PENTIUM II

ATX Form PCI & ISA Bus Pentium Mainboard
On Board PCI Master IDE, Multi-I/O.

R-653

Users Manual

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1. INTRODUCTION

1.1. Preface

Welcom to use the R653 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 R653 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 233MHz / 266MHz.
- ❑ Chipset : Intel 82441FX, 82442FX, 82371SB.
- ❑ Pentium II CPU Built-in 256K or 512KB L2 Cache.
- ❑ Supports 3 Banks of SIMMs (Six -72PIN SIMM Sockets).
  - Supports Memory Size from 8MB to 384MB.
  - Supports Fast Page (FP) and Extended Data Out (EDO) Mode DRAM.
- ❑ Four 16-bit ISA Slots and
  Four 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 Transfers.
- ❑ Universal Serial Bus Controller.
  - Host / HUB Controller.
  - Two USB Ports.

- On-board I / O support :
  - 2 Serial Ports (6550 Fast UART compatible)
  - 1 Parallel Port (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.

- ATX Form Factor : 30.4cm x 24.4cm or 12" x 9.6" (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 :

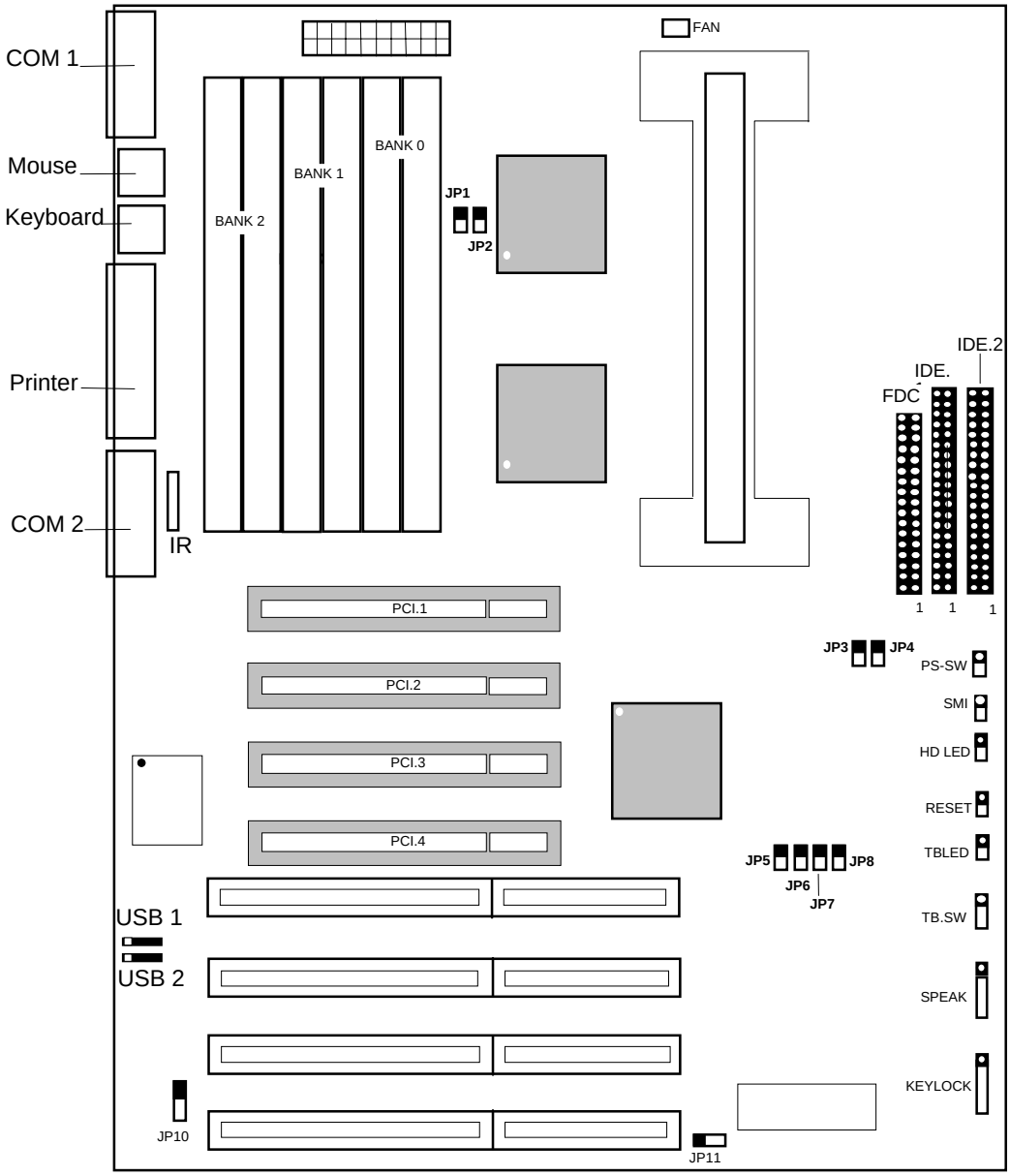
- Do not remove the anti-static pachaging until you are ready to install the system board and other system components.

- 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 R653 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 you system.

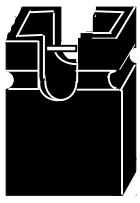
CAUTION : Turn off power to the main board, system chassis, and peripheral devices before performing any work on the main board or system.

2.1. Jumper Setting Summary

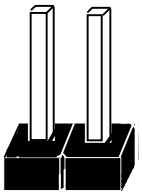
Regarding hardware settings on the board. They specify configuration options for various features. The settings are made using something called a "Jumper". A jumper is a set of two or more metal pins in a plastic base attached to the mainboard. A plastic jumper "cap" with a metal plate inside fits over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

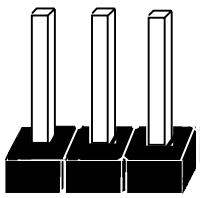
Jumpers and caps



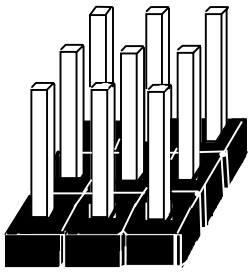
Jumper cap



2-Pin Jumper



3-Pin Jumper

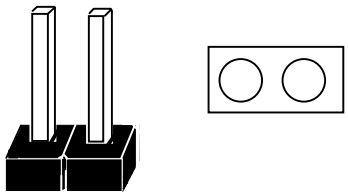


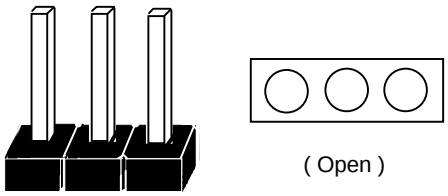
Jumper block

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

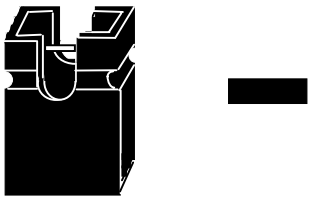
Jumpers are shown like this



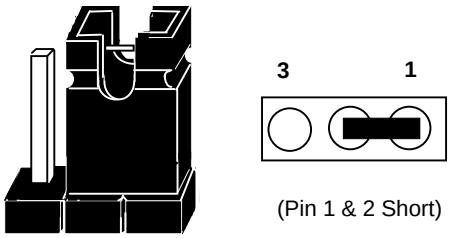


(Open)

Jumper caps like this



Jumper settings like this

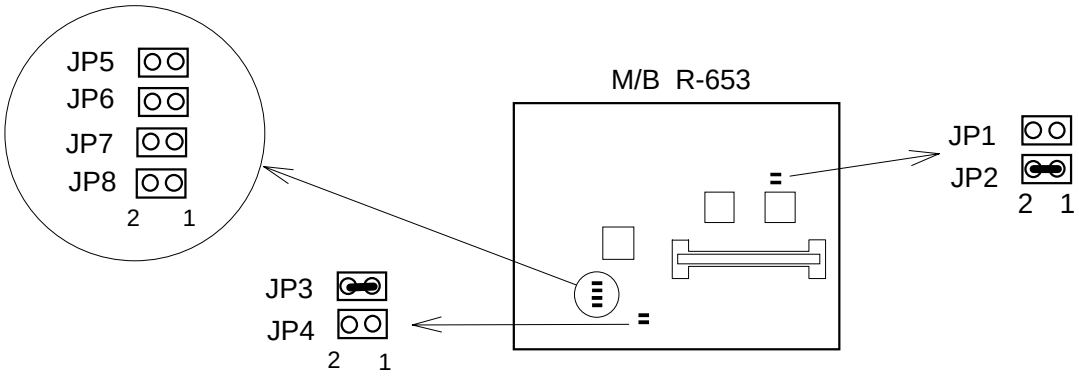


(Pin 1 & 2 Short)

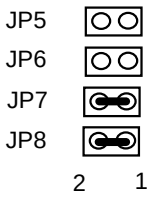
2.1.1 CPU Type Selector : JP1 ~ JP8.

CPU Type	System CLK	JP1	JP2	JP3	JP4	JP5	JP6	JP7	JP8
233MHz	66MHz x 3.5	O	C	C	O	O	O	C	C
266MHz	66MHz x 4					C	C	O	C
300MHz	66MHz x 4.5					O	C	O	C

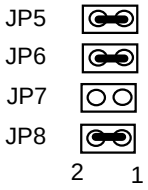
"O" = Open, "C" = Close.



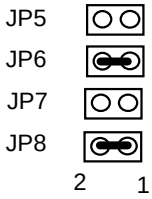
(a) 233 MHz CPU



(b) 266 MHz CPU

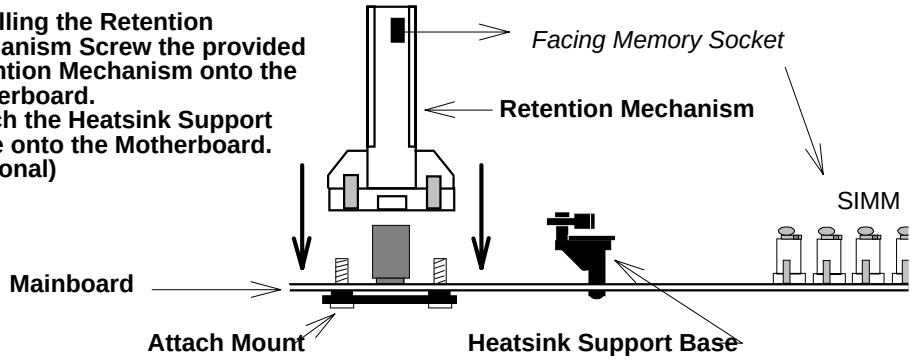


(c) 300 MHz CPU



Installing the Pentium II CPU

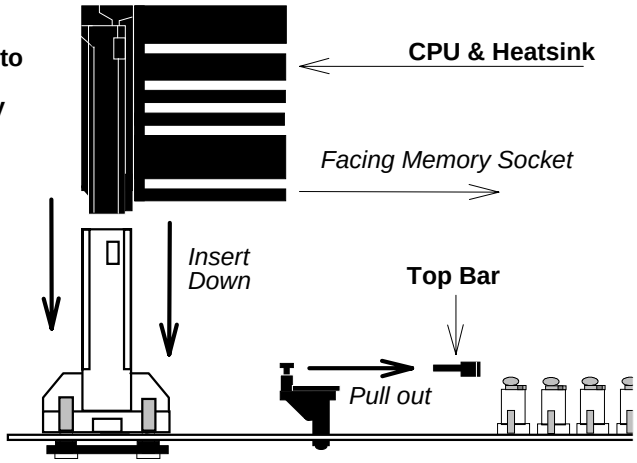
Step 1: **(1) Installing the Retention Mechanism Screw the provided Retention Mechanism onto the Motherboard.**
(2) Attach the Heatsink Support Base onto the Motherboard. (optional)



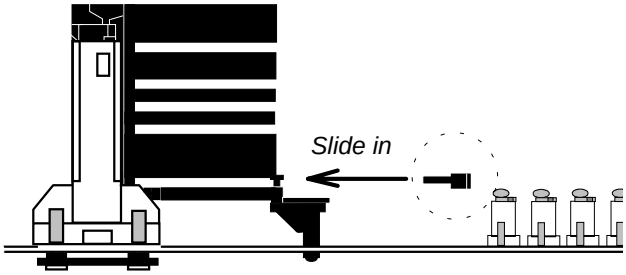
Step 2:

(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)



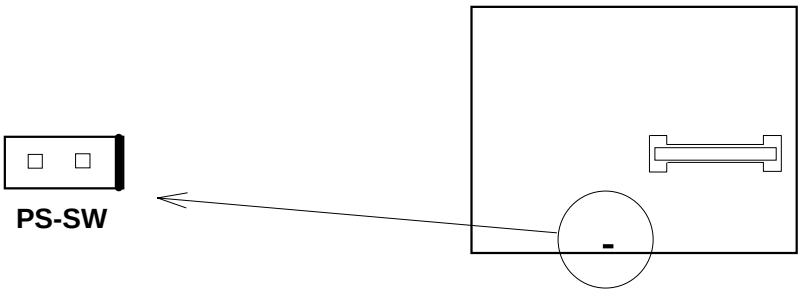
Step 3: **Slide the Top Bar into the Heatsink and Lock it. (optional)**



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

2.1.2. ATX Power ON/OFF Switch : PS-SW.

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.)



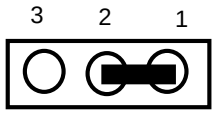
Note: Please make sure the AC Power Switch which on the Power Supply already switch to ON.(If your Power Supply have AC Power Switch)

2.1.3. CMOS Clear Jumper : JP10.

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

Function	JP10
Retain CMOS Data (default)	1-2
Clear CMOS data	2-3

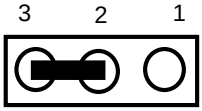
(a) Retain CMOS



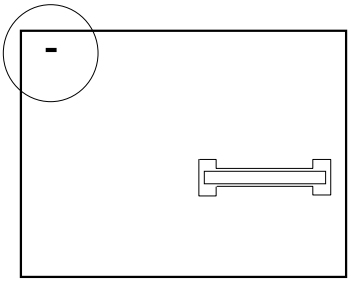
JP10

(Default)

(b) Clear CMOS



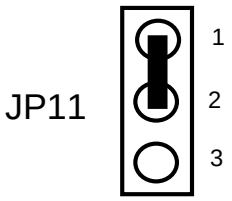
JP10



2.1.4. Flash EPROM Voltage Selector : JP11.

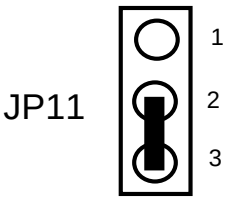
EPROM Voltage Mode	JP11
+5V Flash ROM	1-2
+12V Flash ROM	2-3

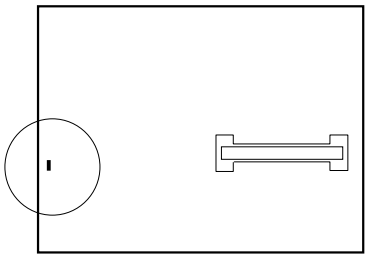
(a) 5V Flash ROM



(Default)

(a) 12V Flash ROM





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 JP11 to select Flash EPROMs Voltage Mode.

	JP11 .
+5V Flash ROM	1-2
+12V Flash ROM	2-3

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.

2.1.5. Upgrading System Memory

The R653 mainboard can use Six- 72pin SIMMs, system DRAM memory can be upgraded from 8MB to 384MB, The DRAM type can be used Fast Page Mode (FP) and Extended Data Output Mode (EDO) or BEDO Mode at the each Banks. The same Bank must use the same type of DRAM.

You must use 2 Module at a time (one Bank), that is. SIM 1 & SIM2 , SIM3 & SIM4, SIM5 & SIM6, (at least one Bank On-board).

Each pair of modules must be the same size and speed and can be either single or double-sided.

DRAM Type	:	Fast Page Mode(FP) or Extended Data Output(EDO) or BEDO Mode.
DRAM Speed	:	70ns or faster.
Parity	:	Either parity or non-parity. (Require Parity Memory to Support ECC)

Installing SIMMs

To install SIMMs as following instructions:

1. The modules will only insert in a socket in one orientation. An orientation cut-out will prevent you from inserting them the wrong way. See the figures at right.

2. Press the module edge connector into the socket at a moderate angle to the board. See the figures below.

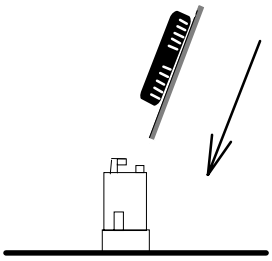
3. Press the module forward onto the socket's vertical posts, so that the alignment pins at the top of each post go into the circular holes at each end of the module.

4. The module should click into place, as the retaining clips at each end of the socket snap behind the module to secure it.

5. Repeat this procedure for each module you install.

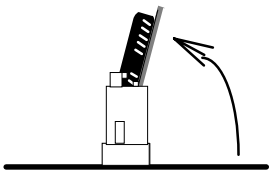
Installing a SIMM Module

A.



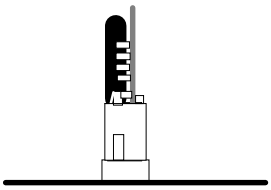
Insert the SIMM into the socket at an anglle.

B.



Press it forward onto the positioning pins.

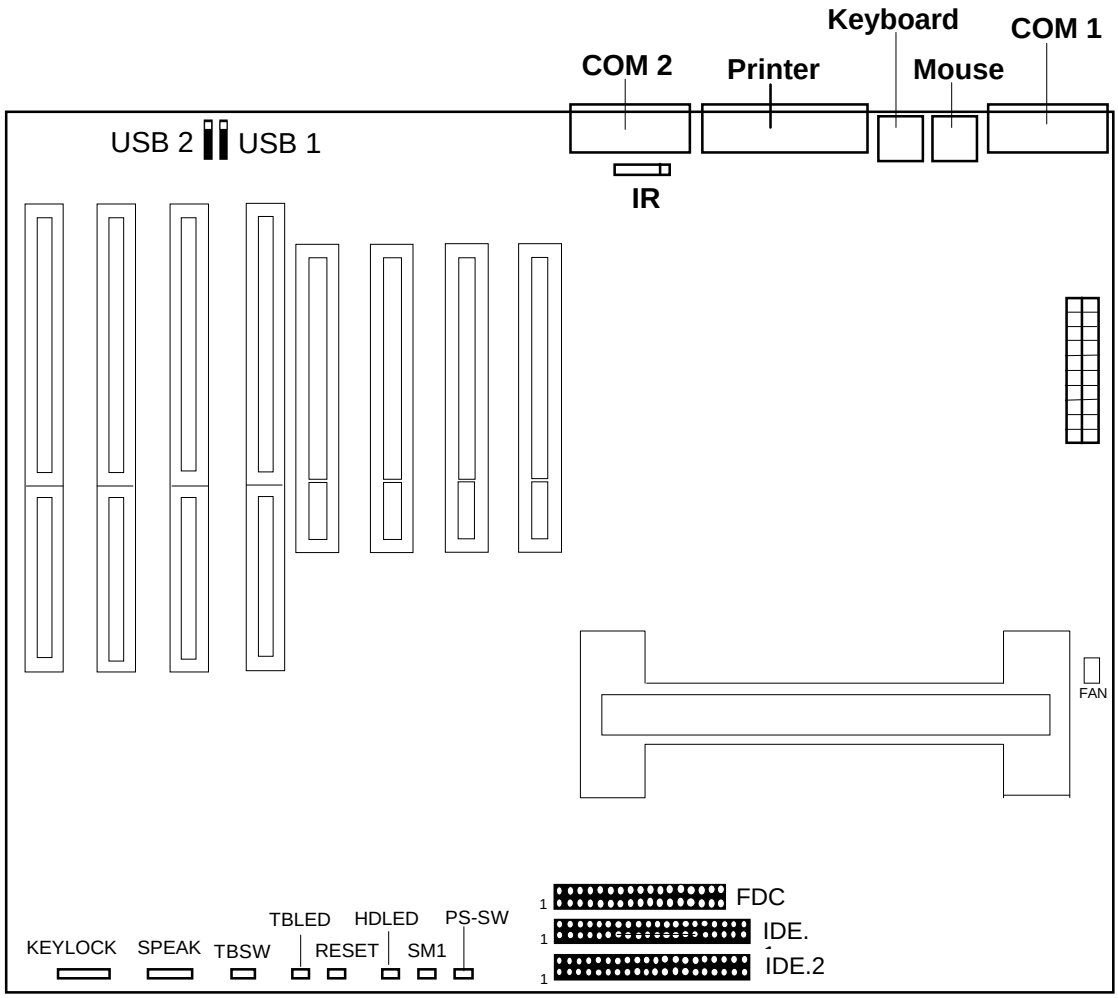
C.



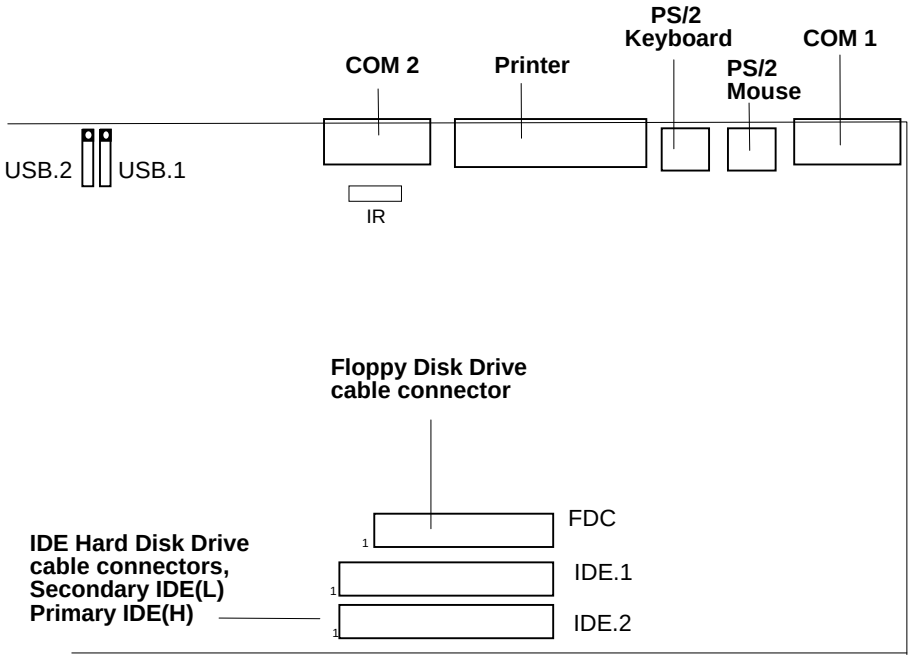
The retaining clips should fit over the edge and hold the SIMM in place.

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 .



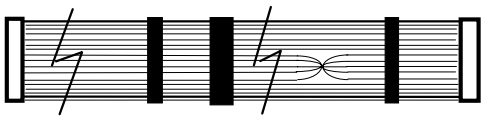
When you connect a ribbon cable to any of these I/O connectors, you must orient the cable connector so that the Pin 1 edge of the cable is at the Pin 1 end of the on-board connector.

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

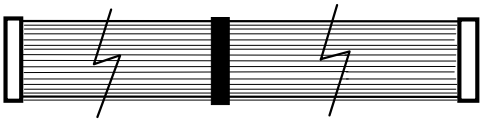
Port & Controller Cables

The mainboard comes with One IDE ribbon connector cable and One Floppy Disk drive ribbon connector cable.
The COM1, COM2 and LPT with D-Type Connector On-board.

(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.

TBSW Connector for the lead from a turbo-switch mounted on the system case.

TBLED Connector for the lead from a turbo-LED mounted on the system case.

SMI Conntctor for the lead from a case-mounted Suspend switch.

HD LED Connector for IDE activity LED.

CN1 ATX Form Power Supply Connector.

PS-SW ATX Power ON/OFF Switch. (refer Page 2-4)

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
Pin 5	Ground

USB 2	Pin Name
Pin 1	SBV1
Pin 2	-SBD1
Pin 3	+SBD1
Pin 4	SBG1
Pin 5	Ground

IR IR Connector.

Pin assignment :

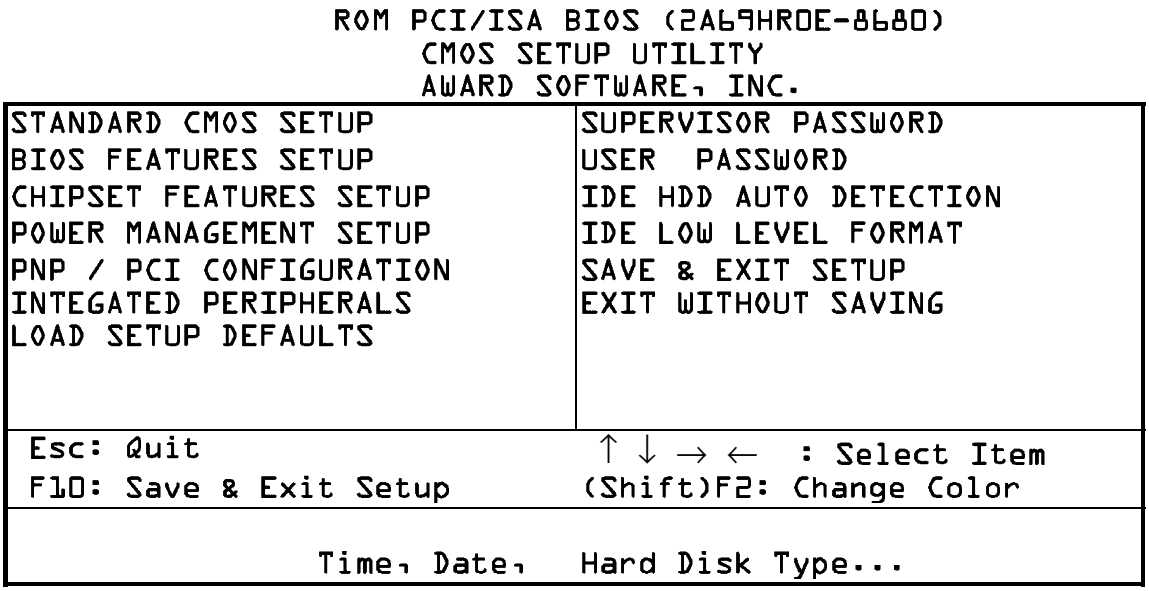
Pin Number	Pin Name
Pin 1	+ 5V
Pin 2	IR RxH
Pin 3	IR RxL
Pin 4	GND
Pin 5	IRTX

3. BIOS Setup

The mainboard's BIOS setup program is the ROM PCI/ISA 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, you are asked to press DEL to enter Setup.

2. Press the <DEL> key to enter the Award BIOS program and the main screen appears:



3. Chosse an option and press <Enter>. Modify the system parameters to reflect the options installed in the system. (See the following sections.)

4. Press <ESC> at anytime to return to the Main Menu.

5. In the Main Menu, choose "SAVE AND EXIT SETUP" to save your changes and reboot the system. Choosing "EXIT WITHOUT SAVING" ignores your changes and exits the program.

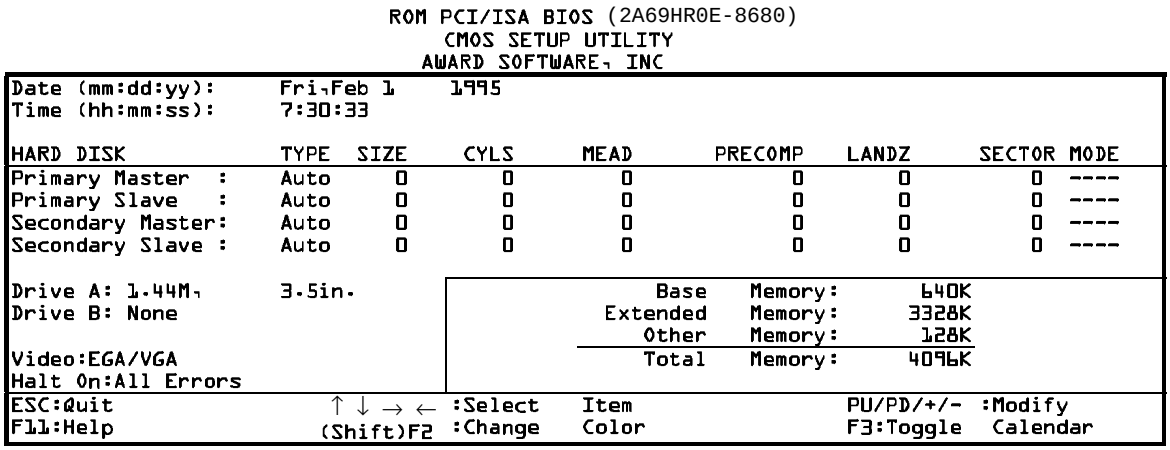
The Main Menu options of the Award BIOS are described in the sections that follow.

【3】

3.1 Standard CMOS Setup

Run the Standard CMOS Setup as follows.

1. Choose "STANDARD CMOS SETUP" from the Main Menu. A screen appears.



2. Use arrow keys to move between items and select values. Modify selected fields using PgUg/PgDn/+/- keys. Some fields let you enter values directly.

Date (mm/dd/yy)	Type the current date.
Time (hh/mm/ss)	Type the current time.
Primary (Secondary) Master & Slave	Choose from the standard hard disk types 1 to 46. Type 47 is user definable. If a hard disk is not installed choose "Not installed". (defaut)
Drive A & B	Choose 360KB, 5 1/4" 1.2MB, 5 1/4" 720KB, 3 1/2" 1.4MB, 3 1/2" (Default), 2.88MB, 3 1/2" or None
Video	Choose Monochrome, Color 40 X 25, VGA/EGA (Default), Color 80 X 25

3. When you finish, press the <ESC> key to return to the Main Menu.

3.2 BIOS Features Setup

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. (The screen below shows the BIOS default settings.)

```
                    ROM PCI/ISA BIOS (2A69HR0E-8680)
                      BIOS FEATURES SETUP
                      AWARD SOFTWARE, INC.
Virus Warning                 : Disabled   Video Bios Shadow  : Enabled
CPU Internal Cache            : Enabled    C8000-CBFFF Shadow : Disabled
External Cache                : Enabled    CC000-CFFFF Shadow : Disabled
Quick Power on Self Test      : Enabled    D0000-C#FFF Shadow : Disabled
Boot Sequence                 : C,A,SCSI   D4000-C7FFF Shadow : Disabled
Swap Floppy Drive             : Disabled   D8000-CBFFF Shadow : Disabled
Boot Up Floppy Drive          : Enabled    DC000-CFFFF Shadow : Disabled
Boot Up Numlock Status        : On
Gate A20 Option               : Fast
Typematic Rate Setting        : Disabled
Typematic Rate (Chars/Sec)    : 6
Typematic Delay (Msec)        : 250
Security Option               : Setup
PCI/VGA Palette Snoop         : Disabled
OS Select for DRAM >64MB      : Non-OS2    ESC: Quit      ↑ ↓ → ←  :Select Item
                                           F1: Help      PU/PD/+/- :Modify
                                           F5: Old Values (Shift)F2:Color
                                           F6: Load BIOS Defaults
                                           F7: Load Setup Defaults
```

2. Use the arrow keys to move between items and to select values. Modify the selected fields using the PgUg/PgDn/+/- keys. <F> keys are explained below:

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

Shift<F2>: Change color.

<F5>: Get the old values. These values are the values with which the user stanted the current session.

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

<F7>: Load all options with the Power-On default values.

A short description of screen items follows:

CPU Internal Cache This option enables/desables the CPU's internal cache. (The Default setting is Enabled.)

External Cache	This option enables/disables the external cache memory. (The Default setting is Enabled.)
Quick Power On Self Test	Enabled provides a Fast POST at boot-up.
Boot Sequence	The default setting attempts to first boot from drive C:then from Floppy drive A: and then from SCSI. other boot sequence are A, C, SCSI -- C,CDROM, A -- CDROM,C,A -- D, A, SCSI -- E, A, SCSI -- F, A, SCSI -- SCSI, A,C -- SCSI, C, A -- C only.
Swap Floppy Drive	Enabled changes the sequence of the A: and B: drives. (The Default setting is Disabled.)
Boot Up Num Lock Status	Choose On or Off. On puts numeric keypad in Num Lock mode at boot-up. Off puts this keypad in arrow key mode at boot-up.
Gate A20 Option	Choose Fast (default) or Normal. Fast allows RAM accesses above 1MB using the fast gate A20 line.
Typematic Rate Setting	Enable this option to adjust the keystroke repeat rate.
Typematic Rate (Chars/Sec)	Choose the rate a character keeps repeating.
Typematic Rate (Msec)	Choose how long after you press a key that a character begins repeating.
Security Option	Choose Setup or System. Use this feature to prevent unauthorized system boot-up or use of BIOS Setup. "System"-Each time the system is booted the passward prompt appears. "Setup"- If a password is set, The passeord Prompt only appears if you attempt to enter the Setup program.

PCI/VGA Palette Snoop

Enable : The color of the monitor may be incorrect if uses with MPEG card. Enable this option to make the monitor normal.

Disable: Default setting.

OS Select for DRAM >64MB

OS2: Choosing this when you are using OS/2 operation system.

Non-OS/2: Choosing this when you are using no-OS/2 operation system.

Video or Adapter BIOS Shadow

BIOS shadow copies BIOS code from slower ROM to faster RAM. BIOS can then execute from RAM.16K segments can be shadowed from ROM to RAM. BIOS is shadowed in a 16K segment if it is enable and it has BIOS present.

3. After you have finished with the BIOS Features Setup program, Press the <ESC> key and follow the screen instructions to save or disregard your settings.

3.3 Chipset Features Setup

The Chipset Features Setup option changes the values of the Chipset registers. These registers control system options in the computer.

Note: Change these settings only if you are familear with the Chipset.

Run the Chipset Features Setup as follows.

1. Choose "CHIPSET FEATURES SETUP" from the Main Menu and the following screen appears. (The screen below shows default settings.)

```
                ROM PCI/ISA BIOS (2A69HR0E-8680)
                  CHIPSET FEATURES SETUP
                    AWARD SOFTWARE, INC

Auto Configuration              : Enabled     Passive Release          : Enabled
                                              Delayed Transaction      : Disabled
DRAM Timing                     : 70 ns
ISA Bus Clock                   : PCICLK/4

DRAM ECC/PARITY Select          : Disabled
CPU-To-PCI Write Post           : Enabled
CPU-To-PCI IDE Posting          : Enabled
System BIOS Cacheable           : Disabled
Video RAM Cacheable             : Disabled
Memory Hole At 15M-16M          : Disabled

                                              ESC : Quit      ↑ ↓ → ←  :Select Item
                                              F1  : Help      PU/PD/+/-:Modify
                                              F5  : Old Values (Shift)F2:Color
                                              F7  : Load BIOS Defaults
```

2. Use the arrow keys to move between items and select values. Modify selected fields using the PgUg/PgDn/+/- keys.

A short description of screen items follows:

Auto Configuration — Enable this option (strongly recommended) and the system automatically sets all options on the left side of the screen (except cache update mode & BIOS cacheable.

DRAM Timing — Choose the right speed to fit your DRAM's spec. 82430HX chipset supports 50, 60, and 70ns DRAM timing.

ISA Clock Use Setup Default setting or choose:
PCICLK/4: for 60, 66MHz CPU Bus Frequency.
PCICLK/3: for 50, 55MHz CPU Bus Frequency.

System BIOS Cacheable
Disable : The ROM area F0000H-FFFFFH is not cached.

Enable : The ROM area F0000H-FFFFFH is cachable if cache controller is enable.

Video BIOS Cacheable
Disable : The video BIOS C0000H-C7FFFH is not cached.

Enable : The video BIOS C0000H-C7FFFH is cachable if cache controller is enable.

Memory Hole At 15M-16M Choose Enabled or Disabled (default). Some interface cards will map their ROM address to this area. If this occurs, you should select Enabled, otherwise use Disabled.

Peer Concurrency Use the default setting.

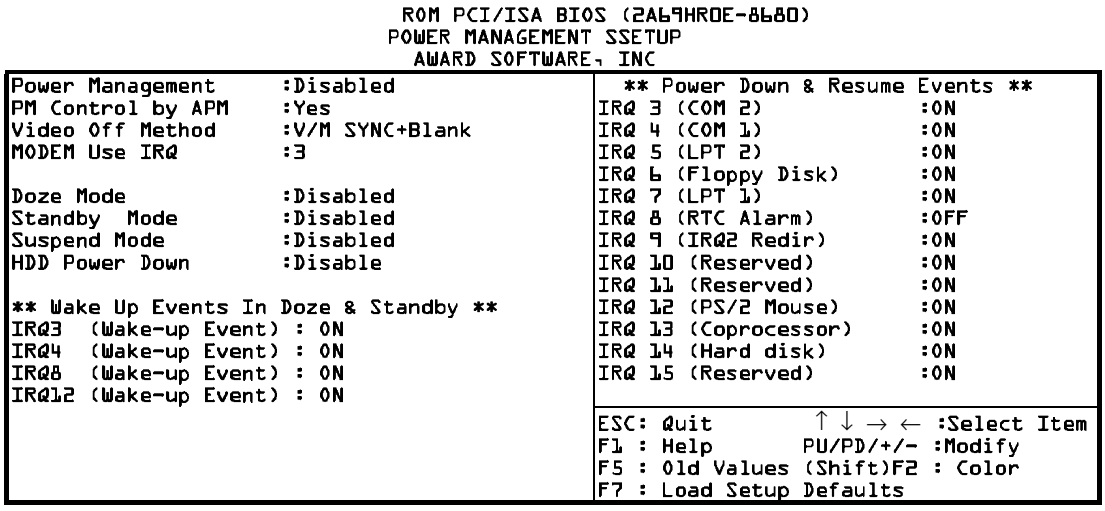
3. After you have finished with the Chipset Features Setup, press the <ESC> key and follow the screen instructions to save or disregard your settings.

3.4 Power Management Setup

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

Run the Power Management Setup as follows.

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



2. Use the arrow keys to move between items and to select values. Modify the selected fields using the PgUg/PgDn/+/- keys.

A short description of selected screen items follows:

Power Management Options are as follows:

User Define Let's you define the HDD and system Power down times.

Disabled Disabled the green PC Features.

Min Saving Doze timer = 1 Hour
Standby timer = 1 Hour
Suspend timer = 1 Hour
HDD Power Down timer = 15 Min

Max Saving Doze timer = 1 Min
Standby timer = 1 Min
Suspend timer = 1 Min
HDD Power Down timer = 1 Min

PM Control by APM	Choose Yes or No (default). APM stands for advanced Power Management. To use APM you must run "power.exe" under DOS V6.0 or later version.
Video Off Method	Choose V/H Sync + Bland (default), Bland screen, or DPMS for the selected PM mode.
Doze Mode	When the set time has elapsed, the BIOS sends a command to the system to enter doze mode. Time is adjustable from 1 Min to 1 Hour.
Standby Mode	The default is Disabled. Time is adjustable from 1 Min to 1 Hour.
Suspend Mode	The default is Disabled. Only an SL-Enhanced (or SMI) CPU can enter this mode. Time is adjustable from 1 Min to 1 Hour. Under Suspend mode, the CPU stops completely (no instructions are executed).
HDD Power Down	When the set time has elapsed, the BIOS sends a command to the HDD to power down, which turns. off the motor. Time is adjustable from 1 to 15 minutes. the default setting is Disabled. Some older model HDDs may not supports this advanced function.
IRQx (Wake-Up Events)	The BIOS monitors these items for activity. If activity occurs from the Enabled item the system wakes up.
Power Down Activities	The BIOS monitors these items for no activity. If no activity occurs from the Enabled item the system will enter power saving mode (Doze/Standby/Supend/HDD Power Down mode)

3. After you have finished with the Power Management Setup, Press the <ESC> key to return to the Main Menu.

3.5 PNP/PCI Configuration Setup

This option sets the mainboard's PCI Slots. Run this option as follows:

1. Choose "PNP/CPI CONFIFURATION SETUP" from the Main Menu and the following screen appears. (The screen below shows default settings.)

```
                ROM PCI/ISA BIOS (2A69HRDE-8680)
                  PNP/PCI CONFIGURATION
                   AWARD SOFTWARE, INC.
PNP OS Installed          : No          | PCI IRQ Actived By     : Level
Resources Controlled By   : Manual      | PCI IDE Map To         : PCI-Auto
Reset Configuration Data  : Disabled    |  Primary   IDE INT#    : A
                                        |  Secondary IDE INT#    : A
IRQ-3  assigned to : Legacy ISA*        |
IRQ-4  assigned to : Legacy ISA*        | Used MEM base addr     : N/A
IRQ-5  assigned to : PCI/ISA PnP*       |
IRQ-7  assigned to : Legacy ISA*        |
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 : Legacy ISA*        |
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 PDnP*      | F7 : Load Setup Defaults
DMA-7  assigned to : PCI/ISA PDnP*      |
```

* These items will disappear when Resource Controlled is Audo.

2. Use the arrow keys to move between items and select values. Modify selected fields using the PgUp/PgDn/+/- keys.

A short description of screen items follows:

PNP OS Installed
No : Choose No for non PNP OS.
Yes : Choose Yes for PNP OS.

Resources Controlled By
Manual: BIOS doesn't manage PCI/ISA PnP card (i.e.,IRQ) automatically.
Auto : BIOS auto manage PCI/ISA PnP card (recommended)

Reset Configuration Data
Disabled: Retain PnP configuration data in BIOS.
Enabled: Reset PnP configuration data in BIOS.

IRQX and DMAX assigned to	Choose PCI/ISA PnP or Legacy ISA, If the first item is set Manual, you could choose IRQX and DMAX assigned to PCI/ISA PnP card or ISA card. PCI/ISA PnP: BIOS auto assigns IRQ/DMA to the device. Legacy ISA: User assigns IRQ/DMA to the device.
PCI IRQ Activated By	Choose Edge or Level. Most PCI trigger signals are Level. This setting must match the PCI card.
PCI IDE IRQ Map To	Select PCI-AUTO, ISA, or assign a PCI SLOT number (depending on which slot the PCI IDE is insertd.) The default setting is PCI-AUTO. If PCI-AUTO does not work, then assign an individual PCI SLOT number.
Primary IDE INT#	Choose INTA#, INTB#, INTC#, or INTD#. the default setting is INTA#
Secondary IDE INT#	Choose INTA#, INTB#, INTC#, or INTD#. the default setting is INTB#.

3. After you have finished with the PCI Slot configuration, press the <ESC> key and follow the screen instructions to save or disregard your settings.

3.6 Load Setup Detaults

This item loads the system values you have pereviously saved.
Choose this item and the following message appears:

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

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

This item is recommended if you need to reset the system setup.

3.7 Integrated Peripherals

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

Note: Change these settings only if you are familear with the Chipset.

Run the Integrated Peripherals as follows.

1. Choose "Integrated Peripherals" from the Main Menu and the following screen appears. (The screen below shows default settings.)

```
                    ROM PCI/ISA BIOS (2A69HR0E-8680)
                       INTEGRATED PERIPHERALS
                         AWARD SOFTWARE, INC.
IDE HDD Block Mode          :Enabled
IDE Primary Master PIO      :Auto
IDE Primary Slave  PIO      :Auto
IDE Secondary Master PIO    :Auto
IDE Secondary Slave  PIO    :Auto
On-Chip Primary  PCI IDE    :Enabled
On-Chip Secondary PCI IDE   :Enabled
PCI Slot IDE 2nd Channel    :Enabled


Onboard FDD Controller      :Enable
Onboard Serial Port 1       :Auto
Onboard Serial Port 2       :Auto
UR2 Mode                    :Standard
Onboard Parallel Port       :378/IRQ7
Parallel Port MODE          :SPP

USB Controller              :Disabled

ESC: Quit          ↑ ↓ → ←  :Select Item
F1 : Help          PU/PD/+/-  :Modify
F5 : Old Values    (Shift)F2 : Color
F7 : Load Setup Defaults
```

2. Use the arrow keys to move between items and select values. Modify selected fields using the PgUp/PgDn/+/- keys.

A short description of screen items follows:

IDE HDD Block Mode — Choose Enabled (default) or Disabled. Enabled invokes multi-sector transfer instead of one sector per transfer. Not all HDDs support this function.

IDE Primary Master PIO
IDE Primary Slave PIO
IDE Secondary Master PIO
IDE Secondary Slave PIO — Choose Auto (default) or mode 0-4. Mode 0 is the slowest speed, and HDD mode 4 is the fastest speed. For better performance and we stability, suggest you use the Auto setting to set the HDD control timing.

On-chip Primary PCI IDE Enable: Use the on-board IDE (default)

On-chip Secondary PCI IDE Disable: Turn off the on-board IDE.

PCI Slot IDE 2nd Channel Choose Enabled (default) or Disabled. When Enabled is set, IRQ 15 is dedicated for secondary IDE use. When Disabled is set, IRQ 15 is released for other devices.

USB Controller Enable or Disable USB Function.

Onboard FDD Controller Enable: Use the on-board floppy controller (default).
Disable: Turn off the on-board floppy controller

Onboard Serial Port 1
Onboard Serial Port 2 Choose Serial port 1 & 2's I/O address. Do not set port 1 & 2 to the same value except for Disabled.

COM 1/3F8H	COM3/3E8H
COM 2/2F8H (default)	COM4/2E8H

UR2 Mode UR2 function, If your device is Mouse or Modem choose Standard (default).
If you have IR device connect to IR connector, choose other options IrDA 1.0, ASK IR, MIR 0.57M, MIR 1.15, FIR depends on your IR device.

UR2 Duplex Mode If UR2 Mode item is not set Standard, this item will present. Choose Half (default) or Full for UR2 Duplex Mode.

Onboard Parallel Port Choose the printer I/O address: 378H/IRQ7(default), 278H/IRQ5, 3BCH/IRQ7.

Parallel Port Mode Choose SPP(default), EPP, ECP, ECP+EPP Mode, The mode depends on your external device that connects to print port.

ECP Mode Use DMA If Parallel Port Mode item is set ECP or ECP+EPP this item will present. Choose DMA Channel 3 (default) or 1 for ECP Mode.

USB Controller Enabled or Disabled (default) USB function.

USB Keyboard Support Enabled or Disabled (default) USB Keyboard Support. If USB Controller is set Enabled, this item will present.

3. After you have finished with the Integrated Peripherals, press the <ESC> key and follow the screen instructions to save or disregard your settings.

3.8 Supervisor Password

Base on the setting you made in the "security Option" of the "BIOS FEATURES SETUP", This Main Menu item lets you configure the system so that a password is required every time the system boots or an attempt is made to enter the Setup program. Change the password as follows:

1. Choose "SUPERVISOR PASSWORD " in the Main Menu and Press <Enter>. The following message appears:

"Enter Password:"

2. Enter a password and press <Enter>.
(If you do not wish to use the password function, you can just press <Enter> and a "Password disabled" message appears.)

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

"Confirm Password"

4. Re-enter your password and then Press <ESC> to exit to the Main Menu.

5. You have the right to change any changeable settings in the "COMS SETUP UTILITY."

Important : If you forget or lose the password, the only way to access the system is to set jumper JP38 to clear the CMOS RAM. all setup information is lost and you must run the BIOS setup program again.

3.9 User Password

Base on the setting you made in the "security Option" of the "BIOS FEATURES SETUP", This Main Menu item lets you configure the system so that a password is required every time the system boots or an attempt is made to enter the Setup program. Change the password as follows:

1. Choose "USER PASSWORD " in the Main Menu and Press <Enter>.
   The following message appears:

   "Enter Password:"

2. Enter a password and press <Enter>.
   (If you do not wish to use the password function, you can just press <Enter> and a "Password disabled" message appears.)

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

   "Confirm Password"

4. Re-enter your password and then Press <ESC> to exit to the Main Menu.

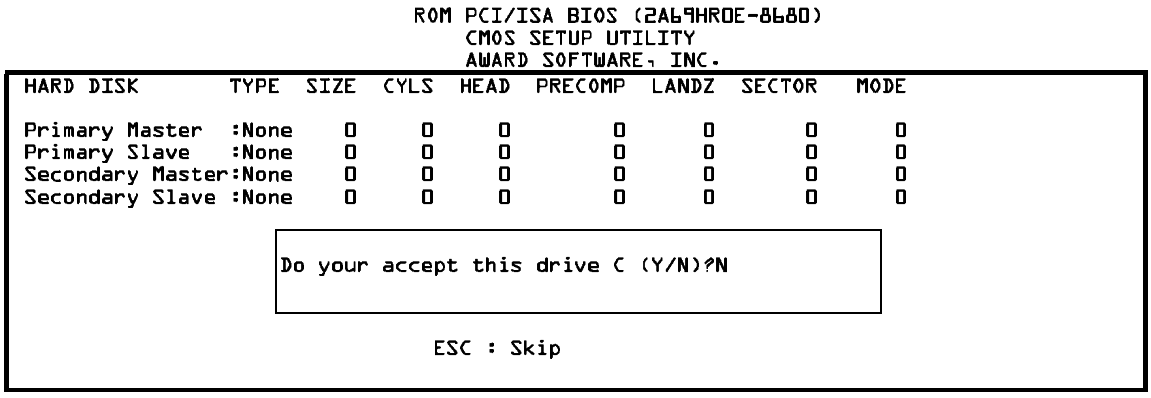
5. You are not allowed to change any settings in the "COMS SETUP UTILITY." except change user's password.

Important : If you forget or lose the password, the only way to access the system is to set jumper JP38 to clear the CMOS RAM. all setup information is lost and you must run the BIOS setup program again.

3.10 IDE HDD Auto Detection

This Main Menu item automatically detects the hard disk type and configures the STANDARD CMOS SETUP accordingly.

Note: This function is only valid for **IDE** hard disks.



DN. 97

PENTIUM II

PCI BUS & ISA BUS MAINBOARD
ON BOARD PCI/IDE, MULTI-I/O.

R653

Users Manual

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