R-625

PENTIUM II AT FORM MAINBOARD
USER'S MANUAL

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1. INTRODUCTION

1.1. Preface

Welcom to use the R625 Pentium II system mainboard. This manual explains how to use this mainboard and install upgrades. It has overview of the design and features of the board and provides useful information if you want to change the configuration of the board, or a system it is installed in.

1.2. Key Features

The R625 Pentium II system mainboard is a high-performance system board that support Intel Pentium II family CPUs.
There has many performance and system features integrated onto the mainboard, including the following :

- ❑ Supports Slot 1 for Intel Pentium II CPU 233/266/300/333...MHz(66MHz).
- ❑ Chipset : Intel 82443EX, 82371EB.
- ❑ L2 Cache in Intel Pentium II CPU
- ❑ Supports 2 Banks of DIMMs (Two -168PIN DIMM Sockets).
  - Supports SDRAM from 8MB to 512MB of total main memory.
  - Supports Extended Data Out (EDO) Mode DRAM or SDRAM
- ❑ Three 16-bit ISA Slots and
  Three 32-bit PCI Bus Master Mode Slots.
- ❑ Fast PCI IDE Interface:
  - Supports 2 PCI Bus Master IDE Ports. (up to Four IDE drivers)
  - Supports PIO Mode 4 and Ultra DMA/33 Transfers.
- ❑ Universal Serial Bus Controller:
  - Host / HUB Controller.
  - Two USB Ports.
- ❑ Accelerated Graphics Port (AGP)

- ❑ Advanced Configuration and Power Interface (ACPI)
- ❑ High Performance Synchronous Switching Regulator
- ❑ Wake Up Timer: Date/Time auto wake up function.
- ❑ Keyboard & Mouse Power on function (ATX power)
- ❑ On-board I / O support :
  - 2 Serial Port Connectors (16550 Fast UART compatible)
  - 1 Parallel Port Connector(with EPP and ECP capabilites)
  - 1 Floppy Disk Connector (support 2 FD drives).
  - 1 PS/2 Mouse Connector.
  - 1 PS/2 Keyboard Connector.
  - 1 IrDA Connector.
- ❑ BIOS support :
  - Plug and Play (PnP), DMI, Green Function.
  - 1M-bit Flash EPROM.
- ❑ AT Form Factor : 22cm x 25cm or 8.7" x 9.84" (4 Layers)

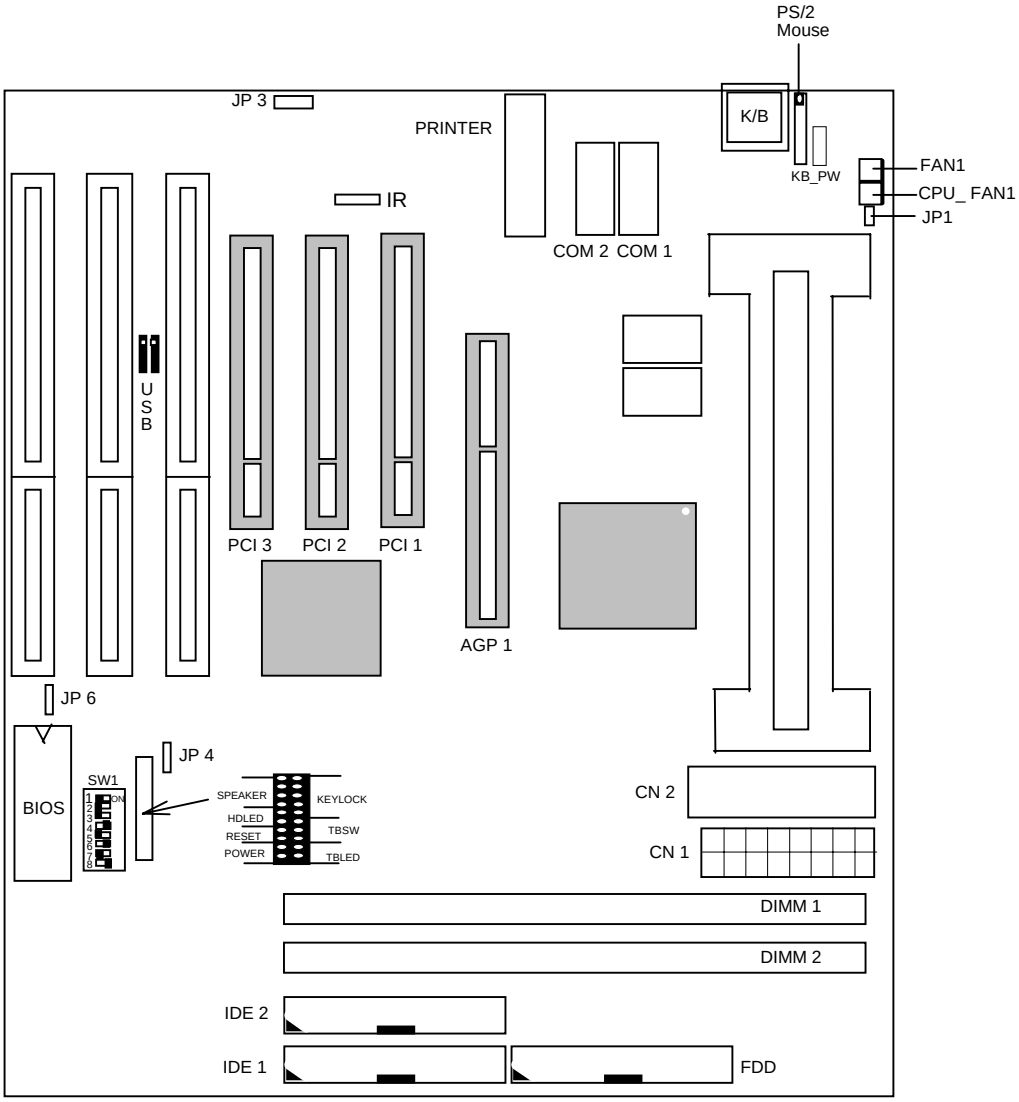
1.3. Static Electricity Precautions

Make sure you ground yourself before handling the mainboard or other system components. Electrostatic discharge can easily damage the components. Note that you must take special precaution when handling the mainboard in dry or air-conditioned environments.

Take these precautions to protect you equipment from electrostatic discharge :

- Do not remove the anti-static pachaging until you are ready to install the system board and other system components.
- Ground yourself before removing any system component from its protective anti-static packaging. To ground yourself grasp the expansion slot covers or other unpainted portions of the computer chassis.
- Frequently ground yourself while working, or use a grounding strap.
- Handle the system board by the edges and avoid touching its components.

1.4 R625 Mainboard Layout



2. HARDWARE INSTALLATION

This chapter explains how to configure the system main board hardware. After you install the main board, you can set jumpers and make case connections. Refer to this chapter whenever you upgrade or reconfigure your system.

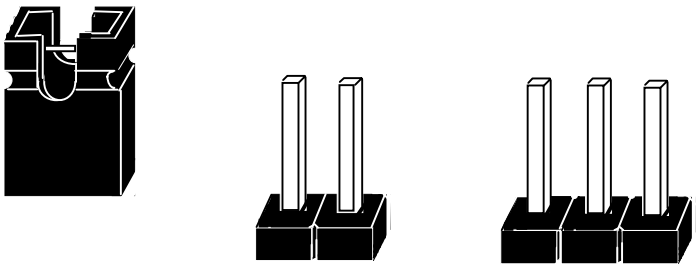
CAUTION : Turn off power to the main board, system chassis, and peripheral devices before performing any work on the main board or system.

2.1. Jumper Setting Summary

Regarding hardware settings on the board. They specify configuration options for various features. The settings are made using something called a "Jumper". A jumper is a set of two or more metal pins in a plastic base attached to the mainboard. A plastic jumper "cap" with a metal plate inside fits over two pins to create an electrical contact between them. The contact establishes a hardware setting.

Some jumpers have two pins, other have three or more. The jumper are sometimes combined into sets called jumper "blocks", where all the jumpers in the block must be set together to establish a hardware setting. The next figures show how this locks.

Jumpers and caps

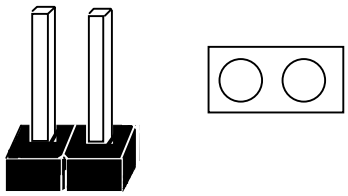


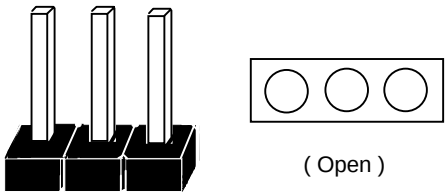
Jumper cap **2-Pin Jumper** **3-Pin Jumper**

Most jumper setting are printed on the board in a stylized bird's-eye view, with which pins to connect for each setting marked by a bar connecting two pins. For example, if a jumper has three pins, connecting or "shorting", the first and second pins creates one setting and shorting the second and third pins creates another. The same type of diagrams are used in this manual. The jumpers are always shown from the same point of view as shown in the whole board diagram in this chapter.

Jumpers diagrams

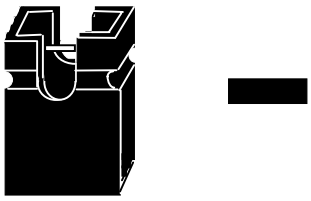
Jumpers are shown like this



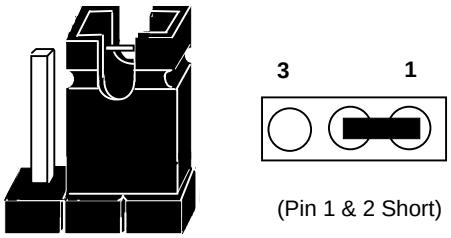


(Open)

Jumper caps like this



Jumper settings like this



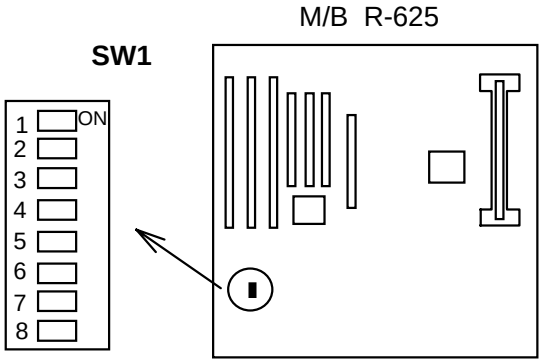
(Pin 1 & 2 Short)

2.1.1 CPU Type Selector : SW 1

CPU Type	System CLK	1	2	3	4
Pentium II					
3.5X	x 3.5	On	Off	Off	On
4.0X	x 4	Off	On	On	On
4.5X	x 4.5	Off	On	Off	On
5.0X	x 5	Off	Off	On	On

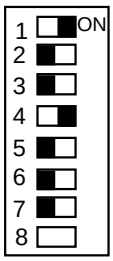
2.1.2 Bus Clock Selector : SW 1

Bus CLK	5	6	7
66	Off	Off	Off
75	Off	On	Off
83	On	Off	On

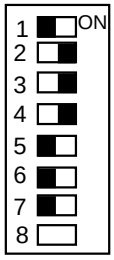


Quick Reference :

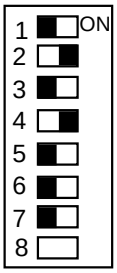
(a) CPU 3.5X Clock Setting
Pentium II - 233/66MHz



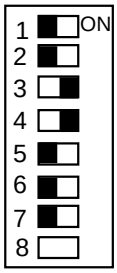
(b) CPU 4.0X Clock Setting
Pentium II - 266/66MHz



(c) CPU 4.5X Clock Setting
Pentium II - 300/66MHz



(d) CPU 5.0X Clock Setting
Pentium II - 333/66MHz

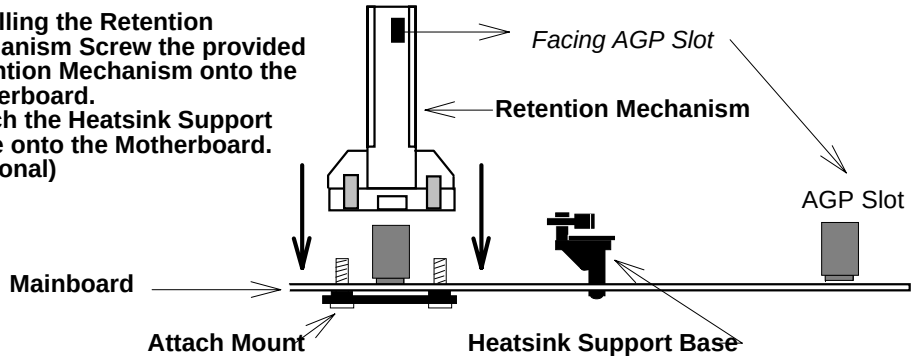


SW1: 1-4: Bus Ratio Select

Bus Ratio	SW: 1~4	Bus Ratio	SW: 1~4	Bus Ratio	SW: 1~4
3.0x		5.0x		7.0x	
3.5x		5.5x		7.5x	
4.0x		6.0x		8.0x	
4.5x		6.5x			

Installing the Pentium II CPU

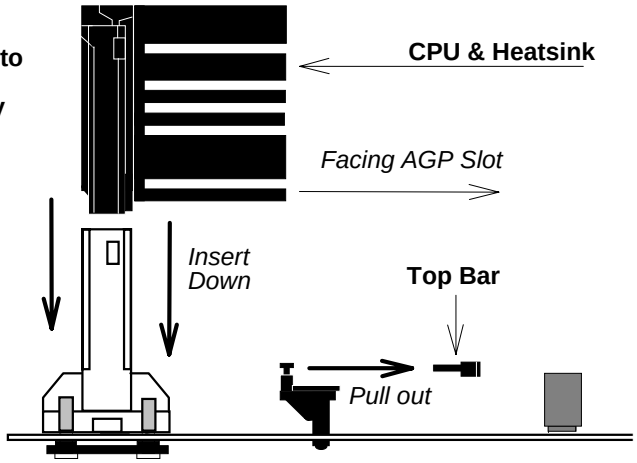
Step 1: **(1) Installing the Retention Mechanism Screw the provided Retention Mechanism onto the Motherboard.**
(2) Attach the Heatsink Support Base onto the Motherboard. (optional)



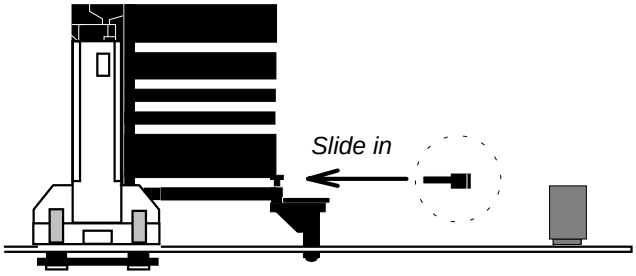
Step 2:

(1) Insert the Pentium II CPU into the Retention Mechanism. Making sure the CPU is fully inserted into the CPU Slot, and the Heatsink is facing the memory Sockets.

(2) Snap the Top Bar onto the rigid pins of the Heatsink Support Base. (optional)



Step 3: **Slide the Top Bar into the Heatsink and Lock it. (optional)**



∗ **(optional)** : If Pentium II CPU come with Large Heatsink.

2.1.3. ATX Power ON/OFF Switch : POWER

1. If "Soft-Off by PWR-BTTN" of Power Management Setup is setted to "Instant Off"

   When the system is OFF, press This button system will ON.
   To turn the system OFF, press this button again.
   (The Switch connect to a two-pin push bottom.)

2. If "Soft-Off by PWR-BTTN" of Power Management Setup is setted to "Delay 4 sec."

   When the system is OFF, press This button system will ON.
   Press this button again, system will enter to Suspend Mode, then press this button and hold for 4 second, the system will OFF.

Note: Please make sure the AC Power Switch which on the Power Supply already switch to ON.(If your Power Supply have AC Power Switch)

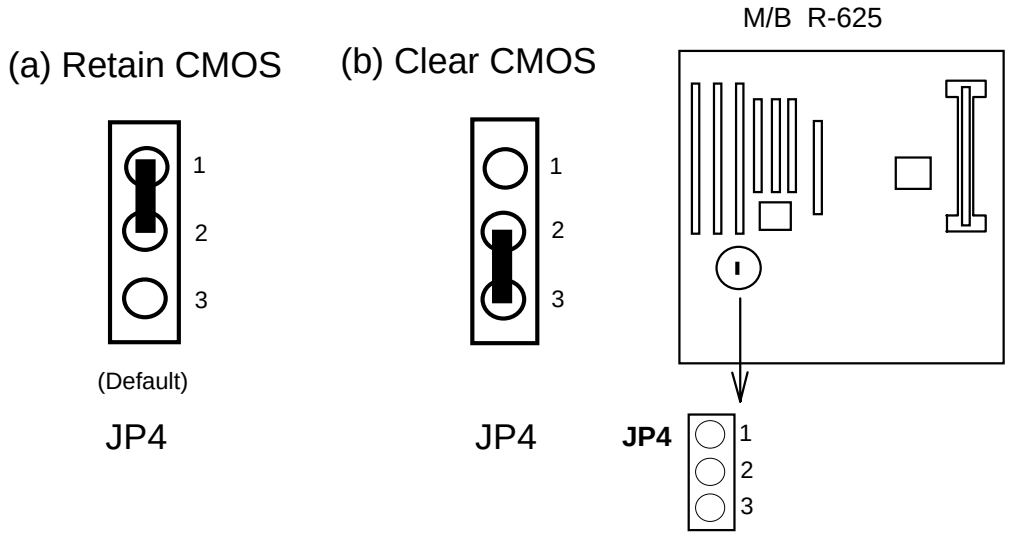
2.1.4. Keyboard Power On Support: KB_PW

Function	KB_PW
Normal (Default)	1-2
Keyboard Power On	2-3

2.1.5. CMOS Clear Jumper : JP4

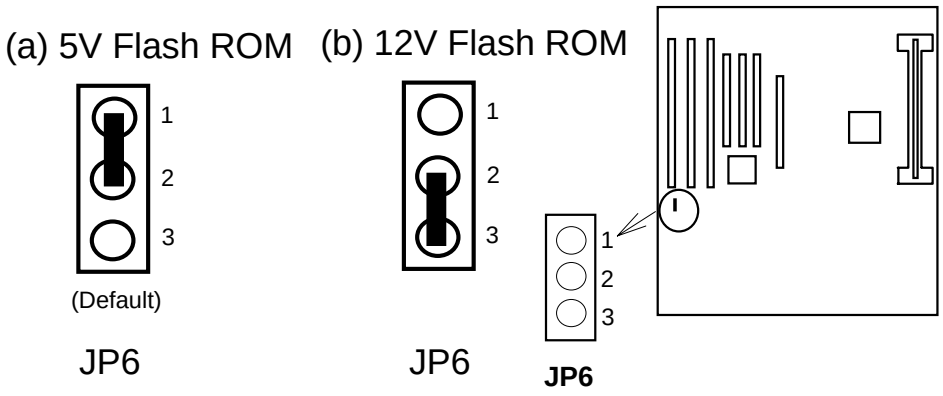
Clear the CMOS memory by momentarily shorting this Jumper; then Open the Jumper to retain new setting.

Function	JP4
Retain CMOS Data (default)	1-2
Clear CMOS data	2-3



2.1.6. Flash EPROM Voltage Selector : JP6

EPROM Voltage Mode	JP6
+5V Flash ROM (default)	1-2
+12V Flash ROM	2-3



How to Update BIOS (Flash ROM)

1. Copy the Flash Utility to a bootable diskette.
   AWDFLASH.EXE : for AWARD BIOS.
   AMIFLASH.COM : for AMI BIOS.

2. Copy the new bios file to the diskette.

＊.BIN : is AWARD BIOS.
＊.ROM : is AMI BIOS.

3. Turn the power off and set the JP6 to select Flash EPROMs Voltage Mode.

4. Turn the system on and run the Flash utility.

5. Follow the promp and input the file name.

6. Save the old BIOS and when prompt to program hit " Y ".

7. After the BIOS is Flash, turn off the system and clear the CMOS.

2.1.7. Upgrading System Memory

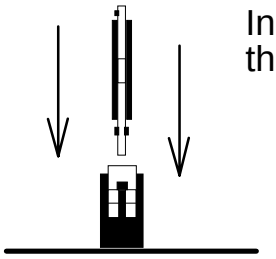
The R625 mainboard can use 2- 168pin SDRAM DIMM and the system memory can be upgraded up to 512MB, or the mainboard can use 2-168pin 3.3v EDO/FP DIMM and the system memory can upgraded from 8MB to 512MB.

Each of module can be either single or double-sided.

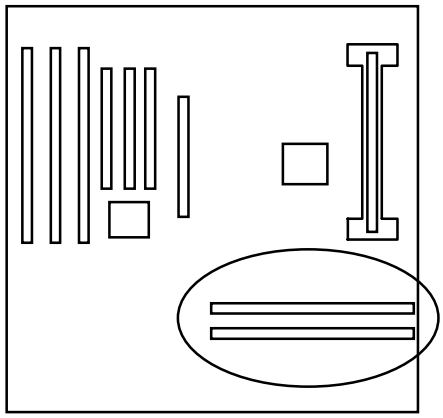
DRAM TYPE	:	3.3v 168pin Fast Page Mode(FP) or Extended Data Output(EDO) or BEDO Mode or SDRAM.
DRAM Speed	:	60ns or faster.
Parity	:	Either parity or non-parity. (Require Parity Memory to Support ECC)

Installing a DIMM Module

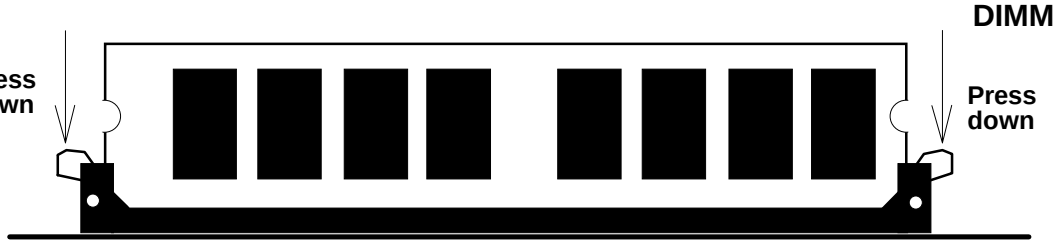
A. Insert the DIMM module into the socket at an angle.



M/B R-625

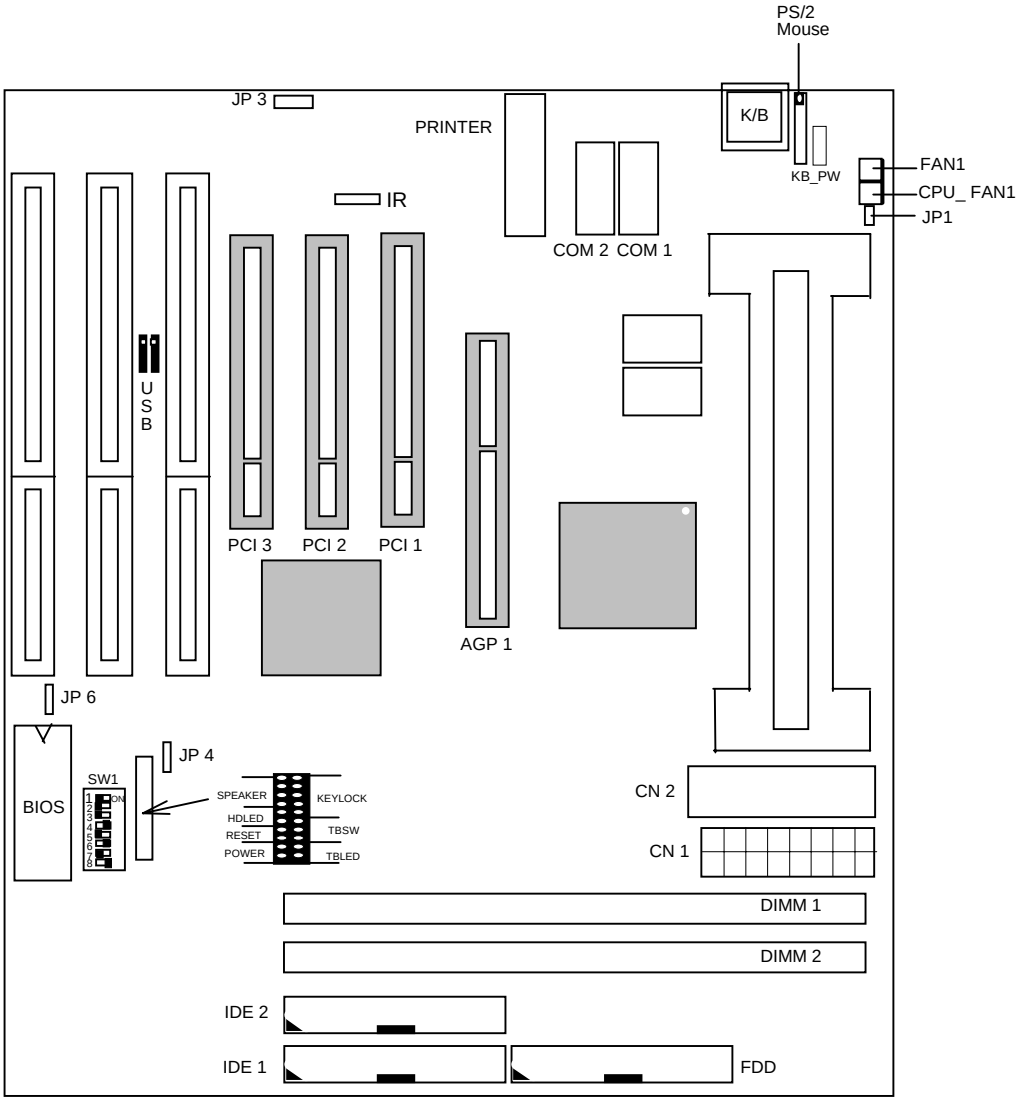


B. Put out the DIMM module from the DIMM socket.

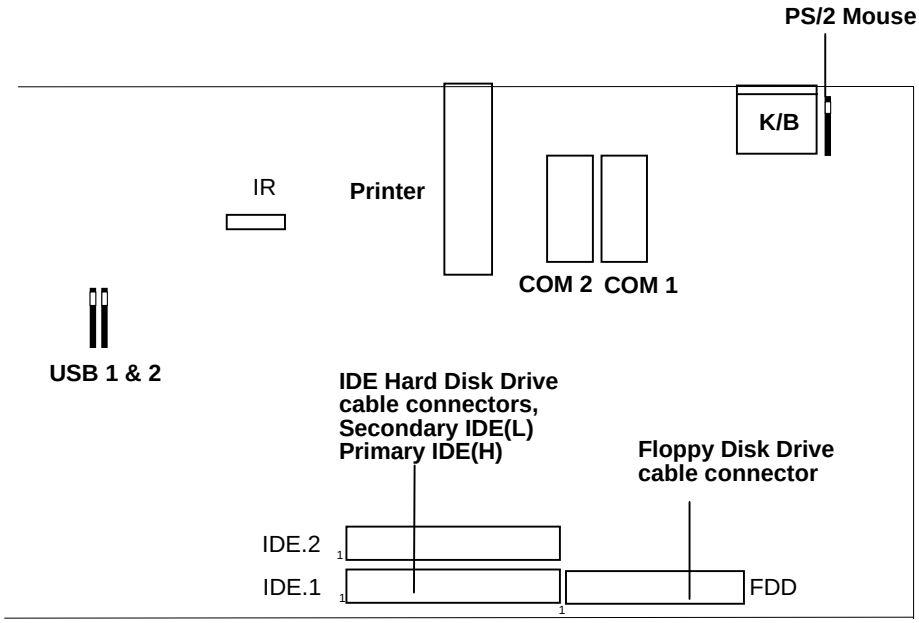


2.2. Connectors

The Connectors are made of the same component as the jumper switchs. There are connectors for the switchs and indicator lights from the system case. There are also connectors for the on-board I/O port and the leads from a system power supply.



2.2.1 I/O Ports .



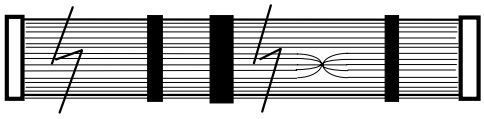
When you connect a ribbon cable to any of these I/O connectors, you must orient the cable connector so that the Pin 1 edge of the cable is at the Pin 1 end of the on-board connector.

The pin 1 edge of the ribbon cable is colored to indentify it.

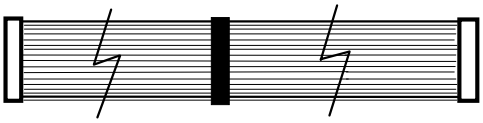
Port & Controller Cables

The mainboard comes with One IDE ribbon connector cable and One Floppy Disk drive ribbon connector cable.

(1) Floppy Drive ribbon cable



(3) IDE Drive ribbon cable



2.2.2 External Connections

There are several connectors on the system board for switches and indicator lights from the system case. The connectors are made of the same components as the jumper switches.

KEYLOCK Connector for both a case-mounted lock and a Power-On LED.

SPEAKER Connector for the lead from a speaker mounted inside the system case.

RESET Connector for the lead from a Reset switch mounted on the system case.

TBLED Connector for the lead from a turbo-LED mounted on the system case. (NOTE 1)

TBSW Conntector for the lead from a case-mounted TBSW switch. (NOTE 1)

HD LED Connector for IDE activity LED.

CN1 ATX Form Power Supply Connector.

CN2 ATX Form Power Supply Connector.

POWER ATX Power ON/OFF Switch. (refer Page 2-6)

NOTE 1 : *TBLED and TBSW are no function.*

USB1, USB2 Two USB ports connector.

Pin assignment of the USB Connectors as following :

USB 1	Pin Name
Pin 1	SBV0
Pin 2	-SBD0
Pin 3	+SBD0
Pin 4	SBG0

USB 2	Pin Name
Pin 1	SBV1
Pin 2	-SBD1
Pin 3	+SBD1
Pin 4	SBG1

IR IR Connector.

Pin assignment :

Pin Number	Pin Name
Pin 1	+ 5V
Pin 2	------
Pin 3	IR RxL
Pin 4	GND
Pin 5	IRTX

3. BIOS Setup

This 82440EX motherboard comes with the AWARD BIOS from Award Software Inc. Enter the Award BIOS program's Main Menu as follows:

1. Turn on or reboot the system. After a series of diagnostic checks, the following message will appear:

   PRESS <DEL> TO ENTER SETUP

2. Press the <DEL> key and the main program screen appears as in the following page.

ROM PCI/ISA BIOS
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP / PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
Esc: Quit F10: Save & Exit Setup	↑ ↓ → ← : Select Item (Shift)F2: Change Color
Time, Date, Hard Disk Type...	

3. Using one of the arrows on your keyboard to select and option and press <Enter>. Modify the system parameters to reflect the options installed in the system.

4. You may return to the Main Menu anytime by press <ESC>.

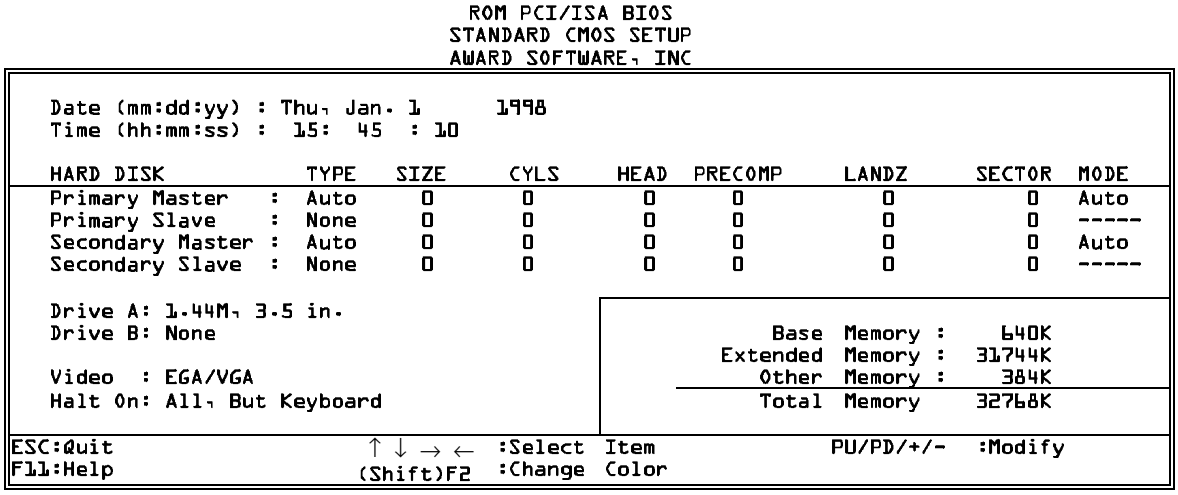
5. In the Main Menu, "SAVE AND EXIT SETUP" saves your changes and reboots the system, and "EXIT WITHOUT SAVING" ignores your changes and exits the program.

3.1 Standard CMOS Setup

Standard CMOS Setup allows you to record some basic system hardware configuration and set the system clock and error handling. You only need to modify the configuration values of this option when you change your system hardware configuration or the configuration stored in the CMOS memory got lost or damaged.

Run the Standard CMOS Setup as follows:

1. Choose "STANDARD CMOS SETUP" from the Main Menu and a screen with a list of options appears.



2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of screen options follows:

Date (mm/dd/yy)	Set the current date and time.
Time (hh/mm/ss)	Type the current time.
Primary (Secondary) Master & Slave	This field records the specifications for all non-SCSI hard disk drives installed in your system. Refer to the respective documentation on how to install the drivers.

Drive A & B	Set this field to the types of floppy disk drives installed in your system. The choices are: 360KB, 5.25 in., 1.2MB, 5.25 in., 720KB, 3.5 in., 1.44M, 3.5 in. (default), 2.88MB, 3.5 in., or None
Video	Set this field to the type of video display card installed in the system. The choice are: Monochrome; Color 40x25; VGA/EGA (default); or Color 80x25
Halt On	Set this field to the type of errors that will cause the system to halt. The choices are: All Errors (default); No Errors; All, But Keyboard; All, But Diskette; or All, but Disk/Key

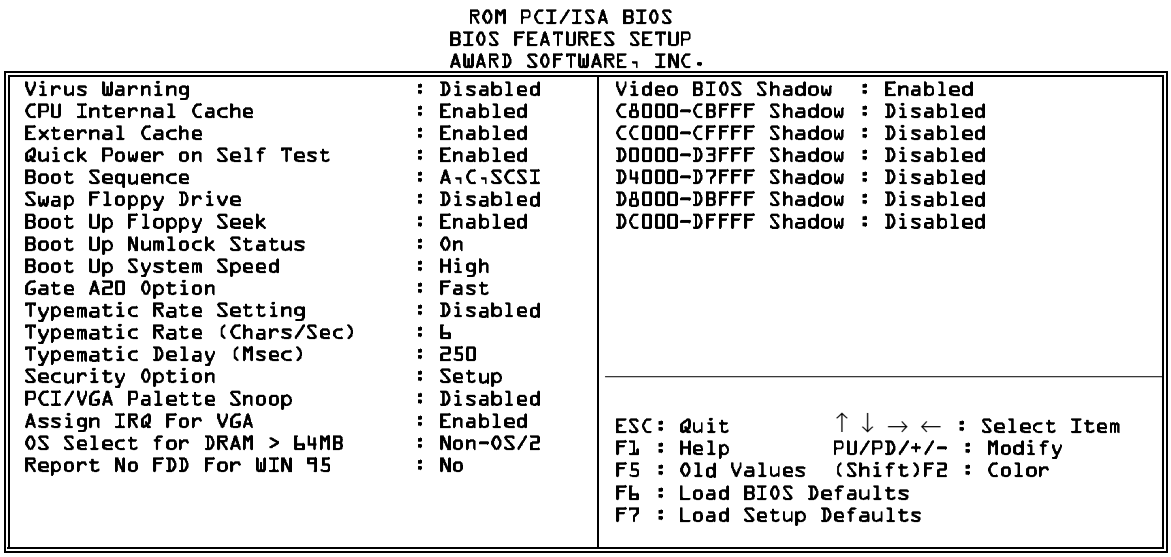
3. Press <Esc> to return the Main Menu when you finish setting up in the "Standard CMOS Setup".

3.2 BIOS Features Setup

BIOS Features Setup allows you to improve your system performance or set up some system features according to your preference.

Run the BIOS Features Setup as follows:

1. Choose "BIOS FEATURES SETUP" from the Main Menu and a screen with a list of items appears.



2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys. An explanation of the <F> keys follows:

   <F1>: "Help" gives options available for each item.

   Shift<F2>: Change color.

   <F5>: Get the previous values. These values are the values with which the user started the current session.

   <F6>: Load all options with the BIOS default values.

   <F7>: Load all options with the Setup default values.

A short description of screen options follows:

Virus Warning Enabled:
Cache Activates automatically when the system boots up

causing a warning message to appear if there is anything attempts to access the boot sector or hard disk partition table.
Disabled:
No warning message will appear when there is something attempts to access the boot sector or hard disk partition table
Note: *Many diagnostic (or boot manager) programs which attempt to access the boot sector table can cause the above warning message. If you will be running such a program, we recommend that you disable the virus protection first.*

CPU Internal Cache Choose Enabled (default) or Disabled. This option allows you to enable or disable the CPU's internal cache.

External Cache Choose Enabled (default) or Disabled. This option allows you to enable or disable the external cache memory.

Quick Power On Self Test Choose Enabled (default) or Disabled. This option allows you to speed up the Power On Self Test routine.

Boot Sequence Default is "A, C, SCSI". This option determines which drive to look for first for an operating system.

Swap Floppy Drive Choose Enabled or Disabled (default). This option swaps floppy drive assignments when it is enabled.

Boot Up Floppy Seek Enabled (default): During POST, BIOS checks the track number of the floppy disk drive to see whether it is 40 or 80 tracks.

Boot Up Num Lock Status Choose On (default) or Off. This option lets user to activate the NumLock function at boot-up.

Gate A20 Option Choose Normal or Fast (default). This option allows the RAM to access the memory above 1MB by using

	the fast gate A20 line.
Typematic Rate Setting	Choose Enabled or Disabled (default). Enable this option to adjust the keystroke repeat rate.
Typematic Rate (Chars/Sec)	Range between 6 (default) and 30 characters per second. This option controls the speed of repeating keystrokes.
Typematic Delay (Msec)	Choose 250 (default), 500, 750, and 1000. This option sets the time interval for displaying the first and the second characters.
Security Option	Choose System or Setup (default). This option is to prevent unauthorized system boot-up or use of BIOS Setup.
PCI/VGA Palette Snoop	Choose Enabled or Disabled (default). It determines whether the MPEG ISA cards can work with PCI/VGA or not.
Assign IRQ for VGA	Choose Enabled (default) or Disabled. Enabled: Add one IRQ to VGA controller. Disabled: Remove IRQ from VGA controller. The system will have extra IRQ for other devices but the VGA controller will still not disabled (only IRQ was removed).
OS Select for DRAM > 64MB	Non-OS2 (default): For Non-OS/2 system. OS: For OS/2 system.
Report No FDD for WIN 95	Yes: BIOS reports "NO FDD" to Win95. No (default): BIOS will not report "NO FDD" to Win95.

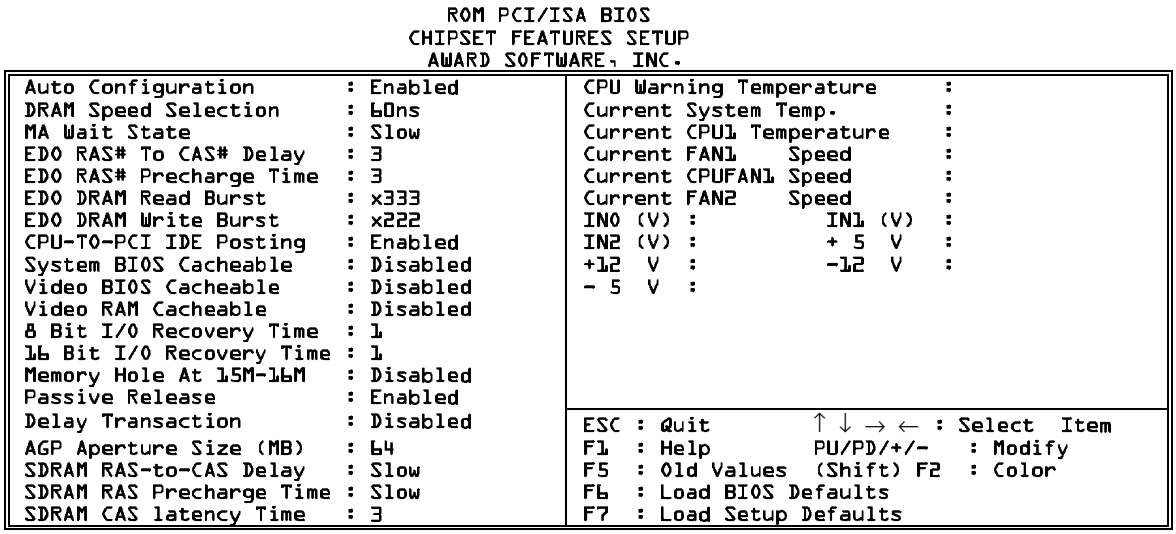
Video BIOS Shadow	Enabled (default): Map the VGA BIOS to system RAM. Disabled: Don't map the VGA BIOS to system RAM.
C8000-CBFFF to DC000-DFFF Shadow	These options are used to shadow other expansion card ROMs.

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

3.3 Chipset Features Setup

Chipset Features Setup changes the values of the chipset registers. These registers control the system options.

Run the Chipset Features Setup as follows:



2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of screen options follows:

Auto Configuration Choose Enabled (default) or Disabled. The system sets all options on the left side of the screen automatically when choose Enabled.

DRAM Speed Selection The DRAM timing is controlled by the DRAM timing Registers. The timings programmed into this register are dependent on the system design. Slower rates may be required in certain system designs to support loose layouts or slower memory.

50ns	DRAM Timing Type.
60ns	DRAM Timing Type.

MA Wait State This item allows you to select MA Wait State.

The Choice: Fast, Slow.

EDO RAS# To CAS# Delay This sets the relative delay between the row and column address strobes from DRAM (EDO).

The Choice: 2, 3.

EDO RAS# Precharge Time Defines the length of time for Row Address Strobe from DRAM (EDO) is allowed to precharge.

The Choice: 3, 4.

EDO DRAM Read Burst This sets the timing for burst mode reads from DRAM (EDO). Burst read and write requestes are generated

by the CPU in four separate parts. The lower the timing numbers,the faster the system will address memory.

x222	Read DRAM(EDO) timings are 2-2-2
x333	Read DRAM(EDO) timings are 3-3-3

EDO DRAM Write Burst

This sets the timing for burst mode writes from DRAM (EDO). Burst read and write requests are generated by the CPU in four separate parts. The lower the timing numbers, the faster the system will address memory.

x222	Write DRAM timings are 2-2-2-2
x333	Write DRAM timings are 3-3-3-3

CPU-To-PCI IDE Posting

Select Enabled to post write cycles from the CPU to the PCI IDE interface. IDE accesses areposted in the CPU to PCI buffers, for cycle optimization.

The Choice: Enabled, Disabled.

System BIOS Cacheable

Choose Enabled or Disabled (default). When Enabled, Enabled, the access to the system BIOS ROM addressed at F0000H-FFFFFH is cached.

Video BIOS Cacheable

Choose Enabled or Disabled (default). When Enabled, the access to the VGA BIOS ROM addressed at C0000H-C7FFFH is cached.

Video RAM Cacheable

Choose Enabled or Disabled (default). When Enabled, the access to the VGA RAM addressed is cached.

8 Bit I/O Recovery Time
16 Bit/ I/O Recovery

This delay happens when the CPU is running so much faster than the I/O bus that the CPU must be delayed to allow for the completion of the I/O.

Time	The choices for 8 bit I/O are NA, 1 to 8 CPU clock. Default is 3. The choices for 16 bit I/O are NA, 1 to 4 CPU clock. Default is 2.
Memory Hole At 15M-16M	Choose Enabled or Disabled (default). 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.
Passive Release	Use the default setting.
Delayed Transaction	Use the default setting.
AGP Aperture Size (MB)	Choose 4, 8, 16, 32, 64 (default), 128, or 256MB. Memory mapped and graphics data structures can reside in a Graphics Aperture. This area is like a linear buffer. BIOS will auto report the starting address of this buffer to the O.S.
SDRAM RAS-to-CAS Delay	Select Fast rate may be require faster memories.
SDRAM RAS Precharge Time	Select Fast rate may be require faster memories.
SDRAM CAS Latency Time	Use the default setting.

CPU Warning Temperature+	Choose Disabled (default), 50℃/122℉, 53℃/127℉, 56℃/133℉, 60℃/140℉,

	63℃/145℉, 66℃/151℉, 70℃/158℉ When CPU temperature is over the setting value, the speaker will sound an alarm and the clock will drop until the temperature is within optimum the temperature range.
Current System+ **Temperature+**	BIOS will displays System's temperature, fan speed, and voltage value. + : These two functions are dependent on the necessary hardware installation.

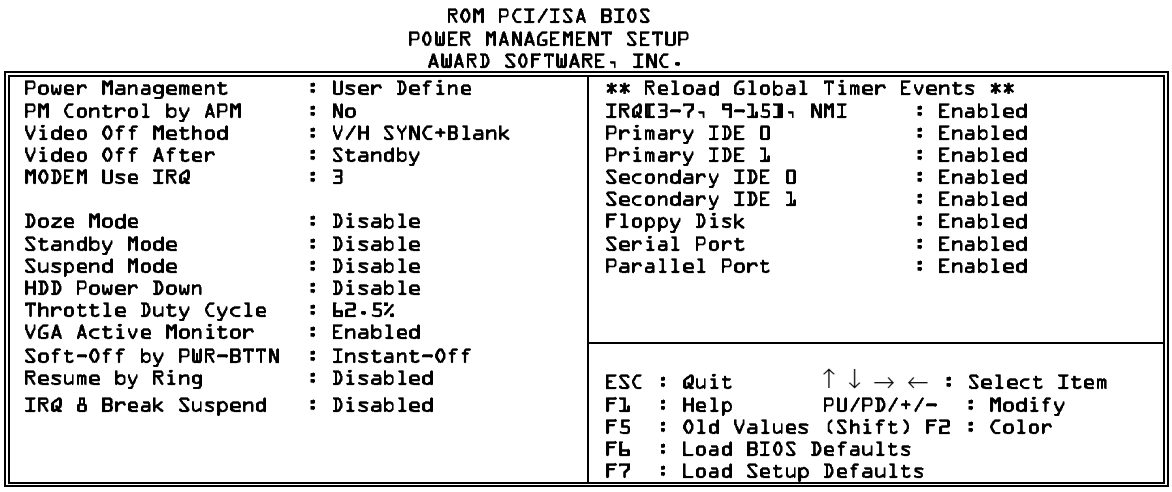
3. Press <ESC> and follow the screen instructions to save or disregard your settings.

【3】

3.4 Power Management Setup

The Power Management Setup sets the system's power saving functions.

1. Choose "POWER MANAGEMENT SETUP" from the Main Menu and a screen with a list of options appears.



2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of screen options follows:

Power Management Choose Max. Saving, User Define, (default), or Min Saving.

PM Control by APM Choose Yes or No (default). You need to choose Yes when the operating system has the APM functions, choose No otherwise.

Video Off Method	Choose Blank, DPMS, or V/H Sync+Blank (default). You can chose either DPMS or V/H Sync+Blank when the monitor has the Green function. You need to choose Blank when the monitor has neither the Green function.
Video Off After	Choose NA, Suspend, Standby (default), or Doze.
MODEM Use IRQ	Assign the IRQ number to the modem which is being used so that the ring signal can wakeup the system. The default setting is 3 (COM2).
Doze Mode	This option sets the CPU speed down to 33MHz during this mode.
Standby Mode **Suspend Mode**	These two options allow you to choose the mode for the different timers. The Standby Mode turns off the VGA monitor, and the Suspend Mode turns off the CPU and saves the energy of the system.
HDD Power Down	Time is adjustable from 1 to 15 minutes. When the set time has elapsed, the BIOS send a command to the HDD to power down, which turns off the motor.
Throttle Duty Cycle	Choose the duty cycle time:12.5%, 25%, 37.5%, 50%, 62.5% (default), 75%, or 87.5%. The bigger of the percentage, the more saving power it gets.

【3】

VGA Active Monitor	Enabled: the system can not enter the power saving mode when monitor is on. Disabled: the system can enter the power saving mode when

monitor is on.

Soft-Off by PWR_BTTN	Instant-off: (default) turns off the system power at once after pushing the power button. Delay 4 Sec: turns off the system power 4 seconds after pushing the power button(to meet PC 97 spec.)
Resume by Ring	Enabled: Wake up the system from ring signal. Disabled: (default) Ring signal can not wake up the system.
Resume by Alarm	Select Enabled to Activate Alarm Power On.
IRQ 8 Break Suspend	Use the default setting.
IRQ (#), NMI; **Primary IDE 0** **Primary IDE 1** **Secondary IDE 0** **Secondary IDE 1;** **Floppy Disk;** **Serial Port;** **Parallel Port**	Enabled: (default) The system can not enter the power saving mode when I/O ports or IRQ # is activated. Disabled: The system still can enter the power saving mode when I/O ports or IRQ # is activated. ***Note:*** *These functions can only be activated when the power management option is Enabled.*

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

3.5 PnP/PCI Configuration Setup

PnP/PCI Configuration Setup configures the PCI bus slots.

Run the Chipset Features Setup as follows:

1. Choose "PnP/PCI CONFIGURATION SETUP" from the Main Menu and a screen with a list of options appears.

```
                    ROM PCI/ISA BIOS
                  PNP/PCI CONFIGURATION
                   AWARD SOFTWARE, INC.
PNP OS Installed                : No      PCI IDE IRQ Map To     :  PCI-AUTO
Resources Controlled By         : Manual  Primary   IDE INT#     :  A
Reset Configuration Data        : Disabled Secondary IDE INT#    :  B

IRQ-3    assigned to : PCI/ISA PnP      Used MEM base addr     :  N/A
IRQ-4    assigned to : PCI/ISA PnP
IRQ-5    assigned to : PCI/ISA PnP      Assign IRQ For USB     :  Enabled
IRQ-7    assigned to : PCI/ISA PnP
IRQ-9    assigned to : PCI/ISA PnP
IRQ-10   assigned to : PCI/ISA PnP
IRQ-11   assigned to : PCI/ISA PnP
IRQ-12   assigned to : PCI/ISA PnP
IRQ-14   assigned to : PCI/ISA PnP
IRQ-15   assigned to : PCI/ISA PnP
DMA-0    assigned to : PCI/ISA PnP
DMA-1    assigned to : PCI/ISA PnP      ESC : Quit      ↑ ↓ → ←  : Select Item
DMA-3    assigned to : PCI/ISA PnP      F1  : Help      PU/PD/+/-    : Modify
DMA-5    assigned to : PCI/ISA PnP      F5  : Old Values (Shift) F2  : Color
DMA-6    assigned to : PCI/ISA PnP      F6  : Load BIOS Defaults
DMA-7    assigned to : PCI/ISA PnP      F7  : Load Setup Defaults
```

PnP OS Installed Select Yes if the system operating environment is Plug-and-Play software (e.g., Windows 95).

The Choice: Yes and No.

Resource Controlled By The Award Plug and Play BIOS can automatically configure all the boot and Plug and Play-compatible devices. If you select Auto, all the interrupt request (IRQ) and DMA assignment fields disappear, as the BIOS automatically assigns them.

The Choice: Auto and Manual.

【3】

Reset Configuration Data Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system cannot boot.

The Choice: Enabled and Disabled.

IRQ n Assigned to When resources are controlled manually, assign each system interrupt as one of the following types, depending on the type of device using the interrupt:

Legacy ISA Devices compliant with the original PC AT bus specification, requiring a specific interrupt (such as IRQ4 for serial port 1).

PCI/ISA PnP Devices compliant with the Plug and Play standard, whether designed for PCI or ISA bus architecture.

DMA n Assigned to When resources are controlled manually, assign each system DMA channel as one of the following types, depending on the type of device using the interrupt:

Legacy ISA Devices compliant with the original PC AT bus specification, requiring a specific DMA channel

PCI/ISA PnP Devices compliant with the Plug and Play standard, whether designed for PCI or ISA bus architecture.

PCI IDE IRQ Map to This field lets you select PCI IDE IRQ mapping or PC AT (ISA) interrupts. If your system does not have one or two PCI IDE connectors on the system board, select values according to the type of IDE interface(s) installed in your system (PCI or ISA). Standard ISA interrupts for IDE channels are IRQ14 for primary and IRQ15 for secondary.

The Choice: PCI-SLOT1, PCI-SLOT2, PCI-SLOT3, PCI-SLOT4, ISA, PCI-AUTO

Primary/ Secondary Each PCI peripheral connection is capable of activating up to four interrupts: INT# A, INT# B, INT# C and INT# D. By default, a PCI connection is assigned INT# A. Assigning INT# B has no meaning unless the peripheral device requires two interrupt services rather than just one.

	Because the PCI IDE interface in the chipset has two channels, it requires two interrupt services. The primary and secondary IDE INT# fields default to values appropriate for two PCI IDE channels, with the primary PCI IDE channel having a lower interrupt than the secondary.
Used MEM base addr	Select a base address for the memory area used by any peripheral that requires high memory. The Choice: C800, CC00, D000, D400, D800, DC00, N/A.
Used MEM Length	Select a length for the memory area specified in the previous field. This Field does not appear if no base address is specified. The Choice: 8K, 16K, 32K, 64K.
Assign IRQ for USB	Select Disabled, BIOS will not Assign IRQ for USB. Default set Enabled.

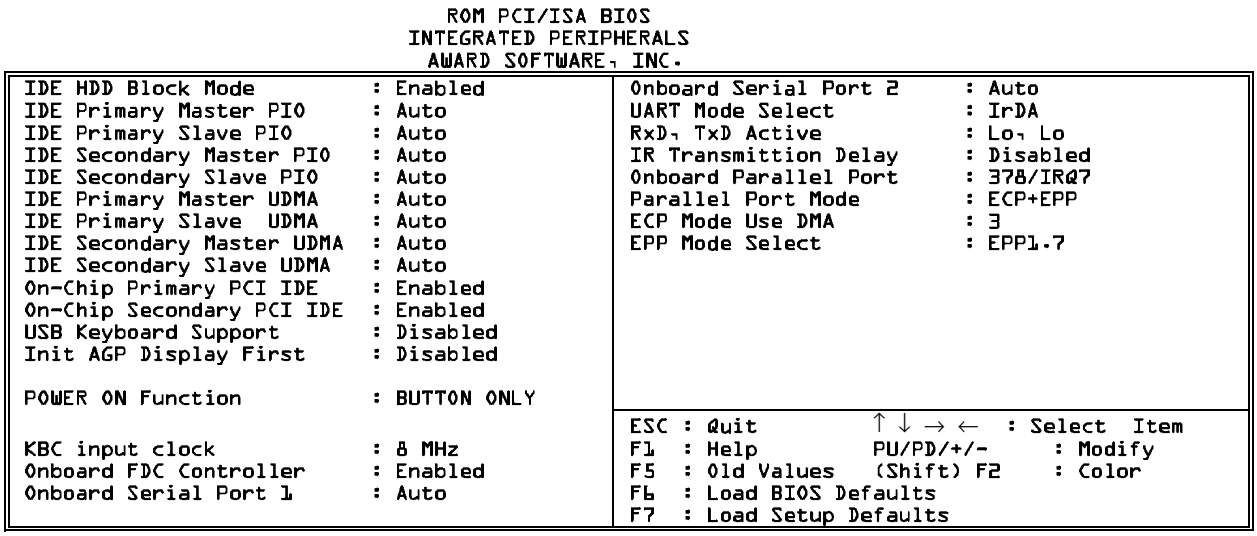
【3】

3.6 Integrated Peripherals

The Integrated Peripherals option changes the values of the Chipset registers. These registers control system options in the computer.

1. Choose "INTEGRATED PERIPHERALS" from the Main Menu and a

screen with a list of options appears.



2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of screen options follows:

IDE HDD Block Mode Choose Enabled (default) or Disabled. If your hard disk size is larger than 540MB, choose Enabled, and, if you are using the IDE HDD Auto Detection option, the BIOS will choose this option automatically.
Note: *Some HDDs of old models don't provide this feature.)*

IDE Primary Master/ PIO
IDE Secondary Master/ Slave PIO Choose Auto (default) or Mode 0~4.
The BIOS will detect the HDD Mode type automatically when you choose Auto. You need to set to a lower mode than Auto when your hard disk becomes unstable.

On-Chip Primary Secondary PCI IDE Enabled: (default) Turn on the onboard IDE function.
Disabled: Turn off the onboard IDE function.

USB Keyboard Support	Enabled: Enables function when the USB keyboard is being used. Disabled: (default) When the AT keyboard be used.
Power On Function	Choose BUTTON ONLY (default), Password, Mouse Left, or Mouse Right. (To support the Password, Mouse Left and Mouse Right, you have to close the 2-3 pin of JP2 & JP3) Mouse Left : Use the PS/2 Mouse Left to boot the system. Mouse Right: Use the PS/2 Mouse Right to boot the system. Password : Choose a special password which is defined by the user or use one of the HOT keys (from CTRL-F1 to CTRL-F12) to boot the system.
KBC Input Clock	Choose 6MHz, 8MHz (default), 12MHz, or 16MHz. There might be a compatible problem when is above 8MHz.
Onboard FDC Controller	Choose Enabled (default) or Disabled. Choose Disabled when you use an ISA card with FDD function, or, choose Enabled to use the onboard FDD connector.
Onboard Serial Port 1	Choose Auto(default), 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, or Disabled. Do no set port 1 & 2 to the same value except for Disabled.

【3】

Onboard Serial Port 2	Choose Auto(default), 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, or Disabled.
UART Mode select	Choose Normal (default), IrDA, or ASKIR.
IR Transmition Delay	Enabled: Enabled delay when transfers data. Disabled (default) Disabled delay when transfers data.

Onboard Parallel Port	Choose the printer I/O address: 378H/IRQ7 (default), 3BCH/IRQ7, 278H/IRQ5
Parallel Port Mode	Choose SPP (default), ECP + EPP, or ECP ECP mode. The mode depends on your external device that connects to this port.
ECP Mode Use DMA	Choose DMA3 (default) or DMA1. Most sound cards use DMA1. Check with your sound card configuratin to make sure that there is no conflict with this function. ** : This option will not be displayed unless the EPP/ECP function is selected.*
EPP Mode Select	Choose EPP1.7 (default) or EPP1.9. EPP1.9 supports harware handshake. This setting is dependent on your EPP device. ***Note:*** *The above 2 options will not be displayed unless the EPP/ECP function is selected.*

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

3.7 Load Setup Detaults

Load Setup Defaults option loads the default system values to the system configuration fields. If the CMOS is corrupted the defaults are loaded automatically. Choose this option and the following message appears:

"Load SETUP Defaults (Y/N)? N"

To use the SETUP defaults, change the prompt to "Y" and press <Enter>.

3.8 Supervisor/User Password

These two options allows you to set your system passwords. Normally, supervisor has a higher right to change the CMOS setup option than the user. The way to set up the passwords for both Supervisor and User are as follow:

1. Choose "Change Password" in the Main Menu and press <Enter>. The following message appears:

"Enter Password:"

2. The first time you run this option, enter your password up to only 8 characters and press <Enter>. The screen does not display the entered characters.

3. After you enter your password, the following message appears prompting you to confirm the new passward:

"Confirm Password"

4. Enter exact the same password you just typed again to confirm the passwod and press <Enter>.

5. Move the cursor to Save & Exit Setup to save the password.

6. If you need to delete the password you entered before, choose the Supervisor Password and press <Enter>. It will delete the password that you had before.

7. Move the cursor to Save & Exit Setup to save the option you did, otherwise the old password will still be there when you turn on your machine next time.

8. Press <ESC> to exit to the Main Menu.

Note: *If you forget or lose the password, the only way to access the system is*

to clear the CMOS RAM by setting JBAT1. All setup information will be lost and you need to run the BIOS setup program again.

3.9 IDE HDD Auto Detection

IDE HDD Auto Detection detects the parameters of an IDE hard disk drive and automatically enters them to the Standard CMOS Setup screen.

The screen will ask you to select a specific hard disk for Primary Master after you select this option. If you accept a hard disk detected by the BIOS, you can enter "Y" to confirm and then press <Enter> to check next hard disk. This function allows you to check four hard disks and you may press the <ESC> after the <Enter> to skip this function and to back to the Main Menu.

3.10 Save & Exit Setup

Save & Exit Setup allows you to save all modifications you have specified into the CMOS memory. Highlight this option on the Main Menu and the following message appears:

"SAVE to CMOS and EXIT (Y/N)? Y"

Press <Enter> key to save the configuration changes.

3.11 Exit Without Saving

Exit Without Saving allows you to exit the Setup utility without saving the modifications that you have specified. Highlight this option on the Main Menu and the following message appears:

"Quit Without Saving (Y/N) ? N"

You may change the prompt to "Y" and press <Enter> key to leave this option.