6M810E

User's Manual Version 1.2

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Table of Contents

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.

The mainboard is a high-performance mainboard based on the advanced Socket 370 microprocessor, the VGA, Audio , PCI Bus and the Intel 810E chipset **(6M810E)** / Intel 810-DC100 chipset **(6M810D) /** Intel 810 chipset **(6M810CN)**.

Package Checklist

Please check that your package is complete . If you discover any item damaged or missing , please contact with your retailer immediately.

- The 6M810E/810D/810CN mainboard.

- Serial COM2 conector with bracket

- 1 x IDE UDMA 66 ribbon cable.

- 1 x floppy ribbon cable.

- 6M810E/810D/810CN drivers and utilities

- This user's Manual

Chapter 2

2

Features

Features of the 6M810E/810D/810CN Mainboard

⌛ Intel 810-DC100 (GMCH+ICH) chipset supports 66/100MHz FSB, UltraDMA 66. **(6M810D)**
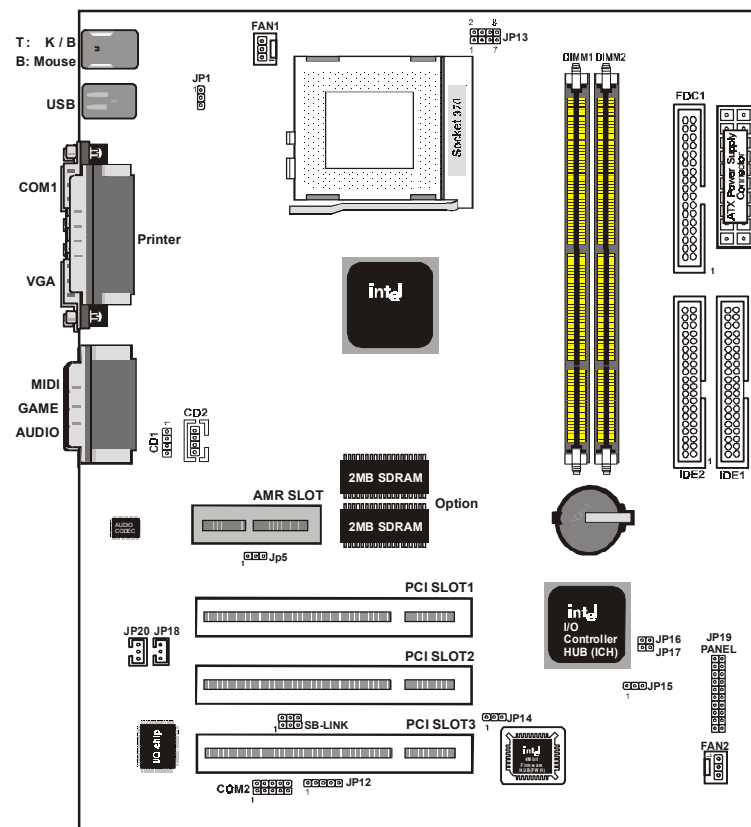
⌛ Intel 810 (GMCH+ICH) chipset supports 66/100MHz FSB, UltraDMA 66. **(6M810CN)**

⌛ Intel 810E (GMCH+ICH) chipset supports 66/100/133MHz FSB, UltraDMA 66. **(6M810E)**

⌛ Supports Intel's Celeron and Coppermine processor designed for socket 370 package in PPGA,FC-PGA.

⌛ Socket 370 Celeron / Coppermine up to 700MHz/1GMHz processor.

⌛ Integrated Graphics controller supports 3D hyper pipelined architecture, parallel data processing and compression, precise pixel interpolation, full 2D hardware acceleration , and motion video acceleration. Optional on board 4MB SDRAM display cache allows upto 1024x768x16 bit color for 3D graphics and 1600x1200x8 bit color for 2D graphics.

⌛ Support "Touch Button Wake up" for soft power on/off and suspend mode multifunction.

⌛ Support Windows 95/98 system Software shutdown (power off) automatically.

⌛ Support CPU FAN ON/OFF and LED indicator under SUSPEND mode.

⌛ Support Resume by Ring through Modem.

⌛ Uses 168-Pin DIMM modules(supports Intel **PC100** compliant SDRAMs) x2 auto banking in multiple configuration up to 512MB. **(6M810D/810CN)**

⌛ Uses 168-Pin DIMM modules(supports Intel **PC100/133** compliant SDRAMs) x2 auto banking in multiple configuration up to 512MB. **(6M810E)**

⌛ 3 x PCI Bus slots, and 1 x AMR (Audio Modem Riser) slots.

⌛ All 3 PCI slots support Master mode.

⌛ PCI Bus master IDE interface on board with two connectors support 4 IDE devices in 2 channel, the PCI IDE Controller supports PIO Mode 0 to Mode 4, Bus master IDE DMA Mode 2 and Ultra DMA 66MB.

- System BIOS support 4 IDE hard disk drivers that don't need device driver for S/W application.

- Support PS/2™ mouse Connector.

- Support the Universal Serial Bus (U.S.B).

- Support Floppy A.

- System BIOS supports LS-120, ZIP driver firmware and Green feature function, Plug and Play Flash ROM.

- AC'97 DAC built into the audio CODEC reduces noise to improve audio quality and performance for a SNR (signal to noise ratio) of +90dB. These features greatly improve voice synthesis and recognition. If more quality is required, an optional onboard Crysial PCI audio improves audio quality beyond software audio.

- Support Software Virus Warning in BIOS.

- Support ACPI functionStatic Electricity Precautions.

- Thermal detect (GL520SM) : **(option)**
  The system's BIOS will sense CPU's temperature through GL520SM on board. The User can watch what current temperature of CPU is & current CPU FAN status is from BIOS. To Using LDCM software (optional) . The user will watch the indication on Win 95/98 environment.

The 6M810E/810D/810CN Mainboard Layout

Chapter 3

3

Installation

Jumper

Expansion Slot   Which pages

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.

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 the location of the 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 ▢ to connect 2&3. Jumpers with two pins will be shown as ▢ for Short (off)and ▢ for Open (on).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 diagrammed.

Real Time Clock (RTC) RAM - JP15 :
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.

JP15 CMOS Clear
[1-2] Normal (Default)
[2-3] Enabled (Clear CMOS)
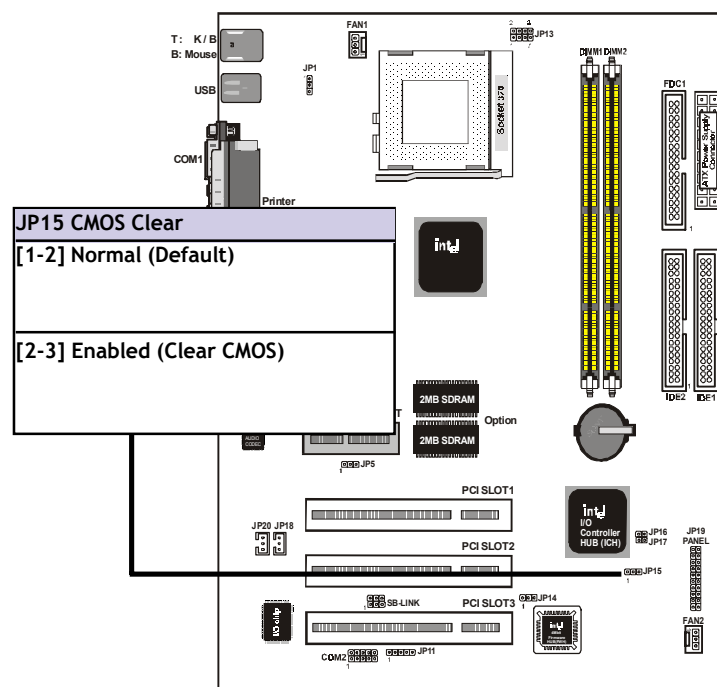
System Memory (DIMM Module)

This **6M810E/810D/810CN** main board supports two 168 pins 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 Intel **PC100** compliant SDRAMs.
 (6M810D/810CN)
The DRAM can be either Intel **PC100/133** compliant SDRAMs.
(6M810E)
Install memory in any or all Banks in Combination:

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
	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.**

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.
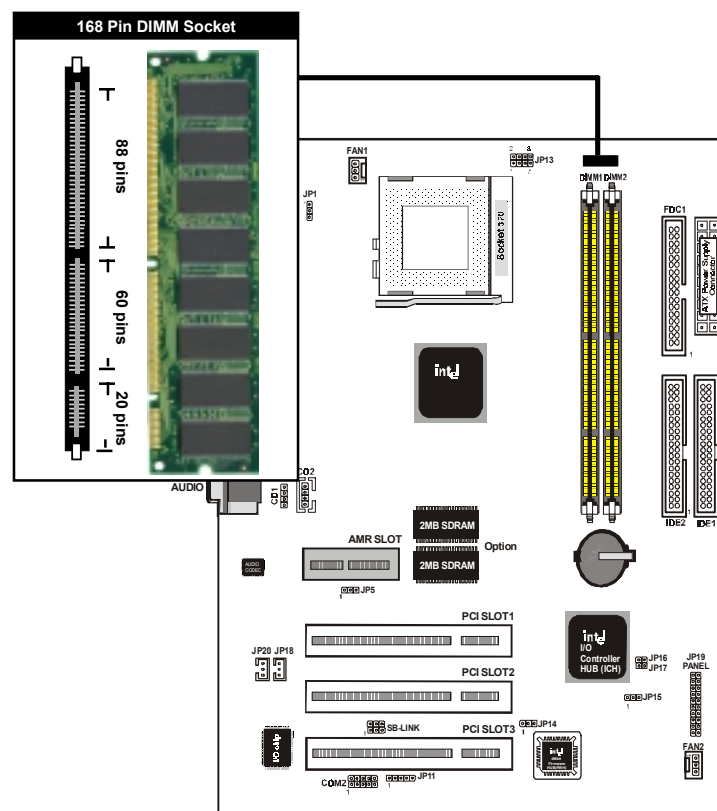
The Dual Inline Memory Module (DIMM) memory module must be 3.3v SDRAM. You can identify the type of DIMM module by the illustration below:

RFU	Unbuffered	5.0V	Reserved
Buffered		3.3V	
DRAM Key Position		Voltage Key Position	
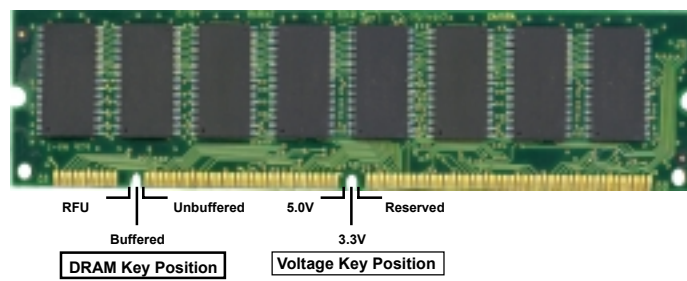
168 Pin DRAM DIMM Notch Key Definitions

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.

Notch
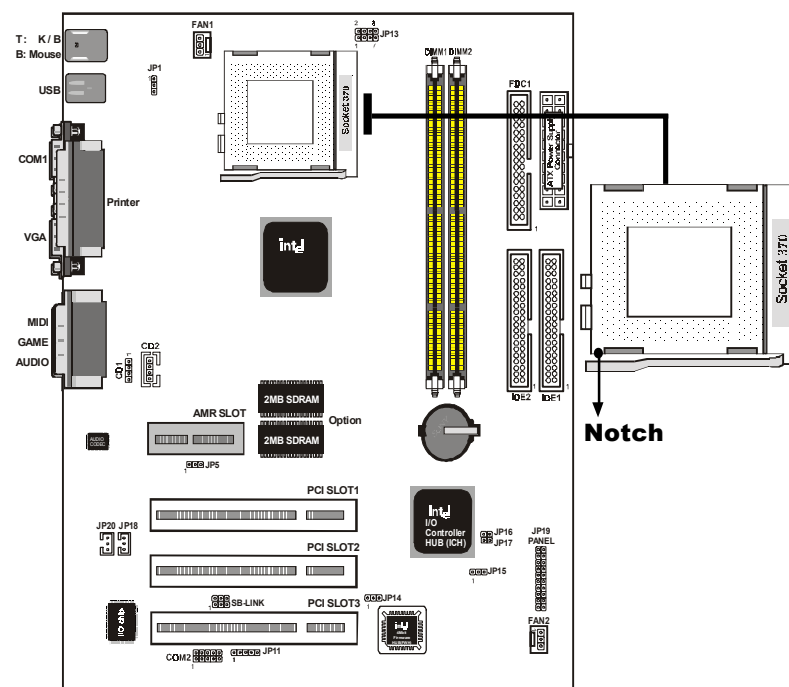
CPU External (Bus) Frequency Selection -JP13

Current PCI bus in limited to 33MHz, socket370 processors limited to 66MHz,100MHz and 133MHz (6M810E only) and SDRAM limited to the DIMM type 100MHz,133MHz (6M810E only), 66MHz SDRAM is not supported on this motherboard. Other settings are for experienced users only.

NOTE:

Most of the CPU frequency are locked by the manufacturer. This motherboard is able to auto-detect the CPU frequency.

JP13	1-2	3-4	5-6	7-8
Auto (Default)	OFF	OFF	ON	ON
100MHz	OFF	OFF	ON	OFF
133MHz	ON	ON	ON	ON
Only 66MHz	OFF	OFF	OFF	OFF
Only 100MHz	ON	ON	ON	OFF

ON

OFF
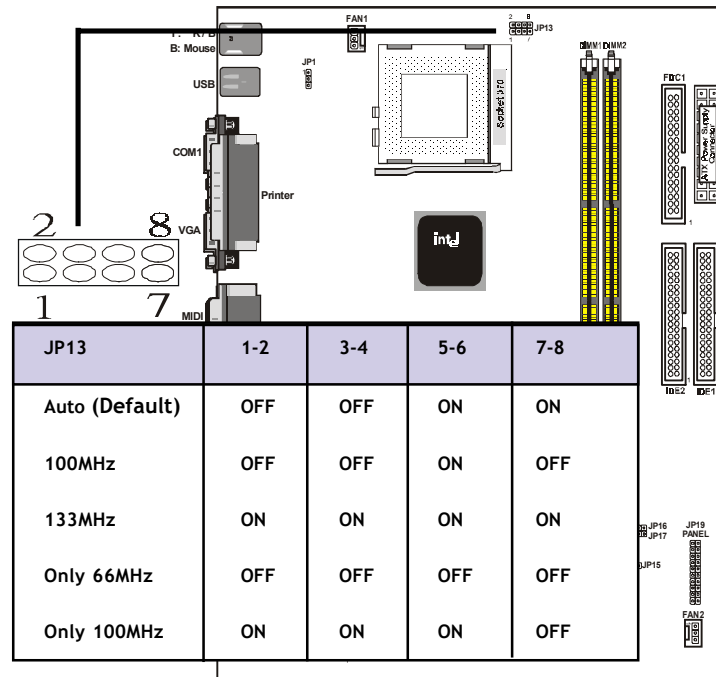
Wake On Keyboard -JP1

This allows you to disable or enable the keyboard power up function.Set to enable if you want to use your keyboard (by press <Spacebar> to power up your computer. This feature requires an ATX power supply that can supply at least 500mA on the +5VSB lead and the new ACPI BIOS support. The default is set to Disable because not all computers have the appropriate ATX power supply. Your computer will not function if you set this to Enable and if you do not have the right ATX Power supply.

JP1 Keyboard Power Up
[1-2] Disable (Default)
[2-3] Enabled

JP14 BIOS Flash Protection
[1-2] Un-LOCK (Default)
[2-3] LOCK
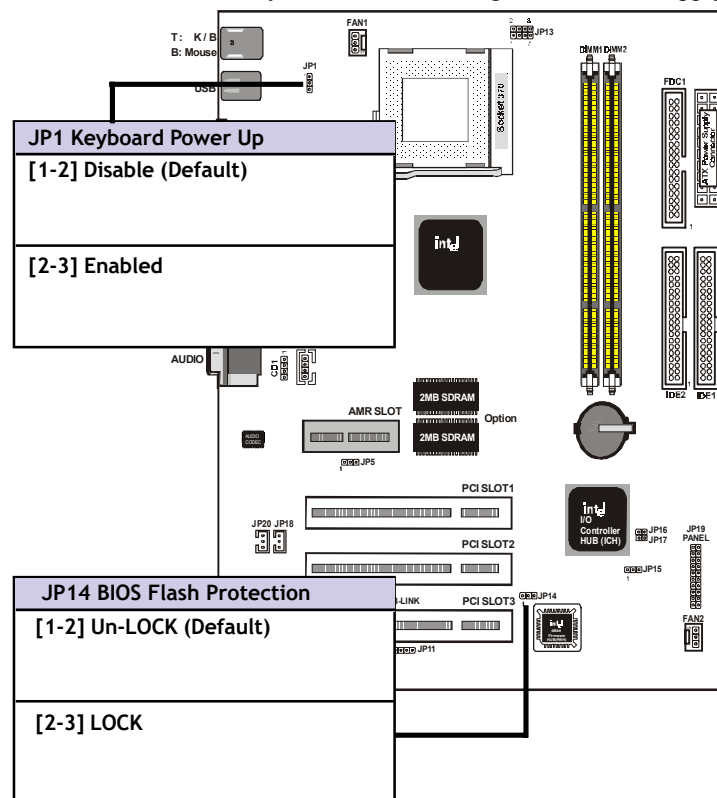
BIOS Flash Protection -JP14

The jumper is used to locked/unlocked BIOS Flash. This jumper should be unlock when flashing/programming the BIOS.

Automatic Timeout Reboot Setting (NO_REBOOT) -JP16

The motherboard is set that when the BIOS detects a hang(timeout) during bootup, the motherboard will automatically reboot in order to try rebooting again. If rebooting is repeating ineffectively, set this jumper to "No Reboot" so that auto reboot will be disabled.

JP16 Automatic timeout reboot setting
Normal (default) JP16
No Reboot JP16

JP17 Safe Mode
Normal (default) JP17
Safe Mode JP17
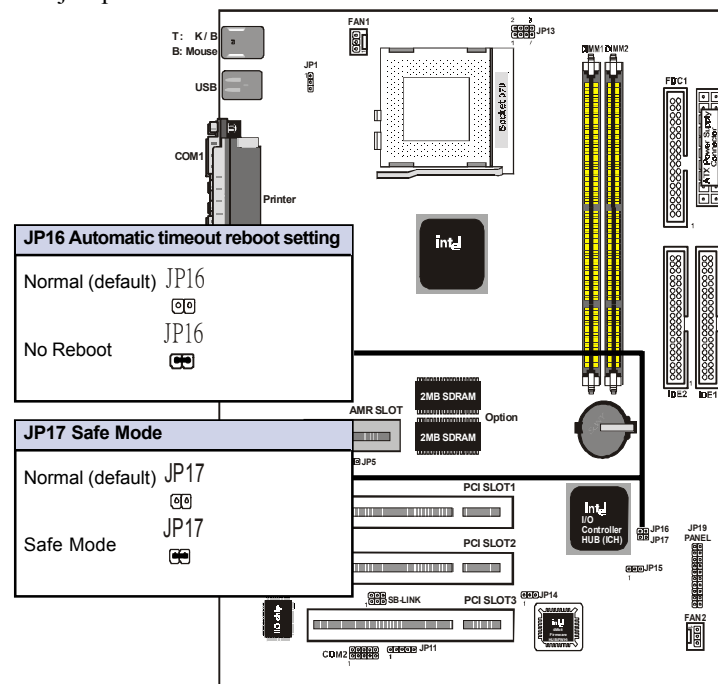
Safe Mode (SAFE_MD) -JP17

Usually socket 370 processors have locked frequency multiples. In this case, there is no way to exceed the specified multiple whether through motherboard setting or BIOS setup. With unlocked socket 370 processors, exceeding the specified multiple is possible through BIOS setup. Exceeding the specified multiple may result in hanging during bootup. If this occurs, enable Safe Mode to force a multiple of 2 in order to enter BIOS setup to correct the problem.

Onboard AMR Setting -JP5

The onboard Audio Codec may be enabled or disables using all of these jumpers. Disable the onboard Audio Codec if you are using PCI Audio card on any of the expansion slots or a primary AMR on the AMR slot. If using an PCI Audio expansion card, onboard AC'97 Audio controller must also be disabled.

JP5 Onboard AMR Setting

[1-2] Disabled
Primary

[2-3] Enabled(Default)
Secondary
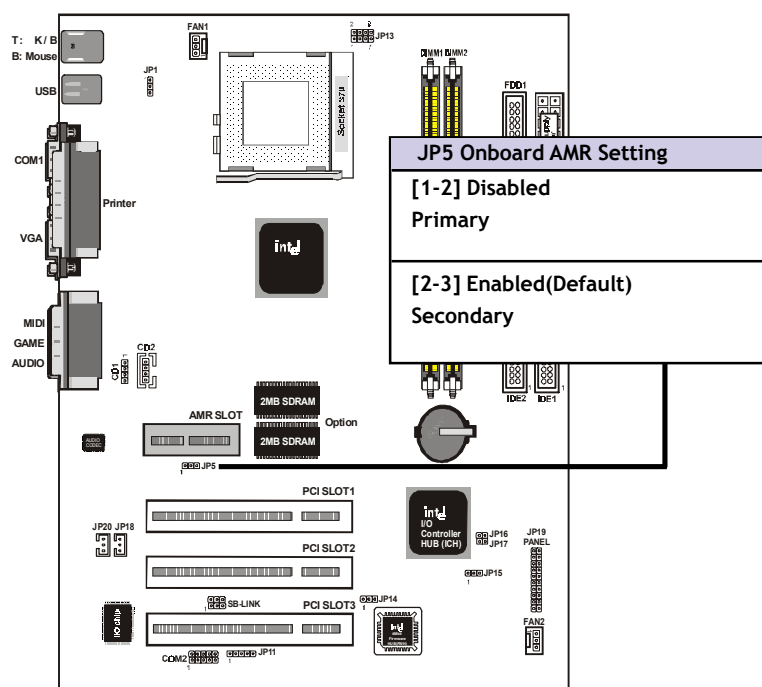
Note:

> **The 6M810E/810D/810CN Disable Onboard AC'97 Sound. You must configure the setting for "Integrated Peripherals" in BIOS.**
>
> **Choose "Integrated Peripherals" from BIOS menu:**
> **AC97 Audio   : Enabled ==>   Disabled**
> **MIDI Port Address   : 330   ==>   Disabled**

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 inch. The clearance on at least 3 of 4 sides of the processor and fan heatsink must be at least 0.2 inch. 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 $^{\circ}$C(113 $^{\circ}$F) . The ambient or room temperature must be below 37 $^{\circ}$C (99 $^{\circ}$F) .

EXTERNAL CONNECTORS

Both Ribbon cable and Connectors on board are with direction signs to avoid that user insert wrong direction. On 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

5 USB1

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

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

1 PS/2 Keyboard (6-pin Female)

USB2

3 COM1

6 VGA

SPEAKER

MIC

Serial Port(9-pin Male)

LINE IN

8 FAN 1 Connector

12 ATX Power Connector

7 Floppy Driver Connector

13 CD Audio Connector

9 IDE Connector

14 Wake On LAN

15 Wake On Modem

11 PANEL

3 COM2

10 IR Port

PCI SLOT

7 FAN 2 Connector
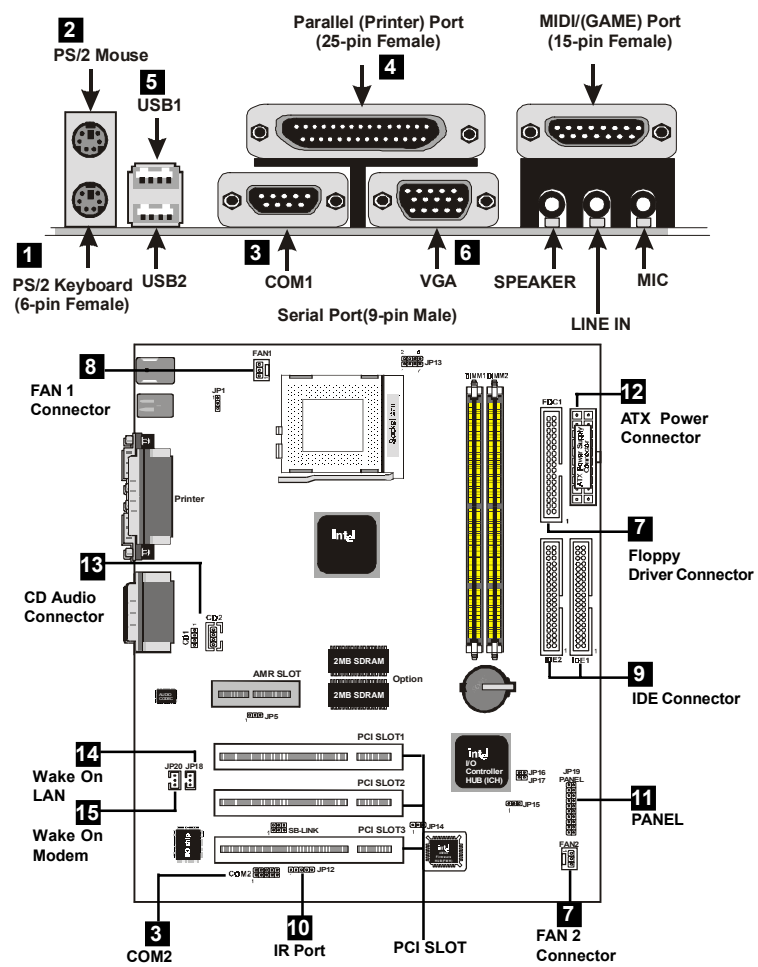
1. **PS/2 AT Keyboard port**

   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 COM1 serial ports can be used for pointing devices or other serial devices. See "Onboard Serial Port" in chipset Feature Setup of the BIOS SOFTWARE.

   The COM2 serial port header (10-1 pin) : The optional serial port bracket can be used to add an additional serial port for additional serial devices.

   NOTE:

   > **Serial {D-type 25pin (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.

6. **VGA Connectors (15-pin)**

   This connectors support monitor.

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. **FAN1 , FAN2 CPU Cooling Fan (FAN1,2)**

These connectors support cooling fans of 500mAmp (6Watt) or less. Orientate the fans so that the heatsink fans 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.

FAN1/2 CPU Cooling FAN		
	Pin	**Description**
P1	1	Ground
P2	2	+12VDC
P3	3	Signal
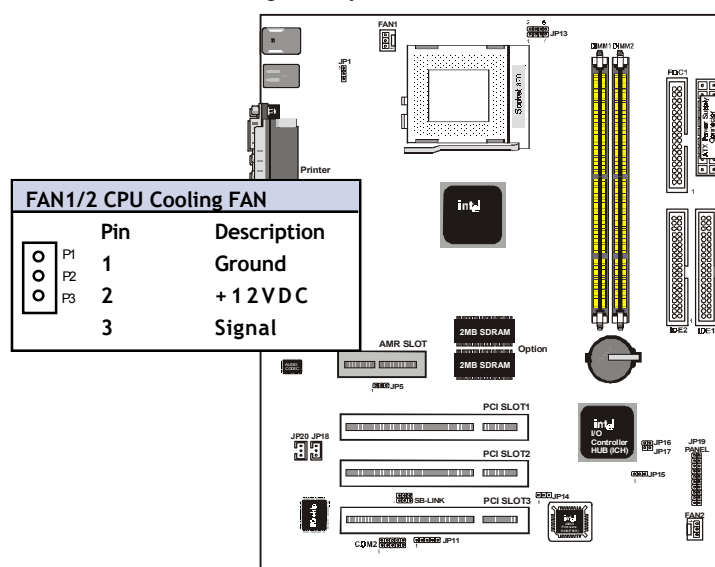
NOTE :

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.

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 . 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 Masters us-
> ing 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 the right one through
> BIOS Feature Setup.**

10. **IrDA / Fast IR-Compliant infrared module connector - JP12**
    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 JP12 Connector	
Pin	**Description**
1	VCC
2	IR4_MODE
3	IRRXA
4	GND
5	IRTXA

11. **PANAL :JP19**

JP19 PANEL Connector
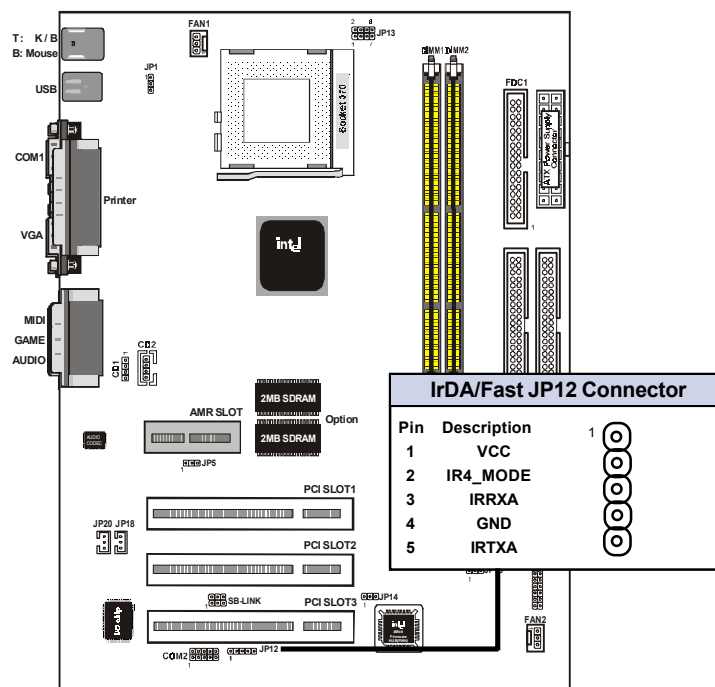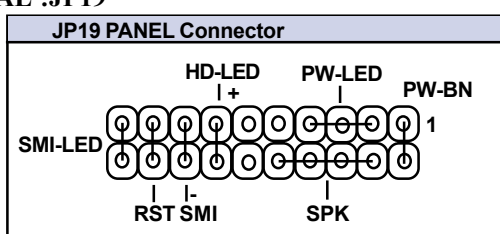
a. **IDE activity LED (HD-LED)**
   This connector supplies power to the cabinet's IDE activity LED.
   Read and write activity by devices connected to the Primary or
   Secondary IDE connectors will cause the LED to light up.

b. **Power LED Lead (PW_LED)**
   The system power LED lights when the system's power is on.

c. **SMI Suspend Switch Lead (SMI)**
   This allows the user to manually place the system into a suspend
   mode or "Green" mode where systematic activity will be instantly
   decreased to save electricity and expand the life of certain com-
   ponents when the system is not in use. This 2-pin connector (see
   the figure below) connects to the case-mounted suspend switch.
   If you do not have a switch for the connector, you may use the
   "Turbo Switch" since it does not have a function. SMI is acti-
   vated when it detects a short to open moment and therefore leav-
   ing it shorted will not cause any problems. It may require one or
   two pushes depending on the position of the switch. Wake-up
   can be controlled by settings in the BIOS but the keyboard will
   always allow wake-up (the SMI lead cannot wake-up the system).
   If you want to use this connector,"Suspend Switch" in the Power
   Management Setup of the BIOS SOFTWARE section should be
   on the default setting of Enable

d. **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 pro-
   long the life of the system's power supply.

e. **Suspend LED (PANEL)**
   The system suspend LED lights when the system's suspend is on
f. **Speaker Connector (SPEAKER)**
   This 4-pin connector connects to the case-mounted speaker.
g. **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's 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

12. **CD Audio Connector- CD1,CD2**

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

CD1	Description
1	CD-R
2	GND
3	GND
4	CD-L

CD2	Description
1	CD-R
2	GND
3	CD-L
4	GND
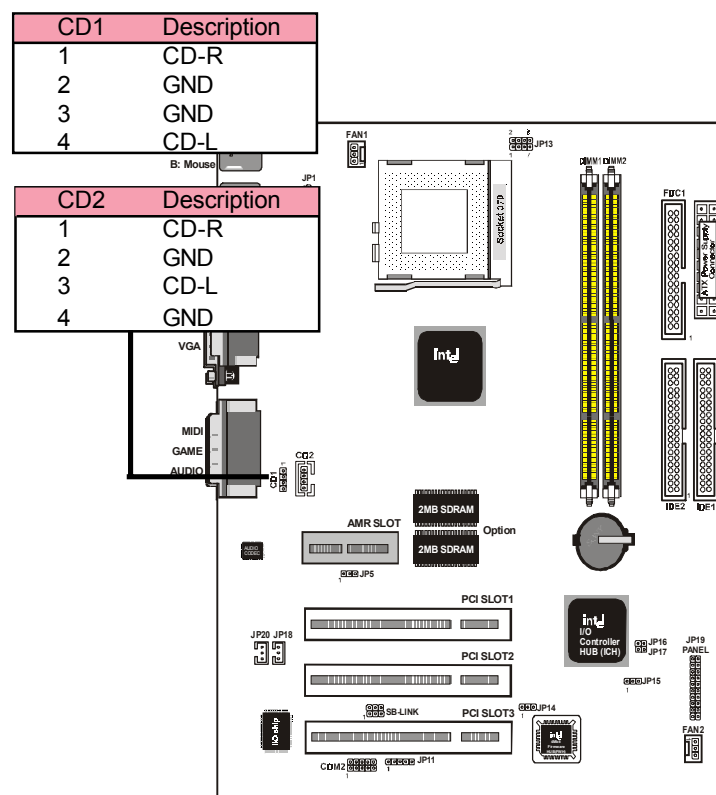
13. Wake Up On MODEM Connector : JP20

This connector connects Modem and a Wake On Modem output.

JP20 Wake Up On-Modem

Pin	Description
1	5VSB
2	GND
3	SIGNAL

JP18 Wake UP On LAN

Pin	Description
1	5VSB
2	GND
3	SIGNAL
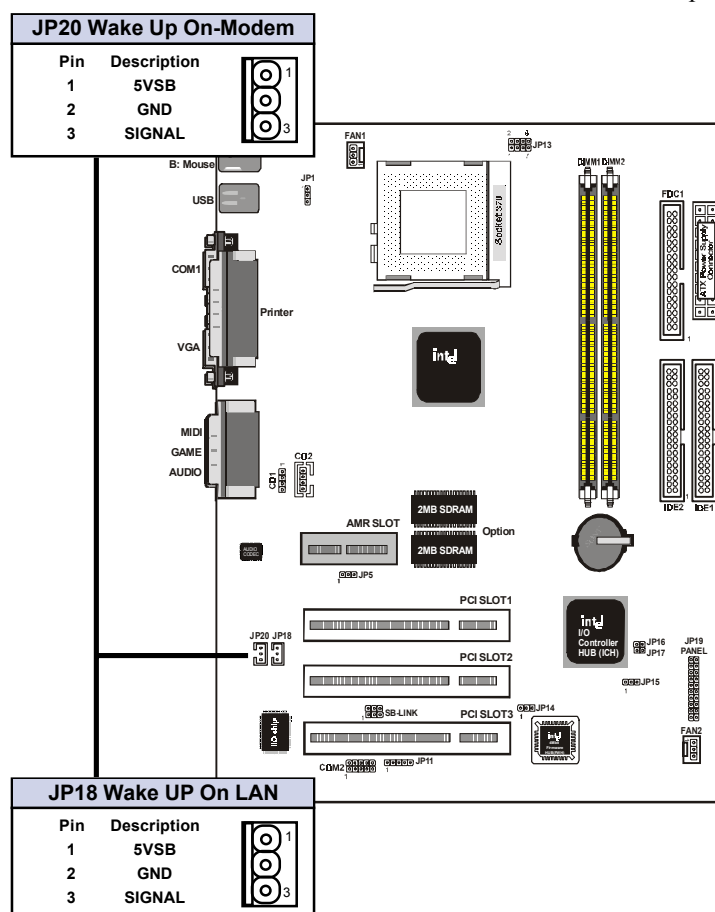
14. Wake Up On LAN Connector : JP18

This connector connects LAN cards and a Wake On LAN output.
When the system is in soft-off mode LAN activity will power
on the system.

15. **SB-LINK : JP10**

"SB-Link" originated from Creative to propose a standard which can be a bridge between the mainboard and PCI sound card to deliver Sound Blaster 16 compatibility under DOS real-mode environment. Sound Blaster 16 was almost the standard of the ISA Bus sound cards, a lot of games were Programmed for Sound Blaster especially under DOS environment. If the users are still interested in playing these game titles, they might have compatibility problems with the new upgraded PCI Bus sound card. This header adopts Intel's PC/PCI technology to deliver Sound Blaster 16 compatibility to PCI Bus sound card, enabling users to play real-mode DOS games. Connect the cable provided by PCI sound card to this connector.

Pin	Description
1	GNT#
2	GND
3	KEY
4	REQ#
5	GND
6	SERIRQ
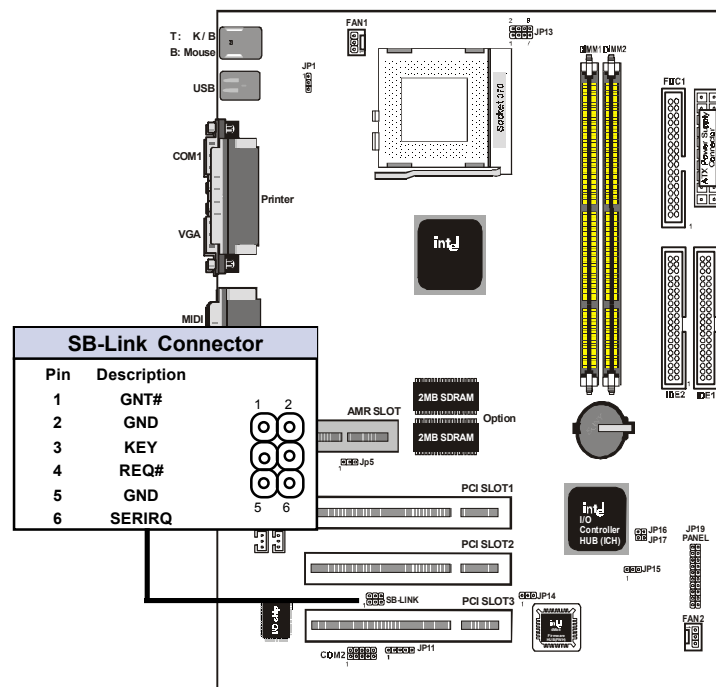
Chapter 4

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&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/Coppermine 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 navigate in the Setup program by using the keyboard.

Keystroke	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left(menu bar)
Right arrow	Move to the item on the right(menu bar)
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)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 Setup	Load Fail-Safe Defaults
Advanced BIOS Setup	Load Optimized Defaults
Advanced Chipset Setup	Set Supervisor Password
Integrated Peripherals	Set User Password
Power Management Setup	Save & Exit Setup
PNP/PCI Configuration	Exit Without Saving
Frequency/Voltage Control	

Esc : Quit F9 : Menu in BIOS   ←→↑↓: 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 Programmed 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.

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 minimal/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 items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

◎ **Figure 2. Standard CMOS Setup**

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

		Item Help
Date(mm:dd:yy)	Tue,Jun 6 2000	
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	
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	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 Setup

◎ **Figure 3. Advanced BIOS Setup**

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

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

←→↑↓: 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:Disabled(default),Enabled.

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.

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 Setup

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 Setup**

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

```
┌─────────────────────────────────────────────────────┬──────────────┐
│ 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           Enabled              │              │
│ Video BIOS Cacheable            Enabled              │              │
│ CPU Latency Time                Disabled             │              │
│ Delayed Transaction             Disabled             │              │
│ On-Chip Video Window Size       64MB                 │              │
│                                                      │              │
│ Onboard Display Cache Setting                        │              │
│ CAS# Latency                    3                    │              │
│ Paging Mode Control             Open                 │              │
│ RAS-TO-CAS Overrido             by CAS#LT            │              │
│ RAS# Timing                     Fast                 │              │
│ RAS# Precharge Timing           Fast                 │              │
└─────────────────────────────────────────────────────┴──────────────┘
```

←→↑↓: 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.

System BIOS Cacheable

    Enabled(default)   Enable System BIOS Cacheable.

    Disabled   Disable System BIOS Cacheable.

Video BIOS Cacheable

    Enabled(default)   Enable Video BIOS Cacheable.

    Disabled   Disable Video BIOS Cacheable.

CPU Latency Time
  Enabled   Enabled.
  Disabled(default)   Disabled.

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

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

CAS# Latency
  The Choices:3(default),2.

RAS# Timing
  The Choices:Fast(default),Normal.

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                      │              │
│ AC97 Modem                       Auto                      │              │
│ IDE HDD Block Mode               Enabled                  │              │
│ Power On Function                Button Only              │              │
│ Onboard FDC Controller           Enabled                  │              │
│ Onboard Serial Port 1            Auto                      │              │
│ Onboard Serial Port 2            Auto                      │              │
│ UART Mode Select                 Normal                    │              │
│ UR2 Duplex Mode                  Half                      │              │
│ TxD,RxD Polarity                 Lo,Hi                     │              │
│ Use IR Pins                      IR-Rx2Tx2                 │              │
│ Onboard Paraller Port            378/IRQ7                  │              │
│ Parallel Port Mode               ECP+EPP1.7               │              │
│ ECP Mode Use DMA                 3                         │              │
│ 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(default)   Enabled USB Keyboard Support.

    Disabled   Disabled USB Keyboard Support.

Init Display First

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

    Onboard AGP   Set Init Display First to onboard AGP.

AC 97 Audio

    Auto(default)   BIOS will automatically detect onboard Audio.

    Disabled   Disabled.

IDE HDD 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.

AC 97 Modem
> **Auto(default)**   BIOS will automatically detect
> onboard Modem.
> **Disabled**   Disabled.

Onboard FDC Controller
> **Enabled(default)**   Enabled onboard FDC
> Controller.
> **Disabled**   Disabled onboard FDC
> Controller.

Onboard Serial Port1/Port2
> Selecting address and corresponding interrupt for the first
> and second serial ports.
> **The Choices:Auto(default)**,Disabled,(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,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.

Parallel Port Mode

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

Disabled	Disabled On Board IDE.
300	Set Midi game address is 300.
330(default)	Set Midi game address is 330.

Midi Port IRQ

10(default)	Set Midi game IRQ 10.
5	Set Midi game 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                  4                      │              │
│ Suspend Mode                   Disabled              │              │
│ HDD Power Down                 Disabled              │              │
│ Soft-Off by PWR-BTTN           Instant-Off           │              │
│ Power On by Ring               Enabled               │              │
│ USB KB Wake-up From S3         Disabled              │              │
│ 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               Enabled               │              │
│ PCI PIRQ[A-D]#                 Enabled               │              │
└─────────────────────────────────────────────────────┴──────────────┘
```

←→↑↓: 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.

HDD 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/H SYNC+Blank	This selection will cause the system to turn off the vertical and horizontal. Synchronization ports and write blanks to the video buffer.
Blank Screen	This option only writes blanks to the video buffer.
DPMS Support (default)	Initial display power management signaling.

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.

4(default)
3/5/7/9/10/11/NA

Suspend Mode

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

HDD 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.

Power On by Ring

Enabled(default)	Enabled.
Disabled	Disabled.

USB KB Wake-up From S3

Disabled(default)	Disabled.
Enabled	Enabled.

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

PCI PIRQ[A-D]#

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

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

```
┌─────────────────────────────────────────────────┬──────────────────┐
│ Reset Configuration Data      Disabled           │ Item Help        │
│                                                  │                  │
│ 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

Resources Controlled By

By Choosing "Auto" (default), the system BIOS will detect the system resources and automatcally 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.

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.

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 systems, 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 Frequency / Voltage Control

◎ **Figure 8. Frequency / Voltage Control**

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Software Frequency / Voltage Control

```
┌─────────────────────────────────────────────┬──────────────┐
│ Auto Detect DIMM / PCI CLK      Disabled     │ Item Help    │
│ Spread Spectrum                 Default      │──────────────│
│ CPU Clock Ratio                 X3.5         │ Menu Level   │
│                                              │              │
│                                              │              │
│                                              │              │
│                                              │              │
│                                              │              │
│                                              │              │
│                                              │              │
└─────────────────────────────────────────────┴──────────────┘
```
←→↑↓: 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.

Spread Spectrum
Default(default)
0.25%   Set Spread Spec. to 0.25%.
                                 (Center spread)
0.5%   Set Spread Spec. to 0.5%.
                                 (Down spread)

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

4.9 Load Fail-Safe Defaults

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

confirmation dialog box with a message similar to:

◎ **Figure 9. Load Fail-Safe Defaults**

CMOS Setup Utility-Copyright(C) 1984-2000 Award
Software
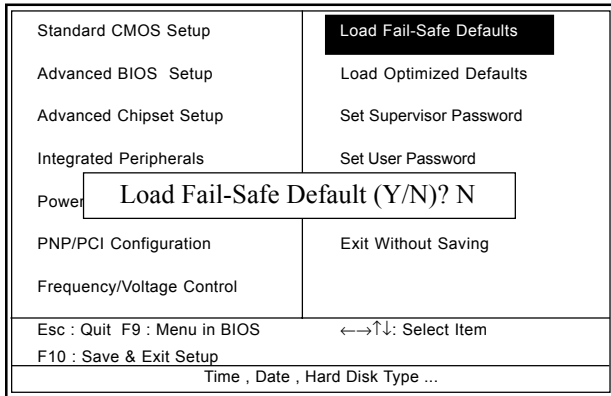
```
┌─────────────────────────────────┬─────────────────────────────────┐
│ Standard CMOS Setup             │ Load Fail-Safe Defaults         │
│ Advanced BIOS  Setup            │ Load Optimized Defaults         │
│ Advanced Chipset Setup          │ Set Supervisor Password         │
│ Integrated Peripherals          │ Set User Password               │
│ Powe │ Load Fail-Safe Default (Y/N)? N │                           │
│ PNP/PCI Configuration           │ Exit Without Saving             │
│ Frequency/Voltage Control       │                                 │
├─────────────────────────────────┴─────────────────────────────────┤
│ 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.

4.10 Load Optimized Defaults

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

confirmation dialog box with a message similar to:

◎ **Figure 10. Load Optimized Defaults**

CMOS Setup Utility-Copyright(C) 1984-2000 Award
Software
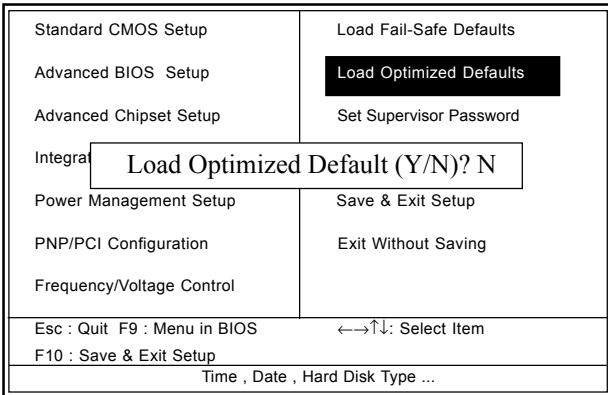
Standard CMOS Setup	Load Fail-Safe Defaults
Advanced BIOS Setup	Load Optimized Defaults
Advanced Chipset Setup	Set Supervisor Password
Integra	Load Optimized Default (Y/N)? N
Power Management Setup	Save & Exit Setup
PNP/PCI Configuration	Exit Without Saving
Frequency/Voltage Control	
Esc : Quit F9 : 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 Set Supervisor / User Password

◎ **Figure 11. Set Supervisor / User Password**

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

Standard CMOS Setup	Load Fail-Safe Defaults
Advanced BIOS Setup	Load Optimized Defaults
Advanced Chipset Setup	**Set Supervisor Password**
Integrated Peripherals	Set User Password
Pow **Enter Password:**	
PNP/PCI Configuration	Exit Without Saving
Frequency/Voltage Control	
Esc : Quit F9 : Menu in BIOS	←→↑↓: Select Item
F10 : Save & Exit Setup	
Time , Date , Hard Disk Type ...	
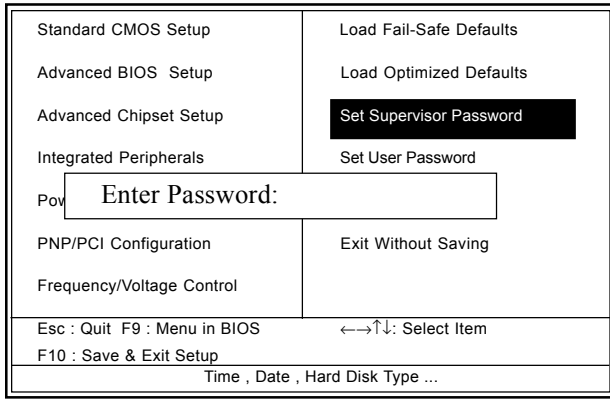
When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

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 comfirm 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 comfirm 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 willbe 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 willbe prompted only when you try to enter Setup.

4.12 Save & Exit Setup

◎ **Figure 12. Save & Exit Setup**

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

```
┌─────────────────────────────────────────────────────────────┐
│  Standard CMOS Setup          Load Fail-Safe Defaults        │
│                                                               │
│  Advanced BIOS  Setup         Load Optimized Defaults         │
│                                                               │
│  Advanced Chipset Setup       Set Supervisor Password         │
│                                                               │
│  Integra┌──────────────────────────────────────────┐         │
│         │  Save & Exit Setup (Y/N)? Y              │         │
│  Power M└──────────────────────────────────────────┘         │
│  Power Management Setup       ▐ Save & Exit Setup ▌          │
│                                                               │
│  PNP/PCI Configuration        Exit Without Saving             │
│                                                               │
│  Frequency/Voltage Control                                    │
├─────────────────────────────────────────────────────────────┤
│  Esc : Quit  F9 : Menu in BIOS      ←→↑↓: Select Item        │
│  F10 : Save & Exit Setup                                      │
├─────────────────────────────────────────────────────────────┤
│            Time , Date , Hard Disk Type ...                   │
└─────────────────────────────────────────────────────────────┘
```
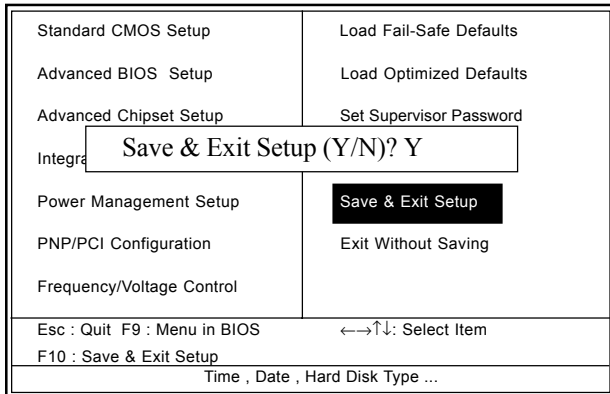
Type "Y" will quit the Setup Unility and save the user setup value to RTC CMOS RAM.

Type "N" will return Setup Unility.

4.13 Exit Without Saving

◎ **Figure 13. Exit Without Saving**

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

```
┌─────────────────────────────────────────────────────────────┐
│  Standard CMOS Setup          Load Fail-Safe Defaults        │
│                                                               │
│  Advanced BIOS  Setup         Load Optimized Defaults        │
│                                                               │
│  Advanced Chipset Setup       Set Supervisor Password        │
│                                                               │
│  Integrated Peripherals       Set User Password              │
│          ┌──────────────────────────────────────┐           │
│  Power Ma│ Exit Without Saving (Y/N)? Y         │ Setup     │
│          └──────────────────────────────────────┘           │
│  PNP/PCI Configuration        ███Exit Without Saving███      │
│                                                               │
│  Frequency/Voltage Control                                   │
├─────────────────────────────────────────────────────────────┤
│  Esc : Quit  F9 : Menu in BIOS      ←→↑↓: Select Item        │
│  F10 : Save & Exit Setup                                     │
├─────────────────────────────────────────────────────────────┤
│              Time , Date , Hard Disk Type ...                │
└─────────────────────────────────────────────────────────────┘
```
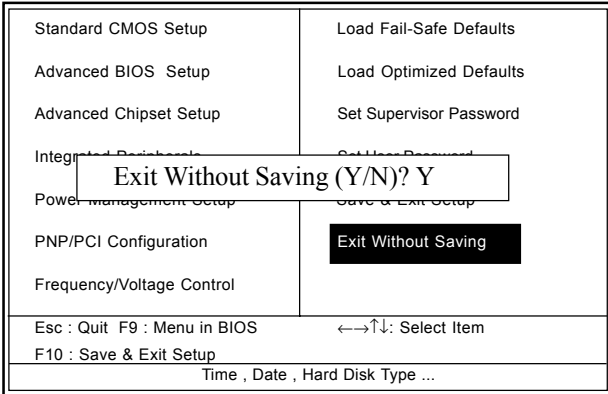
Type "Y" will quit the Setup Unility without saving to RTC CMOS RAM.

Type "N" will return Setup Unility.

Date :   /   /

Guarantee Sheet/Technical Fault Report

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

Serial No.   : _____

Date of Purchasing: _____

Hardware Configuration Used :

CPU	
RAM	
Video Card	
Hard Drive	
Other Card	

Diagnostic Software Used

Fault Description

Technical Support :

WWW :   www.acorp.com.tw

FAE   :   fae@acorp.com.tw