to limit access to the system and Setup,or just to Setup.

System	The system will not boot and access to Setup will be defined if the correct password is not entered in prompt.
Setup(default)	The system will boot,but access to Setup will be defined if the correct password is not entered in prompt.

HDD S.M.A.R.T. Capability

Enabled	Enabled HDD S.M.A.R.T. Capability.
Disabled(default)	Disabled HDD S.M.A.R.T. Capability.

OS Select For DRAM >64MB

Select the operating system that is running with greater than 64MB of RAM on the system

The Choices:Non-OS2(default),OS2

Report No FDD For Window 95

No(default)	Assign IRQ6 For FDD.
Yes	FDD Detect IRQ6 Automatically.

4.4 Advanced Chipset Features

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as DRAM and external cache. It also coordinates communications the PCI bus. It must be stated that these items should never need to be altered. The default settings have been chosen because they provide the best operating conditions for your system.The only time you might consider making any changes would be if you discovered that data was being lost while using your system

◎ **Figure 4. Advanced Chipset Features**

CMOS Setup Utility-Copyright(C) 1984-2000 Award Software advanced Chipset Features

```
┌─────────────────────────────────────────────┬──────────────┐
│ SDRAM CAS Latency/Time        3              │ Item Help    │
│ SDRAM Cycle Time Tras/Trc     6/8            ├──────────────┤
│ SDRAM RAS -to- CAS Delay      3              │ Menu Level   │
│ SDRAM RAS Precharge Time      3              │              │
│ System BIOS Cacheable         Disabled       │              │
│ Video BIOS Cacheable          Disabled       │              │
│ Memory Hole At 15M-16M          Disabled     │              │
│ CPU Latency Timer             Enabled        │              │
│ Delayed Transaction           Enabled        │              │
│ On-Chip Video Window Size     64MB           │              │
│ AGP Graphic Aperture Size     64MB           │              │
│ System Memory Frequency       Auto           │              │
│                                              │              │
│                                              │              │
└─────────────────────────────────────────────┴──────────────┘
←→↑↓: Move   Enter:Select   +/-/PU/PD:Value   F10:Save   ESC:Exit
F1:General Help   F5:Previous Values   F6:Fail-Safe Defaults
F7:Optimized Defaults
```

SDRAM CAS latency Time
    3(default)   Slower SDRAM DIMM
                                    Module.
    2   Fastest SDRAM DIMM
                                    Module.

SDRAM Cycle Time Tras/Trc
    6/8(default)   Set SDRAM Tras/Trc Cycle
                                    time in 6/8 SCLKs.
    5/7   Set SDRAM Tras/Trc Cycle
                                    time in 5/7 SCLKs.

SDRAM RAS -to- CAS Delay
    3(default)   Set SDRAM RAS -to- CAS
                                    delay 3 SCLKs.
    2   Set SDRAM RAS -to- CAS
                                    delay 2 SCLKs.

SDRAM RAS Precharge Time
    3(default)   Set SDRAM RAS Precharge
                                    Time to 3.
    2   Set SDRAM RAS Precharge
                                    Time to 2.

Delayed Transaction
    Enabled(default)   Slow speed ISA device in
                                    system
    Disabled   Disabled.

On-Chip Video Window Size
    64MB(default)   Set Graphics Aperture Size to
                                    64 MB.
    32MB   Set Graphics Aperture Size to
                                    32 MB.

Memory Hole At 15M-16M

In order to improve performace, certain space in memory
can be reserved for ISA cards. This memory must be
mapped into the memory's space below 16MB.
The Choices:Diasbled(default),Enabled.

AGP Graphics Aperture Size

64MB(default)	AGP Graphics Aperture Size is 64 MB.
32MB	AGP Graphics Aperture Size is 32 MB.

System Memory Frequency

Auto(default)	System Memory Frequency to Auto.
100MHz	Set system Memory Frequency to 100MHZ.
133MHz	Set system Memory Frequency to 133MHZ.

4.5 Integrated Peripherals

◎ **Figure 5. Integrated Peripherals**

CMOS Setup Utility-Copyright(C) 1984-2000 Award Software Integrated Peripherals

```
┌─────────────────────────────────────────────────┬──────────────┐
│ On-Chip Primary PCI IDE        Enabled          │ Item Help    │
│ On-Chip Secondary PCI IDE      Enabled          │              │
│ IDE Primary Master PIO         Auto             │ Menu Level   │
│ IDE Primary Slave PIO          Auto             │              │
│ IDE Secondary Master PIO       Auto             │              │
│ IDE Secondary Slave PIO        Auto             │              │
│ IDE Primary Master UDMA        Auto             │              │
│ IDE Primary Slave UDMA         Auto             │              │
│ IDE Secondary Master UDMA      Auto             │              │
│ IDE Secondary Slave UDMA       Auto             │              │
│ USB Controller                 Enabled          │              │
│ USB Keyboard Support           Disabled         │              │
│ Init Display First             PCI Solt         │              │
│ AC97 Audio                     Auto             │              │
│ IDE HDD Block Mode             Enabled          │              │
│ Power On Function              Button Only      │              │
│ KB Power On Password           Enter            │              │
│ Hot Key Power On               Ctrl-F1          │              │
│ Onboard FDC Controller         Enabled          │              │
│ Onboard Serial Port 1          3F8/IRQ4         │              │
│ Onboard Serial Port 2          2F8/IRQ3         │              │
│ UART Mode Select               Normal           │              │
│ RxD,TxD Active                 Hi,Lo            │              │
│ IR Transmission Delay          Enabled          │              │
│ UR2 Duplex Mode                Half             │              │
│ Use IR Pins                    IR/Rx2Tx2        │              │
│ Onboard Paraller Port          378/IRQ7         │              │
│ Parallel Port Mode             SPP              │              │
│ EPP Mode Type                  EPP1.7           │              │
│ ECP Mode Use DMA               3                │              │
│ PWRON After PWR-Fail           Off              │              │
│ Game Port Address              201              │              │
│ Midi Port Adress               330              │              │
│ Midi Port IRQ                  10               │              │
└─────────────────────────────────────────────────┴──────────────┘
```

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

On-Chip Primary PCI IDE

    Enabled(default)   Enabled onboard 1st channel
                                        IDE port.
    Disabled   Disabled onboard 1st channel
                                        IDE port.

On-Chip Secondary PCI IDE

    Enabled(default)   Enabled onboard 2nd channel
                                        IDE port.
    Disabled   Disabled onboard 2nd channel
                                        IDE port.

IDE Primary Master PIO(for onboard IDE 1st channel)

    Auto(default)   BIOS will automatically detect
                                        the IDE HDD Accessing mode.
    Mode 0~4   Manually set the IDE
                                        Accessing mode.

IDE Primary Slave PIO(for onboard IDE 2nd channel)

    Auto(default)   BIOS will automatically detect
                                        the IDE HDD Accessing mode.
    Mode 0~4   Manually set the IDE
                                        Accessing mode.

IDE Secondary Master PIO(for onboard IDE 1st channel)

    Auto(default)   BIOS will automatically detect
                                        the IDE HDD Accessing mode.
    Mode 0~4   Manually set the IDE
                                        Accessing mode.

IDE Secondary Slave PIO(for onboard IDE 2nd channel)

    Auto(default)   BIOS will automatically detect
                                        the IDE HDD Accessing mode.
    Mode 0~4   Manually set the IDE
                                        Accessing mode.

IDE Primary Master UDMA

    Auto(default)   BIOS will automatically detect the IDE HDD Accessing mode.

    Disabled   Disabled.

IDE Primary Slave UDMA

    Auto(default)   BIOS will automatically detect the IDE HDD Accessing mode.

    Disabled   Disabled.

IDE Secondary Master UDMA

    Auto(default)   BIOS will automatically detect the IDE HDD Accessing mode.

    Disabled   Disabled.

IDE Secondary Slave UDMA

    Auto(default)   BIOS will automatically detect the IDE HDD Accessing mode.

    Disabled   Disabled.

USB Controller

    Enabled(default)   Enabled USB Controller.

    Disabled   Disabled USB Controller.

USB Keyboard Support

    Enabled   Enabled USB Keyboard Support.

    Disabled(default)   Disabled USB Keyboard Support.

Init Display First

    PCI Slot(default)   Set Init Display First to PCI Slot.

AC 97 Audio
    Auto(default)   BIOS will automatically detect
                                            onboard Audio
    Disabled   Disabled.

IDE HD Block Mode
    Enabled(default)   Enabled.
    Disabled   Disabled.

Power On by Function
    Password   Enter from 1 to 7 characters to
                                              set the Keyboard Power On
                                            Password.

    Hot Key   Hot Key.
    Mouse Left   Mouse Left.
    Mouse Right   Mouse Right.
    Any Key   Any Key.
    Button Only   Button Only.
    Keyboard 98   If your keyboard have Owner
                                            key button,you can press the
                                          key to power on your system

KB Power On Password
    Enter   Enter from 1 to 7 characters to
                                            set the keyboard Power On
                                          Password.

Hot Key Power On   First you must to choose the
    Ctrl-F1   Power On by Hot Key function
    Ctrl-F2   then Enter from 1 to 8
    Ctrl-F3   characters to set the Hot Key
    Ctrl-F4   Power On your system
    Ctrl-F5
    Ctrl-F6
    Ctrl-F7
    Ctrl-F8

Onboard FDC Controller

    Enabled(default)   Enabled onboard FDC
                                   Controller.

    Disabled   Disabled onboard FDC
                                   Controller.

Onboard Serial Port1/Port2

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

UART Mode Select

    This item allows you decide which Infra Red(IR) function
    of the onboard I/O chip,you wish to use.
    The Choices:Normal(default),IrDA,SCR,ASKIR.

UR2 Duplex Mode

    This item allows you decide which Infra Red(IR) function
    of the onboard I/O chip.
    The Choices:Half (default),Full.

Onboard Parallel Port

    This item allows you decide access onboard parallel port
    controller with which I/O address.
    Disabled.
    378/IRQ7 (default)
    278/IRQ5
    3BC/IRQ7

PWRON After PWR-Fail
> The Choices: Off (default), On.

Parallel Port Mode
SPP(default)	Using Parallel port as Standard Parallel Port.
EPP	Using Parallel port as Enhanced Parallel Port.
ECP	Using Parallel port as Extended Capabilites Port.
ECP+EPP	Using Parallel port as ECP+EPP mode.

Game Port Address
201(default)	Set onboard game port is 201.
209	Set onboard game port is 209.
Disabled	Disabled.

Midi Port Address
300	Set Midi Port address is 300.
330(default)	Set Midi Port address is 330.

Midi Port IRQ
10(default)	Set Midi Port IRQ 10.
5	Set Midi Port IRQ 5.

4.6 Power Management Setup

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

◎ **Figure 6. Power Management Setup**

CMOS Setup Utility-Copyright(C) 1984-2000 Award Software Power Management Setup

```
┌──────────────────────────────────────────────────┬──────────────┐
│ ACPI Function               Enabled               │ Item Help    │
│ ACPI Suspend Type           S1(POS)               │              │
│ Power Management            User Define           │ Menu Level   │
│ Video Off Method            DPMS                   │              │
│ Video Off In Suspend        Yes                    │              │
│ Suspend Type                Stop Grant             │              │
│ Modem Use IRQ               3                      │              │
│ Suspend Mode                Disabled               │              │
│ HDD Power Down              Disabled               │              │
│ Soft-Off by PWR-BTTN        Instant-Off            │              │
│ Wake Up by PCI Card         Disabled               │              │
│ Power On by Ring            Enabled                │              │
│ USB KB Wake-Up From S3      Disabled               │              │
│ PWRON After PWR-Fail        Off                    │              │
│ CPU Thermal-Throttling      50.0%                  │              │
│ Resume by Alarm             Disabled               │              │
│ Data (of Month) Alarm       0                      │              │
│ Time (of hh:mm:ss) Alarm    0   0   0              │              │
│ **Reload Global Timer Events **                    │              │
│ Primary IDE 0               Disabled               │              │
│ Primary IDE 1               Disabled               │              │
│ Secondary IDE 0             Disabled               │              │
│ Secondary IDE 1             Disabled               │              │
│ FDD,COM,LPT Port            Disabled               │              │
│ PCI PIRQ[A-D]#              Disabled               │              │
└──────────────────────────────────────────────────┴──────────────┘
```

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

ACPI Function

This item display status of the Advanced Configuration and Power Management (ACPI).

ACPI Suspend Type

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

S1(POS)(default)   Power on Suspend.

S3(STR)   Suspend to RAM.

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. Doze Mode.
3. Suspend Mode.

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

Power Management

This option 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.

The Choices:User Define (default),Min Saving,Max Saving.

HD Power Down

By default,this is "Disabled", meaning that no matter the mode the rest of system,the hard drive will remain ready. Otherwise, you have a range of choices from 1 to 15 minutes or Suspend. This means that you can select to have your hard disk drive be turned off after a selected number of minutes or when the rest or the system goes into a suspend mode.

Disabled(default).

Doze Mode/Suspend Mode

The **Doze Mode** , and **Suspend Mode** fields set the Period of time after each of these modes actives. At Max Saving, these modes activate sequentially (in the given order) after one minute; at Min Saving after one hour.

Video Off In Suspend

This field determines when to activate the video off feature
for monitor power management.
The Choices:Yes(default),No

Video Off Method

This determines the manner in which the monitor is
blanked.

V/HSYNC+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.

Suspend Type

Stop Grant(default)	Set Susped type is stop grant.
Pwr On Suspend	Set Suspend type is Power on Suspend.

Modem Use IRQ

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

Suspend Mode

Disabled(default)	Disabled.
1 min - 1 hour	Set the timer to enter Suspend Mode.

HD Power Down

Disabled(default)	Disabled.
1 - 15 mins	Enabled.

Soft-Off by PWRBTN

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:Instant-Off (default),Delay 4 Sec.

Wake-Up by PCI card

Enabled	Enabled.
Disabled(default)	Disabled.

USB K/Mouse Wake From S3

Disabled(default)	Disabled.
Enabled	Enabled.

CPU Termal-Throttling

50.0%(default)
Monitor CPU Temp. will cause system slow down
CPU Duty Cycle to 12.5% / 25.0% / 37.5% / 62.5% / 70.5% / 87.5%

Resume by Alarm

Disabled(default)	Disabled.
Enabled	Enabled.

Primary IDE 0/1

Disabled(default)	Disabled.
Enabled	Enabled monitor Primary IDE 0/1 for Green event.

Secondary IDE 0/1

Disabled(default)	Disabled.
Enabled	Enabled monitor Secondary IDE 0/1 for Green event.

FDD,COM,LPT Port

Disabled(default)	Disabled.
Enabled	Enabled monitor FDD,COM, LPT Port.

PCI PIRQ[A-D]#

Disabled(default)	Ignore PCI PIRQ[A-D]# Active.
Enabled	Monitor PCI PIRQ[A-D]# Active.

PWRON After PWR-Fail

      The Choices:Off (default),On.

4.7 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 user should make any changes to the default settings.

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

CMOS Setup Utility-Copyright(C) 1984-2000 Award Software PnP/PCI Configurations

```
┌─────────────────────────────────────────────┬──────────────────┐
│ PNP OS Installed            No               │ Item Help        │
│ Reset Configuration Data      Disabled       │                  │
│ Resources Controlled By       Auto(ESCD)     │ Menu Level       │
│ IRQ Resources                 Press Enter    │                  │
│                                              │ When resources   │
│ PCI/VGA Palette Snoop         Disabled       │ are controlled   │
│                                              │ manually, assign │
│                                              │ each system      │
│                                              │ interrupt a type,│
│                                              │ depending on the │
│                                              │ type of device   │
│                                              │ using the        │
│                                              │ interrupt        │
└─────────────────────────────────────────────┴──────────────────┘
←→↑↓: Move   Enter:Select   +/-/PU/PD:Value   F10:Save   ESC:Exit
F1:General Help   F5:Previous Values   F6:Fail-Safe Defaults
F7:Optimized Defaults
```

PNP OS Installed

When set to YES,BIOS will only initialize the PnP cards used for booting(VGA,IDE,SCSI).The rest of the cards will be initalized by the PnP operation system like Windows 95.When set to No,BIOS will initialize all the PnP cards .Therefore for non-PnP operating system (DOS,Netware),this option must set to No.

Reset Configuration Data

The system BIOS supports the PnP feature so the system needs to record which resource is assigned and proceeds 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 at the system BIOS. If Disabled (Default) is chosen, the system ESCD will update only when the new configuration varies from the last one. If Enabled is chosen, the system is forced to update ESCDs and then is automatically set to the "Disabled" mode.

IRQ3	assigned to:PCI/ISA PnP
IRQ4	assigned to:PCI/ISA PnP
IRQ5	assigned to:PCI/ISA PnP
IRQ6	assigned to:PCI/ISA PnP
IRQ7	assigned to:PCI/ISA PnP
IRQ8	assigned to:PCI/ISA PnP
IRQ9	assigned to:PCI/ISA PnP
IRQ10	assigned to:PCI/ISA PnP
IRQ11	assigned to:PCI/ISA PnP
IRQ12	assigned to:PCI/ISA PnP
IRQ13	assigned to:PCI/ISA PnP
IRQ14	assigned to:PCI/ISA PnP
IRQ15	assigned to:PCI/ISA PnP
DMA-0	assigned to:PCI/ISA PnP
DMA-1	assigned to:PCI/ISA PnP
DMA-2	assigned to:PCI/ISA PnP
DMA-3	assigned to:PCI/ISA PnP
DMA-4	assigned to:PCI/ISA PnP
DMA-5	assigned to:PCI/ISA PnP
DMA-6	assigned to:PCI/ISA PnP
DMA-7	assigned to:PCI/ISA PnP

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 for 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.

Resources Controlled By

By Choosing "Auto" (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 no IRQ/DMA and I/O port conflicts.

IRQ Resources

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

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 system where the 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 forward to the ISA bus. The non-VGA ISA graphic controller can then snoop the data on the ISA bus. Unless you have the above sistuation, you should disable this option.

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

4.8 PC Health Status

◎ Figure 8. PC Health Status

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Software PC Health Status

```
┌─────────────────────────────────────────────┬──────────────┐
│ CPU Warning Temperature      Disabled        │ Item Help    │
│ Current System Temp.         39℃/102 ℉      ├──────────────┤
│ Current CPU1 Temp.           44℃/111 ℉       │ Menu Level   │
│ Current CPU Fan1 Speed       0PRM            │              │
│ Current CPU Fan2 Speed       5578PRM         │              │
│ IN0(V)                       1.61V           │              │
│ IN1(V)                       1.82V           │              │
│ IN2(V)                       3.31V           │              │
│ +5V                          4.99V           │              │
│ +12V                         11.91V          │              │
│ -12V                         -12.11V         │              │
│ -5V                          -5.75V          │              │
│ VBAT(V)                      3.05V           │              │
│ 5VSB(V)                      4.75V           │              │
│ Shut down Temperature        Disabled        │              │
└─────────────────────────────────────────────┴──────────────┘
```

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

Current Voltage(V) Vcore / VGL / Vcc3/+-12V/5V/5VSB/ VBAT

Detect system's voltage status automatically.

Current CPU1 Temperature(℃/℉)

This field displays the current CPU temperature,if you computer contain a monitoring system

Current Fan/Power Fan / System Fan Speed

These field displays the current speed of up to System Fans,if you computer contain a monitoring system

CPU Warning Temperature(℃)

Disabled(default)	Disabled.
60℃ / 140℉	Monitor CPU Temp at 60 ℃ / 140℉.
50℃ / 122℉	Monitor CPU Temp at 50 ℃ / 122℉.
53℃ / 127℉	Monitor CPU Temp at 53 ℃ / 127℉.
56℃ / 133℉	Monitor CPU Temp at 56 ℃ / 133℉
63℃ / 145℉	Monitor CPU Temp at 63 ℃ / 145℉
66℃ / 151℉	Monitor CPU Temp at 66 ℃ / 151℉
70℃ / 158℉	Monitor CPU Temp at 70 ℃ / 158℉

Shutdown Temperature(℃ / ℉)

Disabled(default)	Disabled.
60℃ / 140℉	Monitor CPU Temp at 60 ℃ / 140℉, if Temp>60 ℃ /140℉ system will automatically power off.
65℃ / 149℉	Monitor CPU Temp at 65 ℃ / 149℉, if Temp>65 ℃ /149℉ system will automatically power off.
70℃ / 158℉	Monitor CPU Temp at 70 ℃ / 158℉, if Temp>70 ℃ /158℉ system will automatically power off.
75℃ / 167℉	Monitor CPU Temp at 75 ℃ / 167℉, if Temp>75 ℃ /167℉ system will automatically power off.

4.9 Frequency / Voltage Control

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

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Software Frequency / Voltage Control

```
┌─────────────────────────────────────────────────┬──────────────────┐
│ Auto Detect DIMM / PCI CLK       Disabled        │ Item Help        │
│ Spread Spectrum                  Disabled        │                  │
│ CPU Host/PCI/Spread Spec.        Default         │ Menu Level       │
│ CPU Clock Ratio                  X7              │                  │
│                                                  │                  │
│                                                  │                  │
│                                                  │                  │
│                                                  │                  │
│                                                  │                  │
│                                                  │                  │
└─────────────────────────────────────────────────┴──────────────────┘
```

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

Auto Detect DIMM / PCI CLK

This item allows you to enable/disable auto detect DIMM /
PCI CLOCK.
The Choices:Disabled(default),Enabled.

CPU Host/PCI/Spread Spec.

This item allows you to select CPU Host Clock (CPU/
PCI).

> *NOTE:*
> *If unfortunately,the system frequency that you are*
> *selected is not functioning, there are two methods od*
> *booting-up the system*

Method1:Clear the COMS data by setting the JP6((2-3)
closed) as "On" status. All the COMS data will be loaded
as default setting.
Method2:Press the<Insert>key and Power button
simultaneously, after that keep-on pressing the<Insert>
key until the Power-on screen showed. This action will
boot-up the system according to FSB of the processor..

CPU Clock Ratio

This option will not be shown if you are using a CPU with the locked ratio.
X3/X3.5/X4/X4.5/X5/X5.5/X6/X6.5/X7/X7.5/X8

Spread Spectrum

This function id designed to EMI test only.
The Choices:Disabled(default),Enabled.

4.10 Load Fail-Safe Defaults

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

◎ **Figure 10. Load Fail-Safe Defaults**

CMOS Setup Utility-Copyright(C) 1984-2000 Award Software
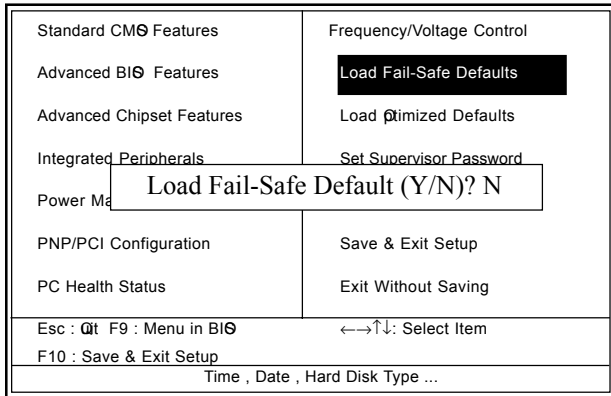
```
┌──────────────────────────────────────────────────────────┐
│  Standard CMOS Features      │  Frequency/Voltage Control  │
│                              │                             │
│  Advanced BIOS Features      │ � Load Fail-Safe Defaults  │
│                              │                             │
│  Advanced Chipset Features   │  Load Optimized Defaults    │
│                              │                             │
│  Integrated Peripherals      │  Set Supervisor Password    │
│              ┌─────────────────────────────────────┐       │
│  Power Ma    │  Load Fail-Safe Default (Y/N)? N     │      │
│              └─────────────────────────────────────┘       │
│  PNP/PCI Configuration       │  Save & Exit Setup          │
│                              │                             │
│  PC Health Status            │  Exit Without Saving        │
├──────────────────────────────────────────────────────────┤
│  Esc : Quit  F9 : Menu in BIOS     ←→↑↓: Select Item       │
│  F10 : Save & Exit Setup                                   │
│           Time , Date , Hard Disk Type ...                 │
└──────────────────────────────────────────────────────────┘
```

Pressing 'Y' loads the default values that are factory settings for optimal performance system operations.

4.11 Load Optimized Defaults

When you press <Enter> on this item, you get a

confirmation dialog box with a message similar to:

◎ **Figure 11. Load Optimized Defaults**

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Software

```
┌─────────────────────────────────────────────────────────────┐
│  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 Manage ┌──────────────────────────────────┐           │
│               │  Load Optimized Default (Y/N)? N  │           │
│  PNP/PCI Conf └──────────────────────────────────┘ Setup     │
│                                                               │
│  PC Health Status              Exit Without Saving            │
├─────────────────────────────────────────────────────────────┤
│  Esc : Quit  F9 : Menu in BIOS    ←→↑↓: Select Item           │
│  F10 : Save & Exit Setup                                      │
├─────────────────────────────────────────────────────────────┤
│              Time , Date , Hard Disk Type ...                 │
└─────────────────────────────────────────────────────────────┘
```

Pressing 'Y' loads the default values that are factory settings
for optimal performance system operations.

4.12 Set Supervisor / User Password

◎ **Figure 12. Set Supervisor / User Password**

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```
┌─────────────────────────────────────────────────────────────┐
│  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/PC │  Enter Password:                     │ p            │
│         └──────────────────────────────────────┘             │
│  PC Health Status              Exit Without Saving            │
├─────────────────────────────────────────────────────────────┤
│  Esc : Quit  F9 : Menu in BIOS      ←→↑↓: Select Item        │
│  F10 : Save & Exit Setup                                      │
├─────────────────────────────────────────────────────────────┤
│           Time , Date , Hard Disk Type ...                    │
└─────────────────────────────────────────────────────────────┘
```
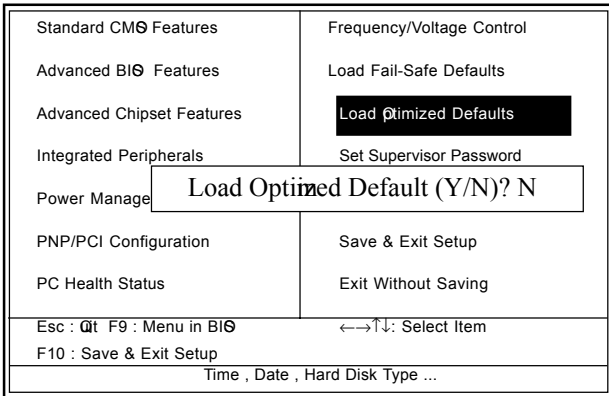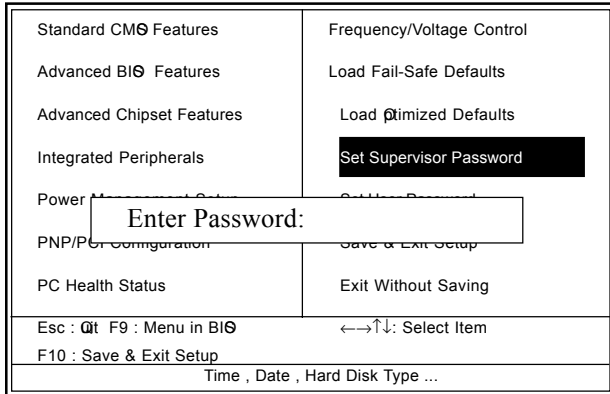
When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

Enter Password

Type the password, up to eight characters, and press <Enter>. The password you type 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 about the selection and not enter a password. To disable password, just press <Enter> when you are prompted to enter password. A message will confirm that you wish to disable the password. Once the password is disabled, the system will boot and you can enter setup freely.

Password Disabled

If you select "System" at the Security Option of BIOS
Features Setup Menu, you will be prompted for the password
every time when the system is rebooted, or any time when
you try to enter Setup. If you select "Setup" at Security
Option of BIOS Features Setup Menu, you will be prompted
only when you try to enter Setup.

4.13 Save & Exit Setup

◎ **Figure 13. Save & Exit Setup**

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```
┌─────────────────────────────────────────────────────────────┐
│  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 │       Save & Exit Setup (Y/N)? Y         │          │
│        └──────────────────────────────────────────┘          │
│  PNP/PCI Configuration         Save & Exit Setup              │
│                                                               │
│  PC Health Status              Exit Without Saving            │
│ ─────────────────────────────────────────────────────────────│
│  Esc : Quit   F9 : Menu in BIOS      ←→↑↓: Select Item        │
│  F10 : Save & Exit Setup                                      │
│ ─────────────────────────────────────────────────────────────│
│              Time , Date , Hard Disk Type ...                 │
└─────────────────────────────────────────────────────────────┘
```
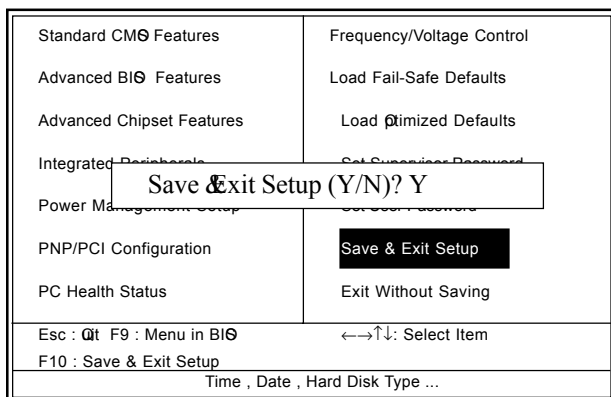
Type "Y" will quit the Setup Unility and save the user setup
value to RTC CMOS RAM.

Type "N" will return Setup Unility.

4.14 Exit Without Saving
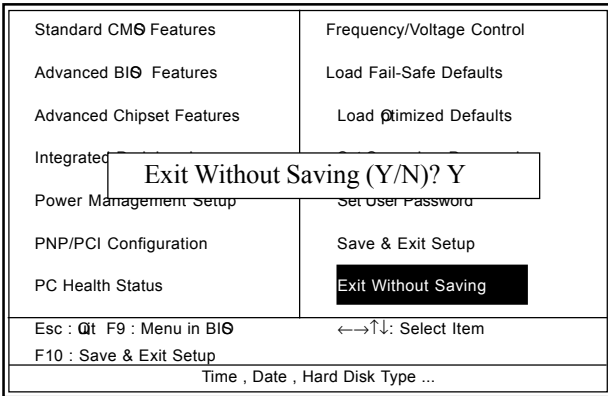
◎ **Figure 14. Exit Without Saving**

CMOS Setup Utility-Copyright(C) 1984-2000 Award Software

```
┌─────────────────────────────────────────────────────────┐
│  Standard CMOS Features      │   Frequency/Voltage Control │
│                              │                             │
│  Advanced BIOS Features      │   Load Fail-Safe Defaults   │
│                              │                             │
│  Advanced Chipset Features   │   Load Optimized Defaults   │
│                              │                             │
│  Integrated ┌──────────────────────────────────────┐     │
│             │   Exit Without Saving (Y/N)? Y       │     │
│  Power Management Setup       │   Set User Password         │
│                              │                             │
│  PNP/PCI Configuration        │   Save & Exit Setup         │
│                              │                             │
│  PC Health Status             │  Exit Without Saving        │
│──────────────────────────────────────────────────────────│
│  Esc : Quit  F9 : Menu in BIOS  ←→↑↓: Select Item          │
│  F10 : Save & Exit Setup                                   │
│──────────────────────────────────────────────────────────│
│              Time , Date , Hard Disk Type ...              │
└─────────────────────────────────────────────────────────┘
```

Type "Y" will quit the Setup Unility without saving to RTC CMOS RAM.

Type "N" will return Setup Unility.

Date :   /   /

Warranty Card/Technical Fault Report

M/B Model No.:_____   **Vender**

Serial No.   :_____

Date of Purchasing:_____

Hardware Configuration Used :

CPU	
RAM (Brand,MB)	
Video Card	
Hard Drive	
Other Card	

Diagnostic Software Used :

Fault Description :