6A815E1/815EP1

User's Manual Version 1.0

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Table of Contents

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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 complete . Should any item be damaged or missing , please contact your retailer immediately.

- ⌛ The 6A815E1/6A815EP1 mainboard.

- ⌛ 1 x IDE UDMA100 ribbon cable.

- ⌛ 1 x COM2 cable.

- ⌛ 1 x Floppy ribbon cable.

- ⌛ 6A815E1/815EP1 support software:
  CD driver and utilites.
  -Intelinf (Intel(R) chipset software to system containing 815E
  chipset)
  -Easy Over Clock
  (Realtek-AP (Selecting the CPU Frequency))
  -Uatadrv (Intel(R) ultra ATA storage setup)
  -Sound (on board sound driver)

- ⌛ This user's Manual

2

Features

Features of the 6A815E1/6A815EP1 Mainboard

The 6A815E1/6A815EP1 is designed for the PC user who wants many new key features processed by the fastest CPU in a economical package. This mainboard :

⌛ **New general CPU support :**
- Socket 370 for Intel PPGA/FC-PGA PII/PIII processor.
- Socket 370 Celeron (300MHz~800MHz) or higher processor.
- Socket 370 VIA Cyrix III 500~600MHz processor.
- Socket 370 Copperine (500MHz~1GHz) or higher processor.

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

- **Biggest memory capacity :**

  6A815E1/6A815EP1 is equipped with three DIMM sockets 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 :**
  - Provides 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 devices.

- **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 , supports 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 maxim 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.**

- ❖ **Integrated Graphics :**
  (Only supports 6A815E1 motherboard)
  Controller supports 3D hyper pipelined architecture, parallel data processing and compression, precise pixel interpolation, full 2D hardware acceleration, and motion video acceleration.

- **Support Ring on by modem/Alarm on :**
  Supports 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 Go:**
  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 6A815E1/6A815EP1 Mainboard layout
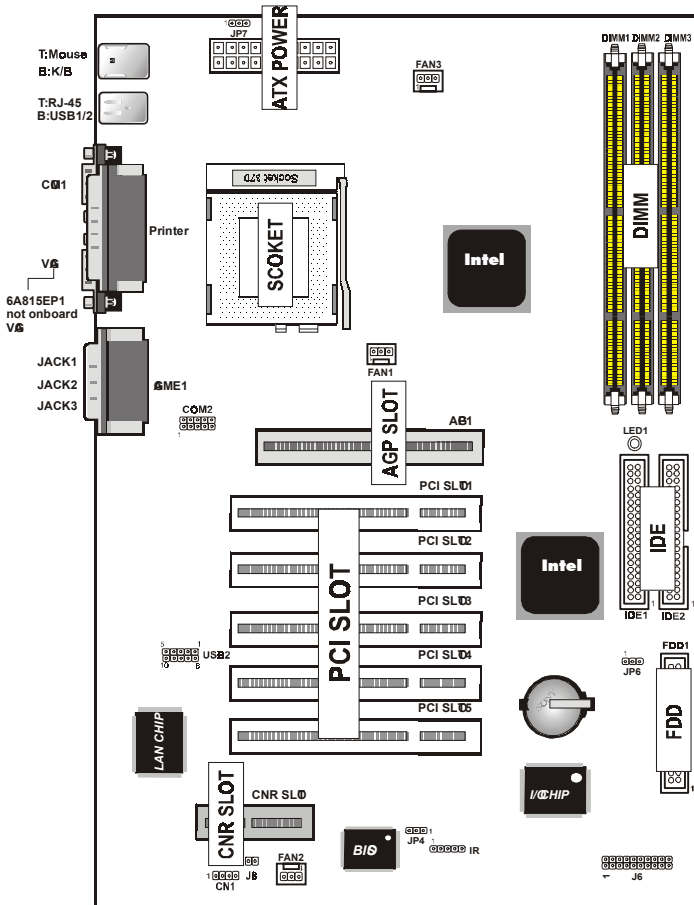
3

Installation

Jumper

Jumper		Refer to page

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 diagram 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.

JP6 CMOS Clear
[1-2] Normal (Default)
[2-3] Enabled (Clear CMOS)
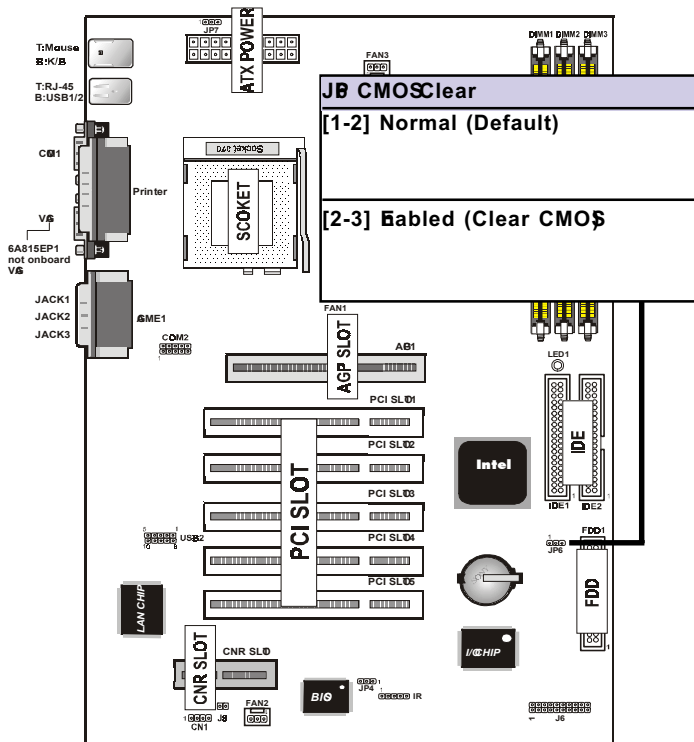
System Memory (DIMM Module)

This **6A815E1/6A815EP1** main board supports three 168 pin DIMM of 16 MB, 32 MB, 64 MB, 128 MB ,256MB to form a memory size between 16MB to 256MB.

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

Install memory in any or all Banks in Combination:

> **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.
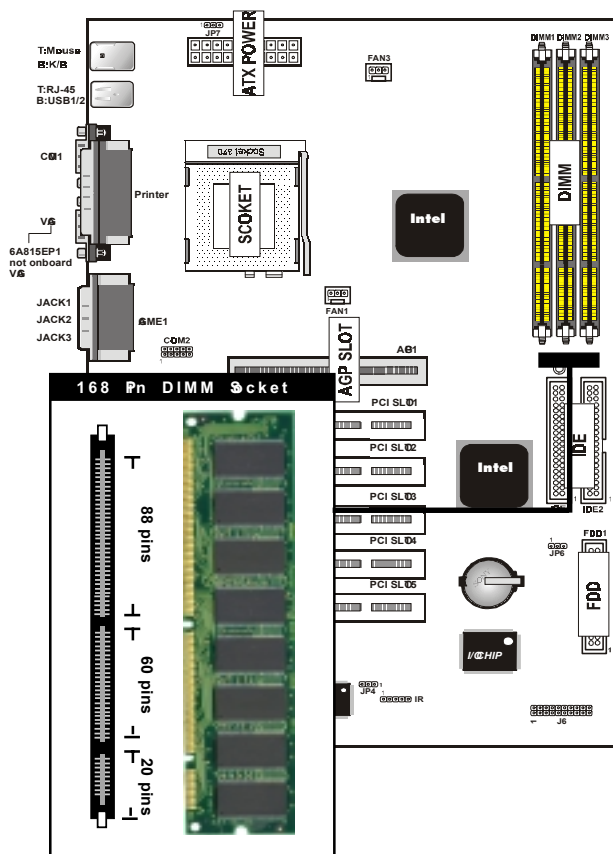
The Dual Inline Memory Module (DIMM) memory module must
be 3.3v . You can identify the type of DIMM module by the illustra-
tion below:
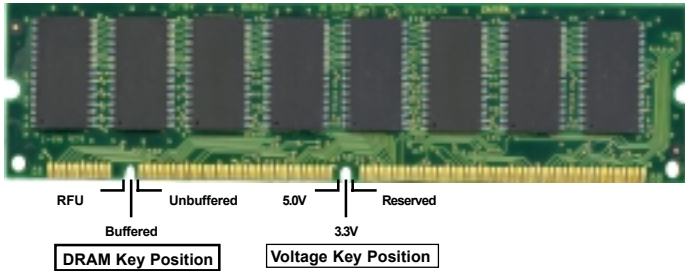
168 Pin DRAM DIMM Notch Key Definitions

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.
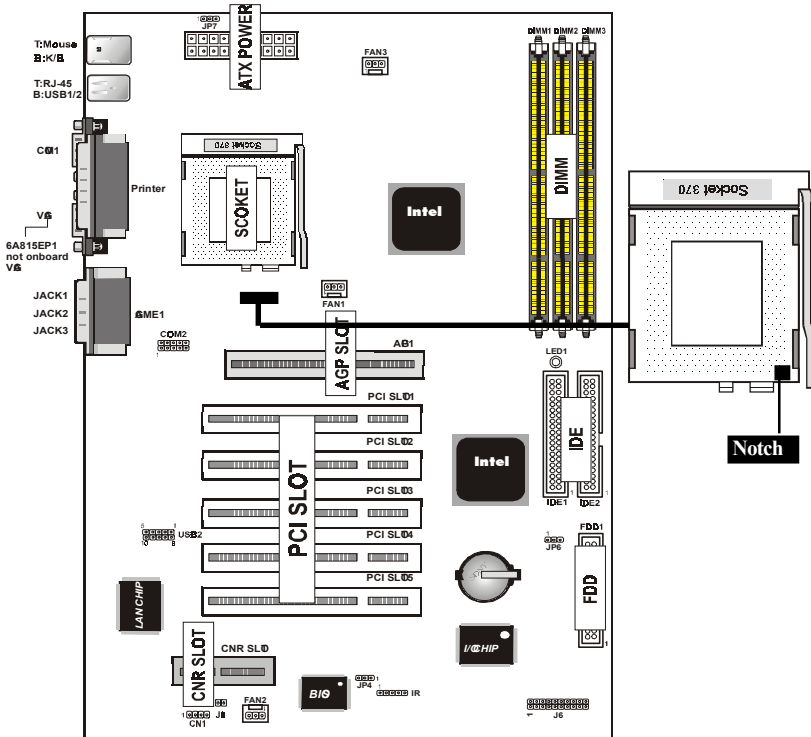
Clearance Requirements

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) .

Selecting the CPU Frequency

CPU voltage auto-detection and allow user to set CPU frequency through BIOS setup, no jumper or switch is needed. The correct CPU information is saved into EPROM, with these technologies, the disadvantages of Pentium base jumper-less design are eliminated. 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, 8.0x, 8.5x, 9.0x, 9.5x, 10x, 10.5x, 11x, 11.5x, 12x, .

CPU Host/PCI Clock/PC133
This item lets you set external clock (bus clock). The possible settings are 66,100 and 133 MHZ....
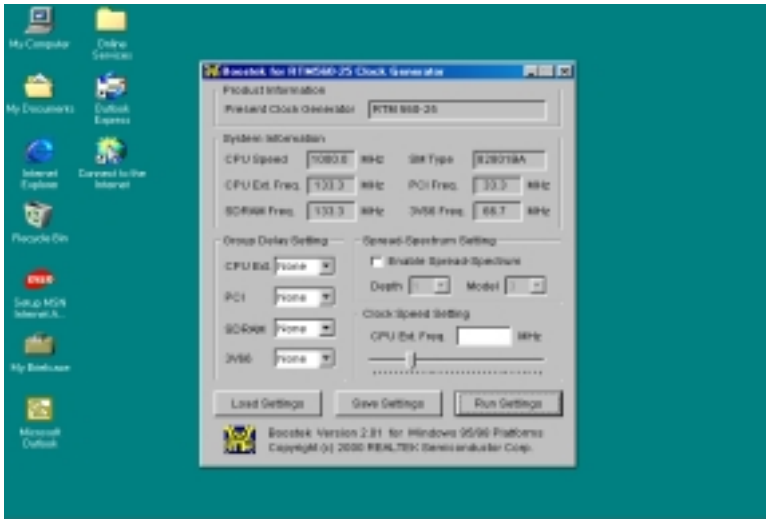
1. **Boostek is a overclocking utility that can overclock step lessly.**
2. **If you want to overclock , you should , make sure the following:**
   a. **Setup CPU/SDRAM frequency in BIOS.**
      (EX: CPU/SDRAM=66/100, 100/100, 133/100 or 133/133)
   b. **Adjust the FSB of CPU to the frequency you want, then press "Run Setting" to start overclocking.**
      (SDRAM, 3V66, PCI will be adjusted in the same rate at same time)

3. **Boostek-9x for in95/98**

4. **Boostek-2000-NT for Win2000/ Winnt 4.0**

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 PS/2 Mouse

7 RJ-45 (option)

4 Parallel (Printer) Port (25-pin Female)

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

1 PS/2 Keyboard (6-pin Female)

5 USB1/2

3 COM1
Serial Port

6 VGA

SPEAKER
LINE IN
MIC

13 ATX Power Connector

10 FAN 1,2,3 Connector

9 IDE Connector

5 USB3/4

11 IR Port

CD Audio Connector

14

8 Floppy Driver Connector

12 PANEL

3 COM2
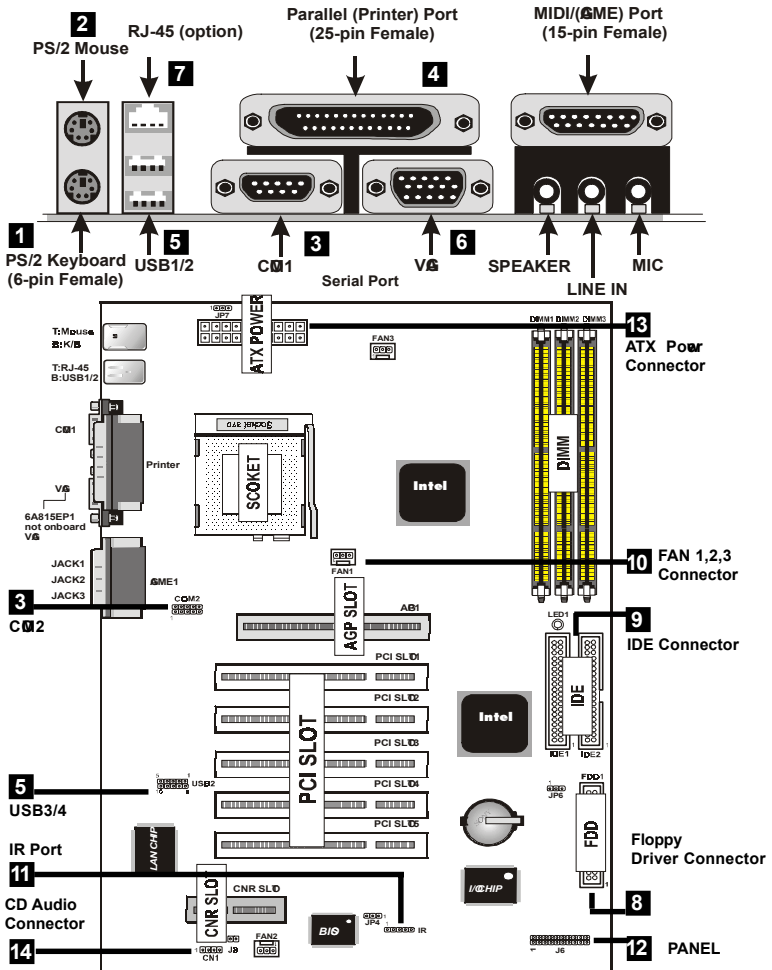
1. **PS/2 Keyboard port**
   This connection is for a standard keyboard using an PS/2 plug (mini DIN) . This connector will not allow standard at AT size (large DIN) keyboard plugs. You may use a DIN to mini DIN adapter on standard AT keyboards.

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	6
P0-	2	7 GND
P0+	3	8 P1+
GND	4	9 P1-
	5	10 VCC
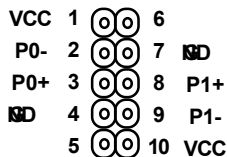
6. **VGA Connectors (15-pin)**
   (Only support 6a815e1 motherboard)
   This connectors support monitor.

7. **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 .

8. **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.

9. **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.**

10. **FAN1 , FAN2 , FAN3 CPU Cooling Fan (FAN/PWR)**

These connectors support cooling fans of 500mA (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.

(Only FAN1 and FAN3 can detect FAN speed)

FAN1/2/3 CPU Cooling FAN	
Pin	**Description**
1	Ground
2	+12VDC
3	Signal
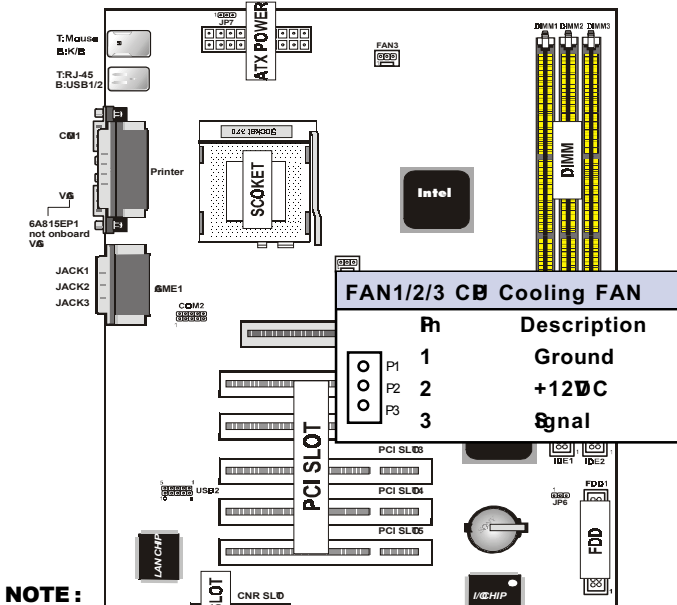
NOTE :

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

WARING :

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.

11. **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 open-
    ing 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

12. **J6**

```
┌─────────────────────────────────────────┐
│  J6 PANEL Connector                      │
│                                          │
│               SPEAK                      │
│                +                         │
│   2  ⊙⊙⊙⊙⊙⊙⊙⊙⊙⊙⊙                         │
│   1  ⊙⊙⊙⊙⊙⊙⊙⊙⊙⊙⊙                         │
│        +         +                       │
│   PW_BN   PW_LED   HD_LED   RST           │
└─────────────────────────────────────────┘
```
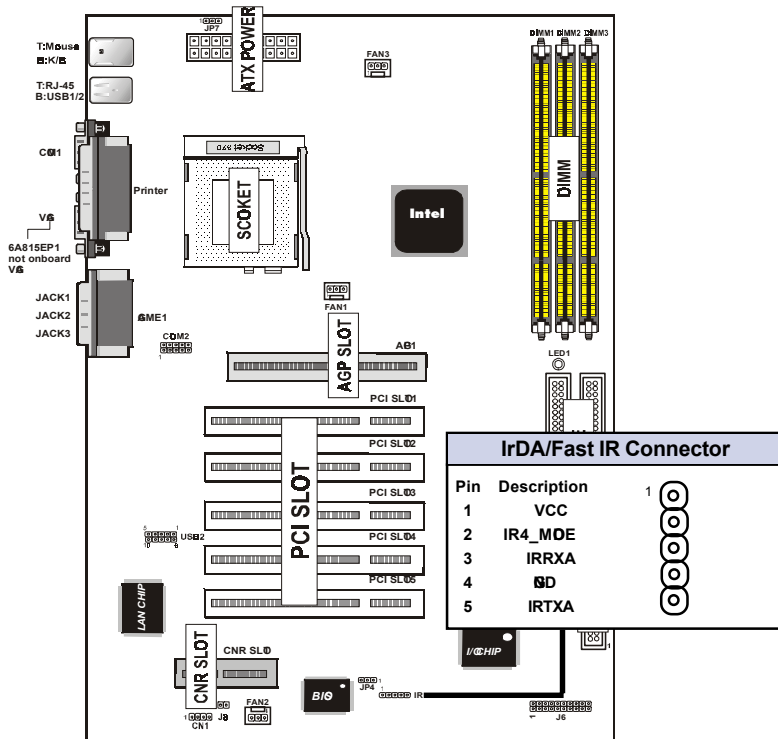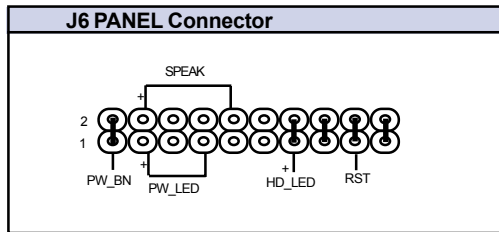
a. **IDE activity LED (HD-LED)**

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.

13. **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 with-
> out 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

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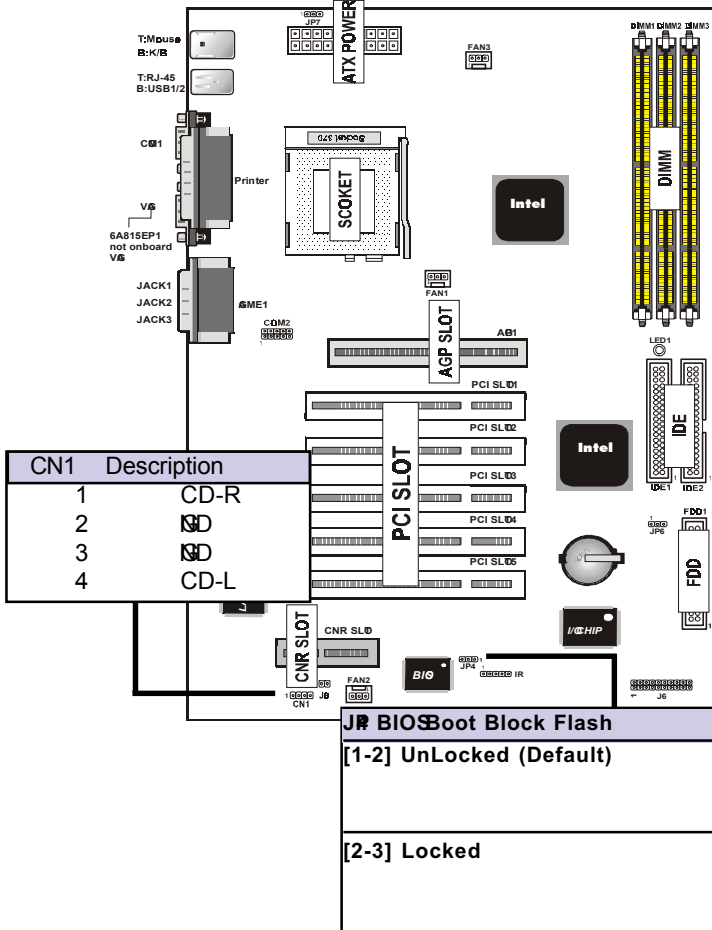
15. **BIOS Boot Block Flash Jumper-JP4**

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

    This Jumper should be unlock when flashing/programing the

    BIOS.

16. Keyboard Wake up Setting- JP7

The Jumper is used to Keyboard boot setting.

T:Mouse
B:K/B
T:RJ-45

JP7

JP7 Keyboard Wake up Setting

[1-2] Disabled

[2-3] Enabled (Default)
          Keyboard Boot

JP7

FAN3

DIMM1 DIMM2 DIMM3

DIMM

Intel

FAN1

JACK3   COM2

AGP SLOT   AGP1

Pin J8	Assignment
	Close:secondary (Default)
	Open :primary

LED1

IDE

PCI SLOT1

PCI SLOT2

PCI SLOT3

PCI SLOT4

PCI SLOT5

Intel

IDE1 IDE2

JP6

FDD1

FDD

LAN

CNR SLOT CNR SLOT

BIOS

I/O CHIP

JP4   IR

FAN2

CN1   J8

J6

ATX POWER

17. CNR Card Use Setting-J8

The Jumper is used to CNR Card use setting.

18. 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 the 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

This 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/Copperine PII/PIII Processor.

Using Setup

In general, you use the arrow keys to highlight item, 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 ore detail about how to navigate in the Setup program by using the keyboard.

Note:

(BIO version 1.0 is for reference only. If there is a change in BIO version, please use the actual version on the BIO.)

Keystroke	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left(menu bar)
Right arrow	Move to the item on the right(menu bar)
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 Setup 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 in the 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 updated 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 items in the standard compatible BIOS.

Advanced BIOS Features

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

Advanced Chipset Features

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

Integrated Peripherals

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

Power Management Setup

This setup page includes all the items of the power manage ment features.

PnP/PCI Configuration

This setup page includes the user defined or default IRQ Setting.

PC Health Status

This page shows the hardware Monitor information of the system

Frequency / Voltage Control

This setup page controls the CPU's clock and frequency ratio.

Load Fail-Safe 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 successfully, 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 the 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                       │              │
│                                                      │              │
│ 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	Menu Level
External Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	Allows you to
Processor Number Feature	Enabled	choose the
Quick Power On Self Test	Enabled	VIRUS warning
First Boot Device	Floopy	feature for IDE
Second Boot Device	HDD-0	Hard Disk boot
Third Boot Device	LS120	sector protection.
Boot Other Device	Enabled	If this function
Swap Floppy Drive	Disabled	is enabled and
Boot Up Floppy Seek	Enabled	someone attempts
Boot Up NumLock Status	On	to write data into
Gate A20 Option	Fast	this area,BIOS
Typematic Rate Setting	Disabled	will show a
Typematic Rate (Chars/Sec)	6	warning message
Typematic Delay (Msec)	250	on screen and
Security Option	Setup	sound an alarm
OS Select For DRAM >64MB	Non-OS2	
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 attempts to write data into this area, BIOS will show a warning message on screen and sound an alarm

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 speeds 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

This 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 Drive

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

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 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.

HD 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 of 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       7/9               ├──────────────┤
│ 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

    7/9(default)   Set SDRAM Tras/Trc Cycle
                                     time in 7/9 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 performance, 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 Mouse Support	Enabled	
USB Keyboard Support	Enabled	
Init Display First	PCI Solt	
AC97 Modem	Auto	
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 Mouse Support
    Enabled(default)   Enabled USB Mouse Support.
    Disabled   Disabled USB Mouse Support.

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

AC 97 Modem
    Auto(default)   BIOS will automatically detect onboard Modem
    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 has an 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 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 to select 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 to select the Infra Red(IR) function
    of the onboard I/O chip.
    The Choices: Half (default), Full.

Onboard Parallel Port

> This item allows you to select the I/O address with which to access the onboard parallel port controller.
> **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 to 201.
209	Set onboard game port to 209.
Disabled	Disabled.

Midi Port Address

300	Set Midi Port address to 300.
330(default)	Set Midi Port address to 330.

Midi Port IRQ

10(default)	Set Midi Port IRQ to 10.
5	Set Midi Port IRQ to 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-BTN              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 "Press Enter" next to the "Power Management" label and then press the enter key, it will take you to 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.

HDD Power Down

By default, this is "Disabled", meaning that no matter the mode of the rest of the 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 activates. 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.
PwrOn 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.

Power on by Ring

Enabled(default)	Enabled.
Disabled	Disabled.

USB KB Wake From S3

Disabled(default)	Disabled.
Enabled	Enabled.

CPU Termal-Throttling

50.0%(default)

Monitor CPU Temp. will cause system to 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 when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users 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 operating 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 be 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's 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 are 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, the Write Access to the palette will not show up on the ISA bus if the PCI VGA controller responds to the Write.

In this case, the PCI VGA controller should not respond to the Write, it should only snoop the data and permit the access to be forwarded to the ISA bus. The non-VGA ISA graphic controller can then snoop the data on the ISA bus. Unless you have the above situation, you should disable this option.

Disabled (default)	Function disabled.
Enabled	Function enabled.

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 CPU Temperature	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 CPU Temperature(℃ / ℉)

This field displays the current CPU temperature,if your computer contains a monitoring system

Current Fan/Power Fan / System Fan Speed

This field displays the current speed of the System Fans,if your computer contains 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 the CPU Host Clock (CPU/
PCI).

> *NOTE:*
> *If the frequency you have selected is not functioning,*
> *there are two methods of 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 shows. This action will
boot-up the system according to the 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/X8.5/ 9X/9.5X/10X/10.5X/11X/11.5X/12X.

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
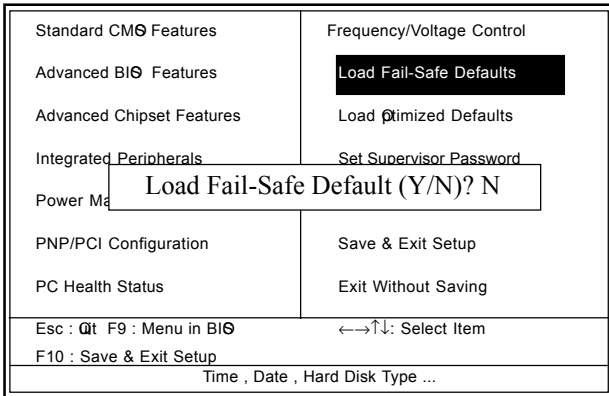
```
┌─────────────────────────────────┬─────────────────────────────────┐
│ Standard CMOS Features          │ Frequency/Voltage Control       │
│                                 │                                 │
│ Advanced BIOS Features          │ Load Fail-Safe Defaults         │
│                                 │                                 │
│ 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 of 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**

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 Manage┌─────────────────────────────────┐              │
│              │   Load Optimized Default (Y/N)? N │              │
│  PNP/PCI Configuration└──────────────────────────┘ 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 of system operations.

4.12 Set Supervisor / User Password

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

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 F9 : Menu in BIOS	←→↑↓: Select Item
F10 : Save & Exit Setup	
Time , Date , Hard Disk Type ...	

Enter Password:

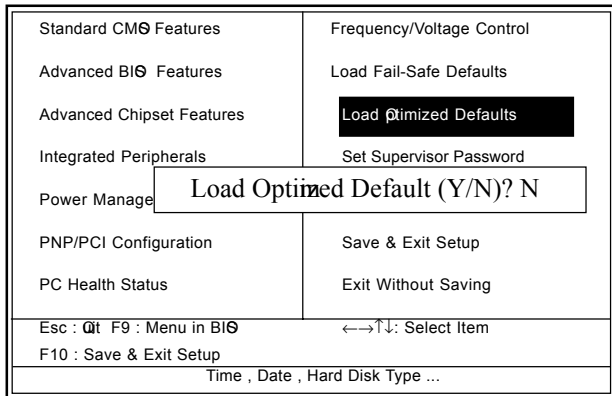When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

Enter Password

Type a 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 abort the selection and not enter a password. To disable the password, just press <Enter> when you are prompted to enter a 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 the 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**

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    │
│            Save & Exit Setup (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 ...                  │
└─────────────────────────────────────────────────────────────┘
```
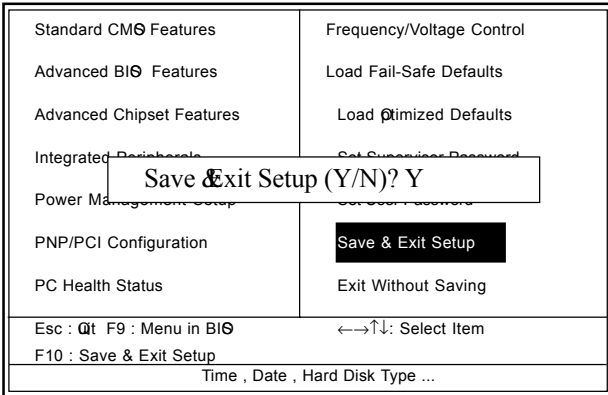
Typing "Y" will quit the Setup Utility and save the user setup value to RTC CMOS RAM.

Typing "N" will return to the Setup Utility.

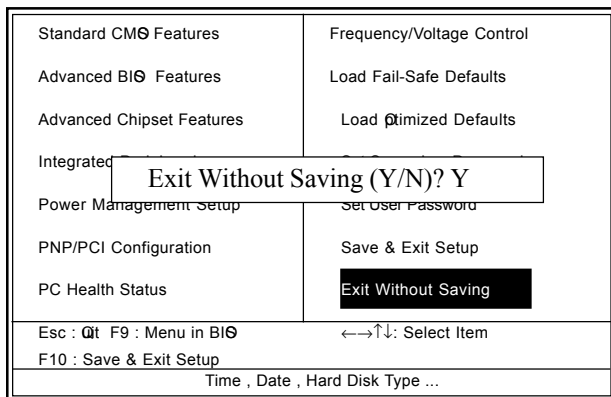## 4.14 Exit Without Saving

◎ **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 ...            │
└─────────────────────────────────────────────────────────┘
```

Typing "Y" will quit the Setup Utility without saving to RTC CMOS RAM.

Typing "N" will return to the Setup Utility.

Date :   /   /

Warranty Card/Technical Fault Report

M/B Model No.:_____   Vender

Serial No.   :_____

Date of Purchase:_____

Hardware Configuration Used :

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

Diagnostic Software Used :

Fault Description :