

Introduction

System Overview

Thanks for buying this product! This manual was written to help you start using this product as quickly and smoothly as possible. Inside you will find adequate explanations to solve most problems. In order for this reference material to be of greatest use, refer to the “expanded table of contents” to find relevant topics.

This board incorporates the system board, ISA I/O, and PCI IDE into one board that provides a total PC solution. The mainboard, a Pentium II™ micro-processor based PC/ATX system, supports single processors with ISA Bus, PCI Local Bus, and AGP Bus to support upgrades to your system performance. It is ideal for multi-tasking and fully supports MS-DOS, Windows, Windows NT, Novell, OS/2, Windows95/98, UNIX, SCO UNIX etc. This manual also explains how to install the mainboard for operation, and how to setup your CMOS configuration with the BIOS setup program.

Features

• Hardware

CPU

- The Pentium II™ micro-processor provides the processing power for the new generation of high-end workstations and servers.
- Slot 1 compliant.

Speed

- Supports from 233MHz to 550MHz CPU speed.
- Supports 33MHz PCI Bus speed.
- I/O clock 8MHz for ISA Bus.
- Supports 66MHz / 133MHz AGP Bus.

DRAM Memory

- Supports 8/16/32/64.....MB DIMM module socket.
- Supports Synchronous DRAM (3.3V).
- Supports a maximum memory size of 384MB with SDRAM.

Green Function

- Supports power management operation via BIOS.
- Power down timer from 1 to 15 mins.
- Wakes from power saving sleep mode at the press of any key or any mouse activity.

Shadow RAM

- A memory controller provides shadow RAM and supports 8-bit ROM BIOS.

BUS Slots

- Provides three 16-bit ISA Bus slots, four PCI Bus slots, and one AGP Bus slot.

Flash Memory

- Supports flash memory.
- Supports ESCD Function.

PCI Enhanced IDE Built-in On Board

- Supports four IDE hard disk drives.
- Supports PIO Mode 4, Master Mode, high performance hard disk drives.
- Supports Ultra DMA/33, Bus Master Mode.
- Supports IDE interface with CD-ROM.
- Supports high capacity hard disk drives.
- Supports LBA mode.

ISA I/O Built-in On Board

- Supports one multi-mode Parallel Port.
 - (1) Standard & Bidirection Parallel Port.
 - (2) Enhanced Parallel Port (EPP).
 - (3) Extended Capabilities Port (ECP).
- Supports two serial ports, 16550 UART.
- Supports one Infrared transmission (IR). (optional)
- Supports PS/2 Mouse.
- Supports 360KB, 720KB, 1.2MB, 1.44MB, and 2.88MB floppy disk drivers.

Universal Serial Bus

- Supports two Universal Serial Bus (U.S.B.) Ports.
- Supports 48 MHz USB.

Dimensions(ATX form-factor)

- 30.5 cm X 20 cm (W x L)

Hardware Monitor Function(Optional)

- CPU Fan Speed Monitor

- System and CPU Temperature Monitor
- System Voltage Monitor

• Software

BIOS

- AWARD legal BIOS.
- Supports APM1.2.
- Supports USB Function.

Operating System

- Offers the highest performance for MS-DOS, OS/2, Windows, Windows NT, Windows 95/98, Novell, UNIX, SCO UNIX etc.

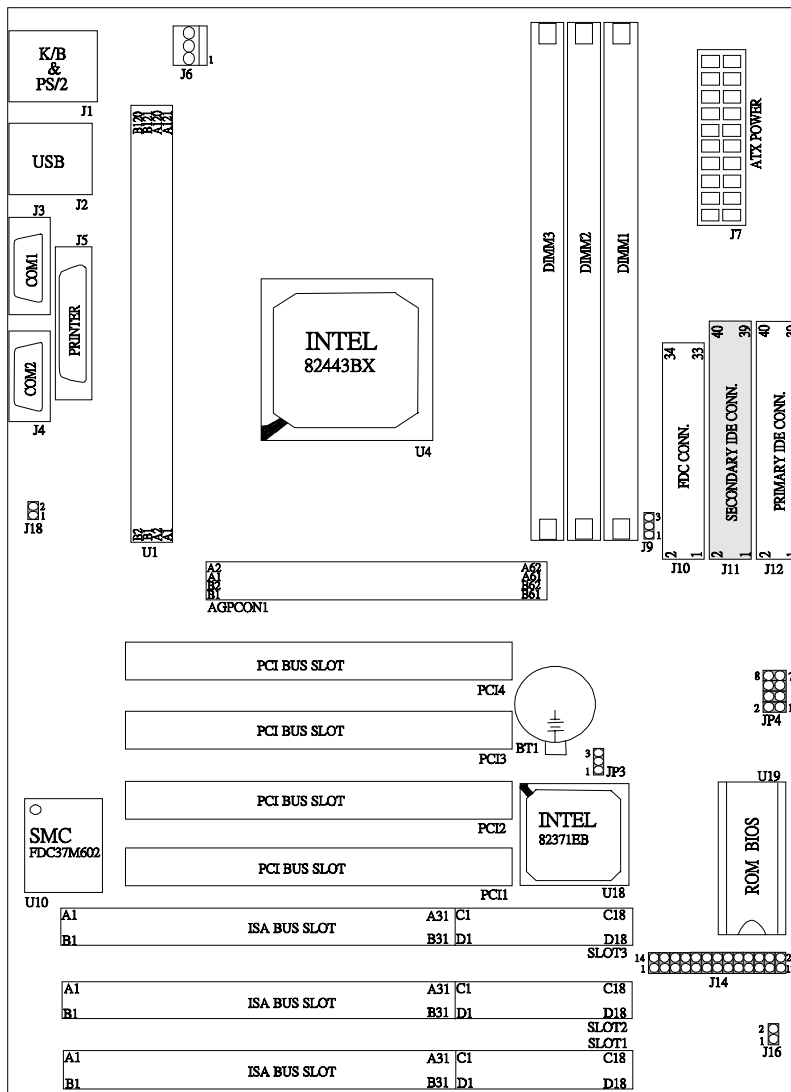
• Attachments

- HDD Cable
- FDD Cable
- Flash Memory Writer for BIOS Update
- Retention Kits for CPU
- IDE and Hardware Monitor Setup Driver CD
- Rear I/O panel for ATX Case (optional)

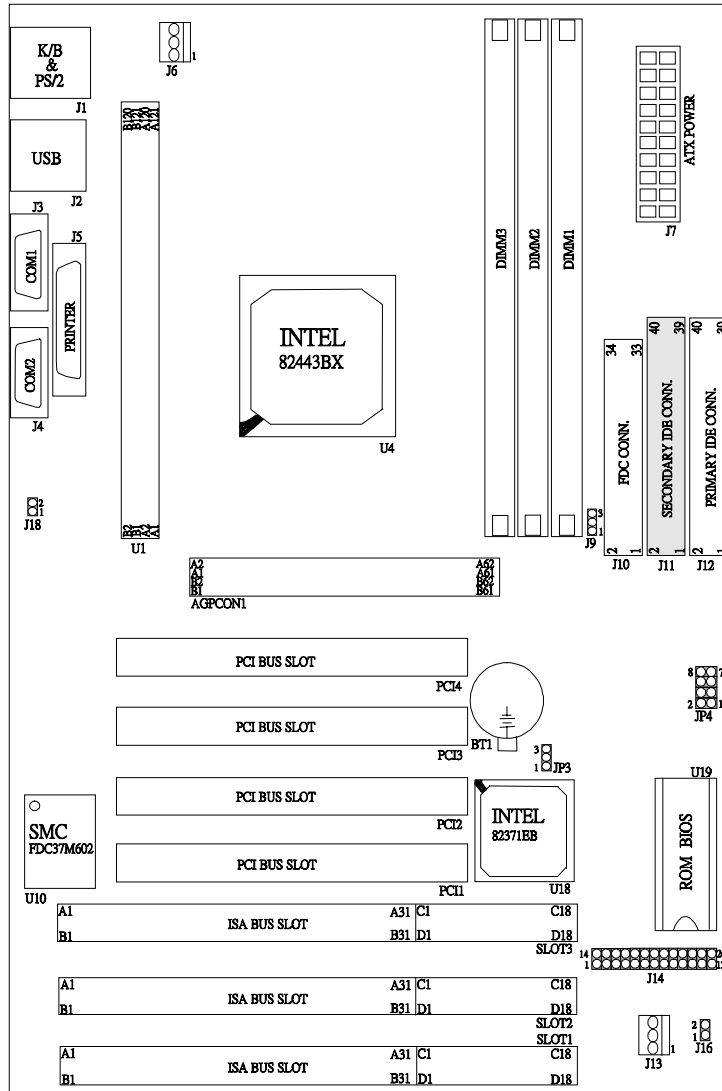
Mainboard Installation

Layout of Mainboard

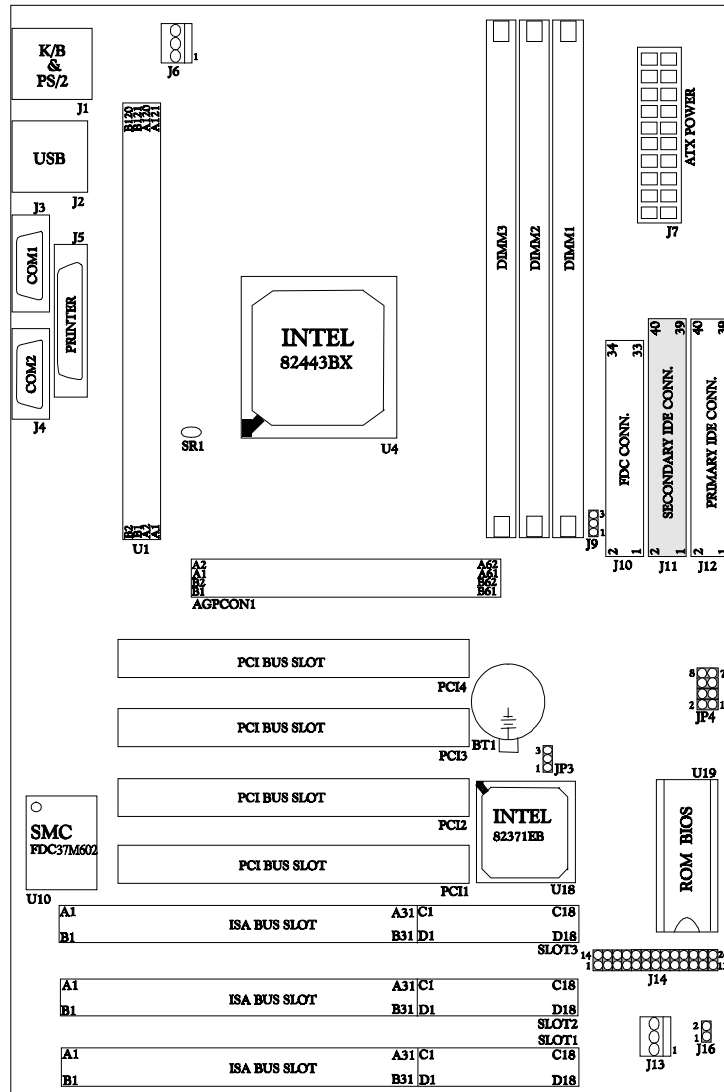
Model No. M6TBA Ver:1.0



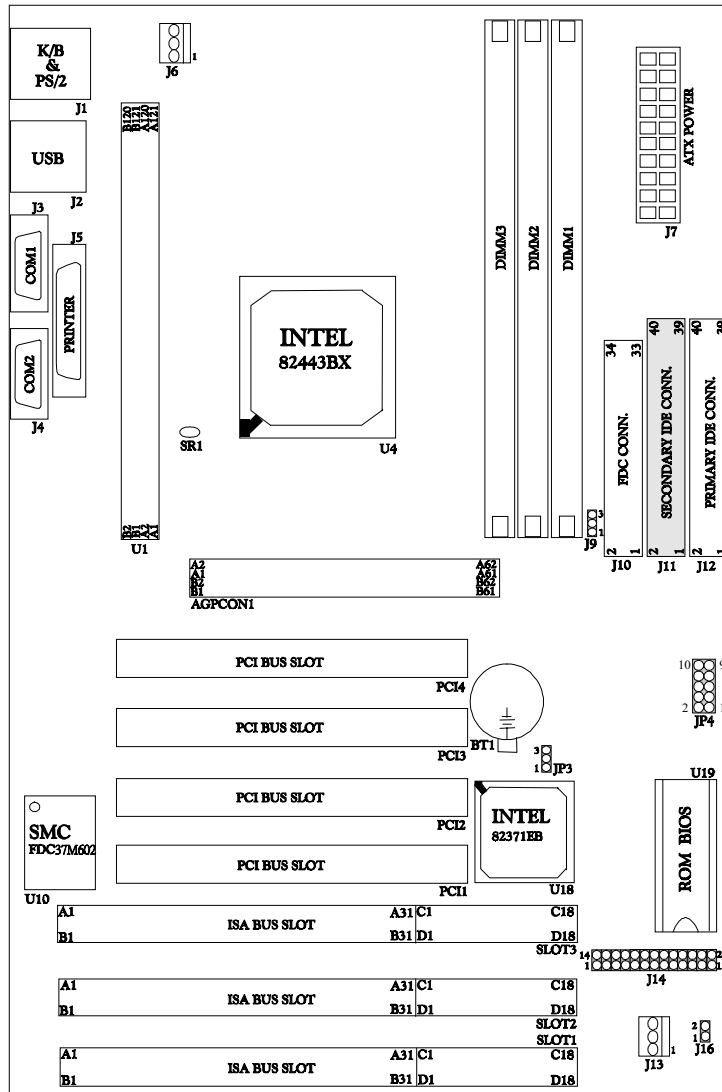
Model No. M6TBA Ver:1.1



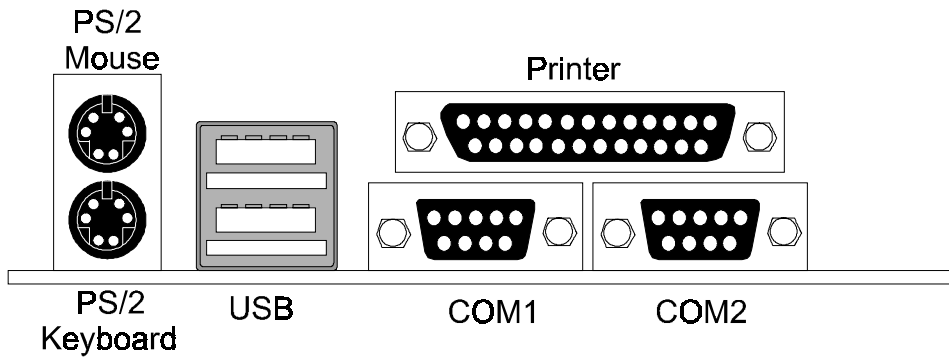
Model No. M6TBA Ver:1.2



Model No. M6TBA Ver:1.3 and afterwards



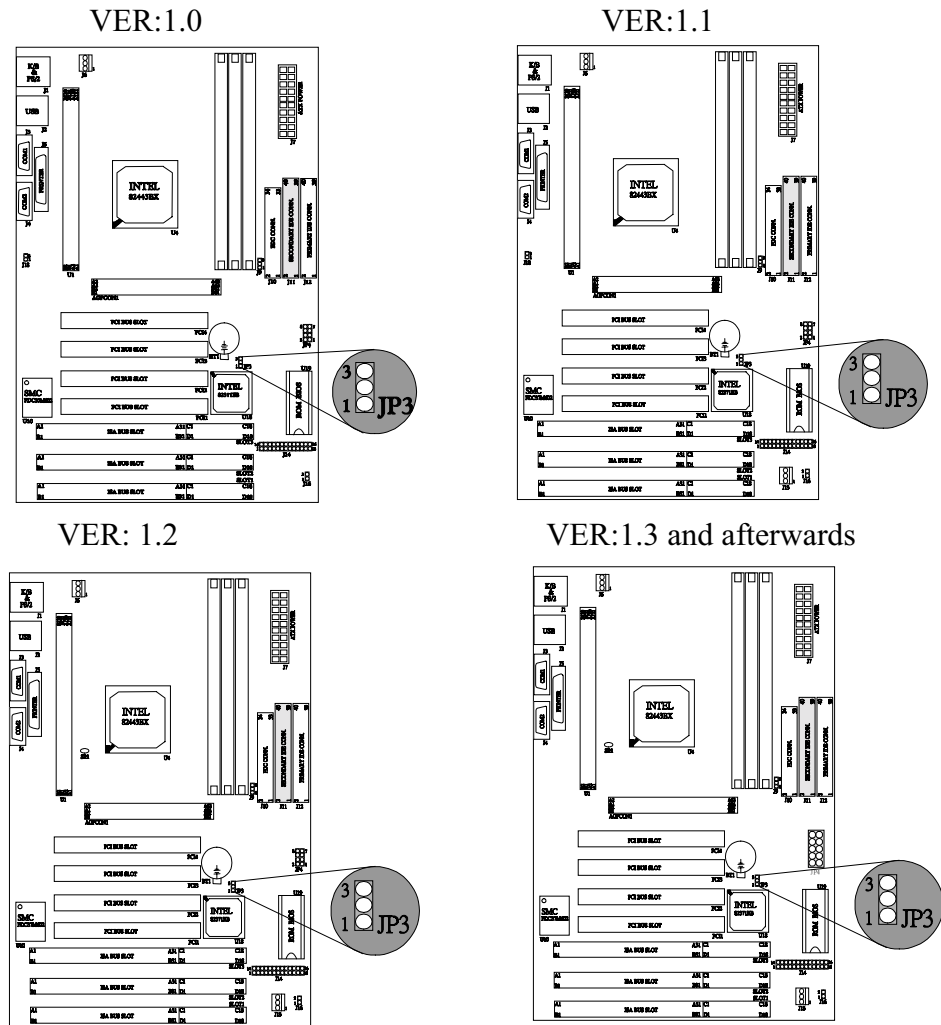
Back I/O panel

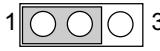
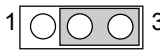



Jumper Settings

A jumper is several pins, which may or may not be covered by a plastic jumper cap. A jumper is used to select different system options.

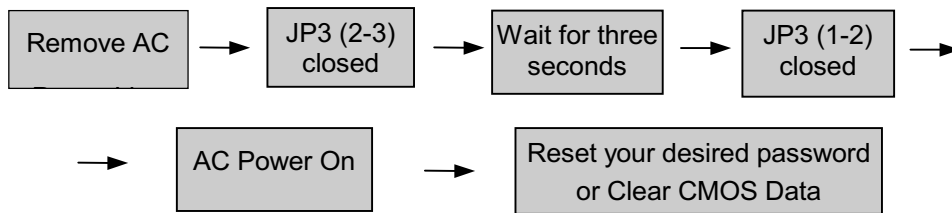
(A) JP3 CMOS Function Select



JP3	Assignment
 1-2 Closed	Normal Operation (default)
 2-3 Closed	Clear CMOS Data (*Note)
 Open	Onboard Battery Disabled

***Note :** Please follow the procedure as below to clear CMOS Data.

Note : Please follow the procedure as below to clear the BIOS Password if your password is lost or forgotten.

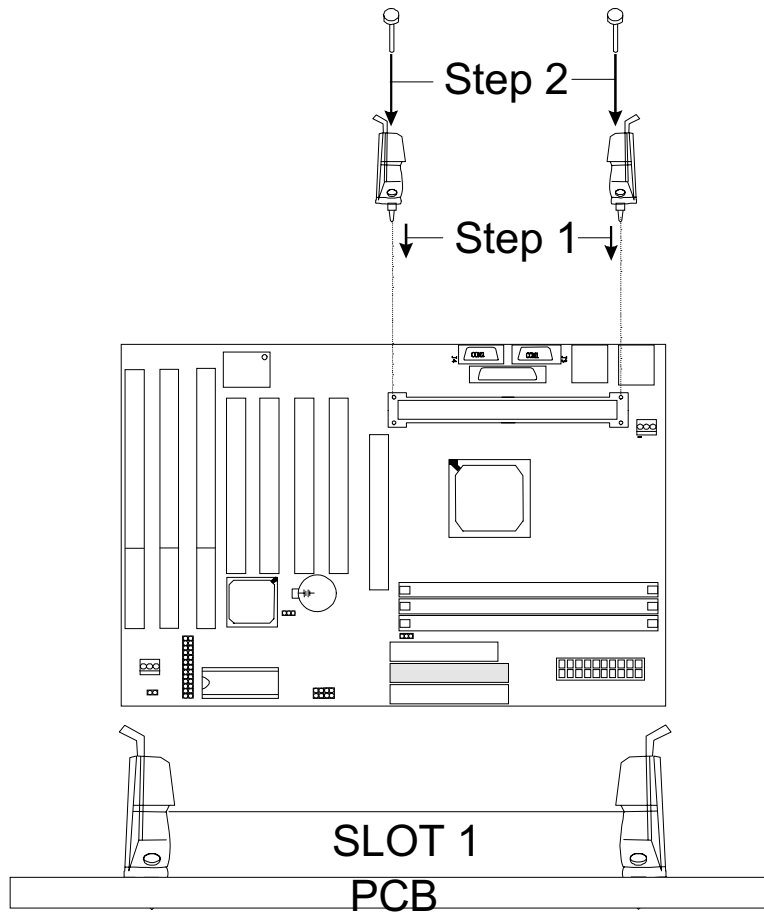


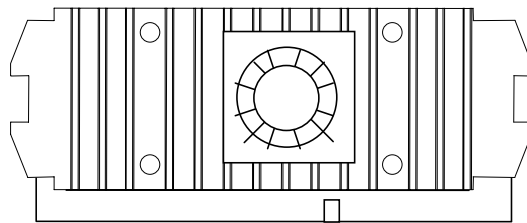
CPU Installation/Jumper Setting

CPU Installation and Setup

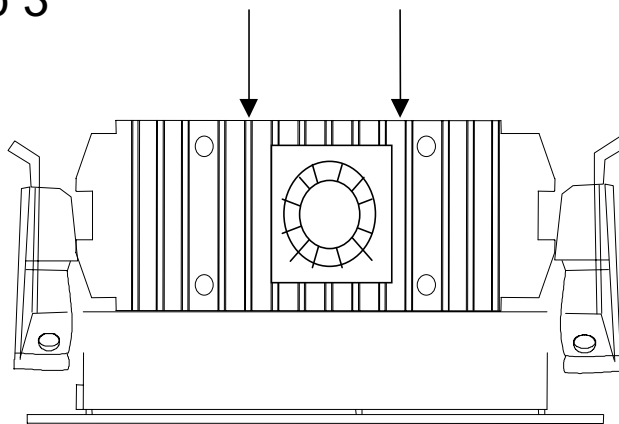
(1) Celeron™ CPU Installation Procedure

Step 1:





Step 3



(2) Pentium II CPU Installation Procedure

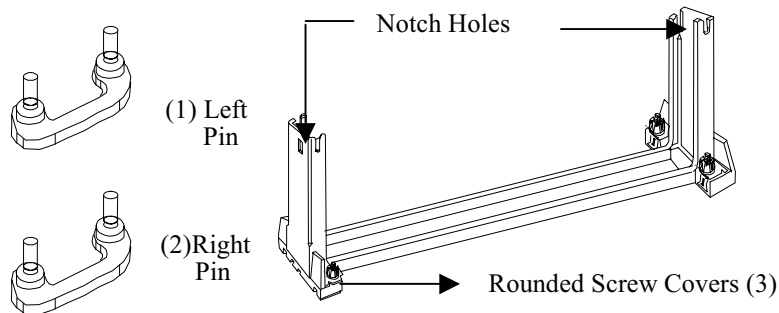
The M6TBA motherboard provides one Single Edge Contact (SEC) slot. This slot allows you to install a Pentium II CPU.

Before you use:

Please look on your motherboard and locate the CPU fan and CPU fan power supply. Please verify that this fan is directly used to cool the CPU and its heat sink, as well as to cool the motherboard and circulate the air.

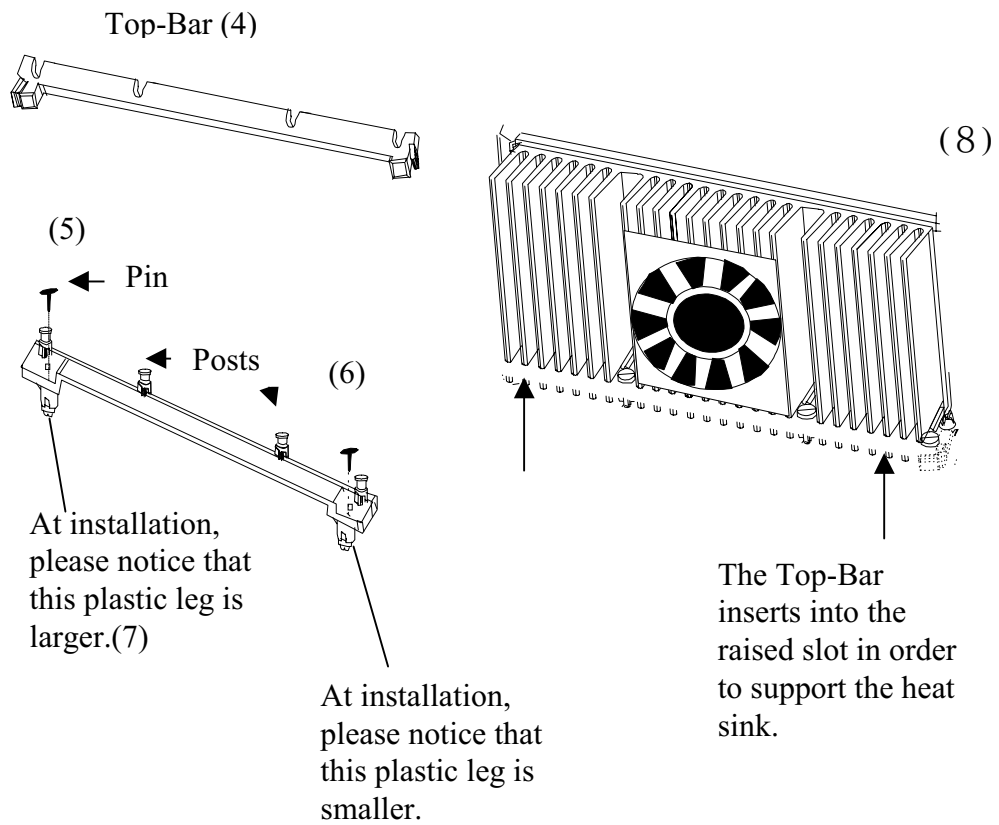
WARNING : *If air circulation is insufficient, the CPU will overheat, which may damage the CPU, CPU slot, and the motherboard.*

Please inspect your motherboard to see if it has the Pentium II CPU retention kit components. (ATTENTION: The CPU installation components color and shape may vary slightly based on kits coming from different suppliers.)



Pentium II Heat Sink Pins

Pentium II Heat Sink Bracket

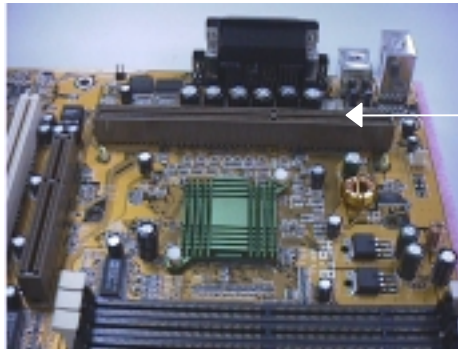


Heat Sink Support Base

Heat Sink Support Frame

M6TBA Pentium II CPU Special Installation and Setup :

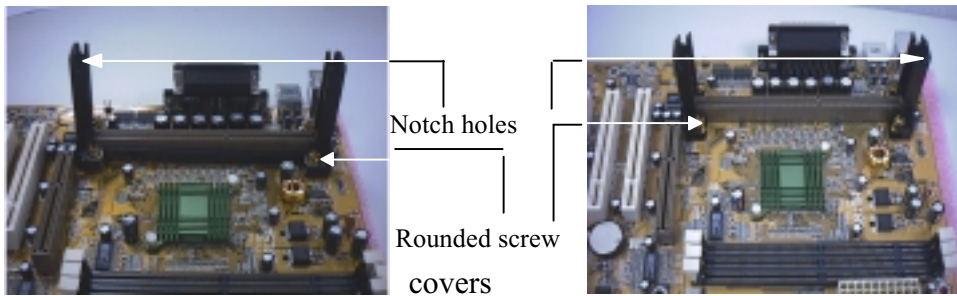
Around Pentium II CPU SEC slot

Install Pentium II:

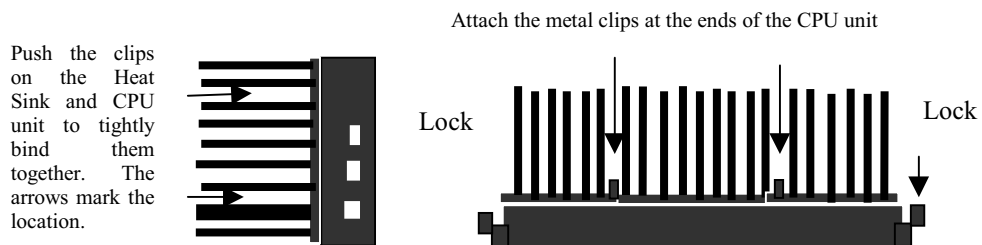
Single Edge Contact
(SEC) slot.

1 · Installing the Pentium II Heat Sink Support Frame :

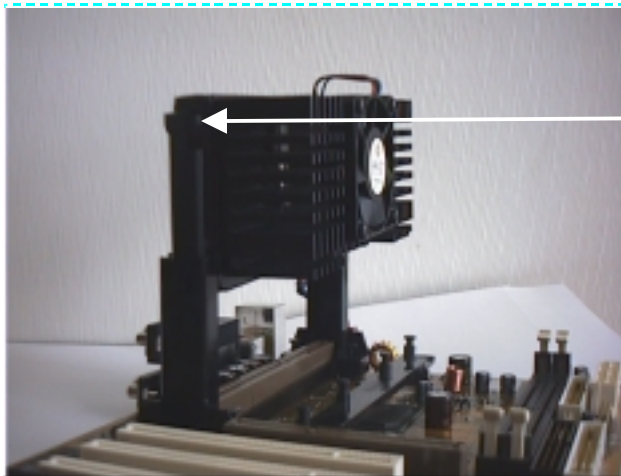
The Heat Sink Support Base can only be inserted one-way. Please match the leg sizes on the Heat Sink Support Base to the holes on the motherboard. Please remember the notch holes align with the Intel Chip AGP Support Frame. After gently and snugly inserting the Intel Chip AGP Support Frame into the motherboard, please insert the H screws from the bottom of the motherboard and tighten into the rounded screw covers.



2. Installing the CPU Heat sink : Take the smooth side of the Heat Sink and bound it closely together with the Pentium II CPU. Next, at the ends of the Heat Sink, clip the CPU together with the Heat Sink. Please verify that there is zero space between the Heat Sink and CPU unit. **WARNING:** If there is any space between the CPU and Heat Sink, the CPU will over-heat severely and may damage the CPU.

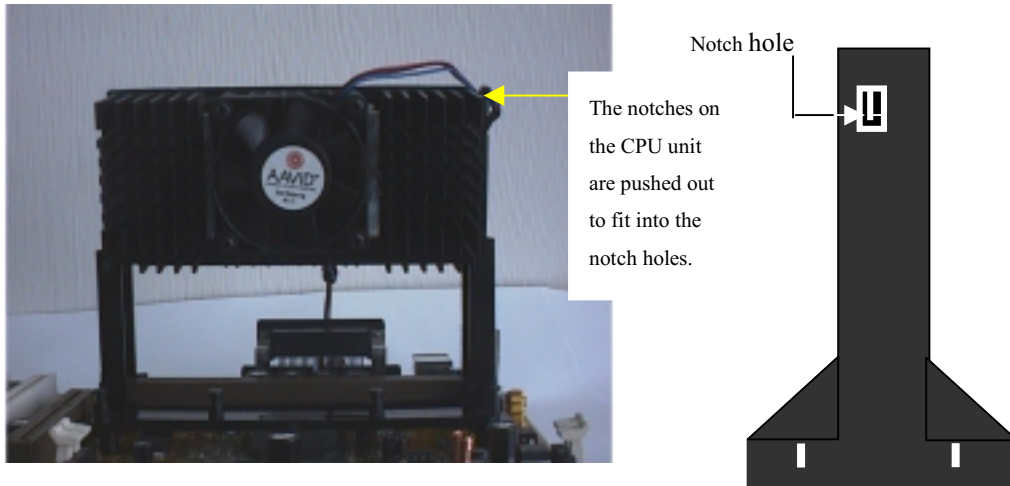


3. Insert the Pentium II into the SEC Slot. First, press the CPU unit into the Frame until it fits snugly into the notch holes. Then, clip the Heat Sink and CPU together with the Heat Sink Support Frame.

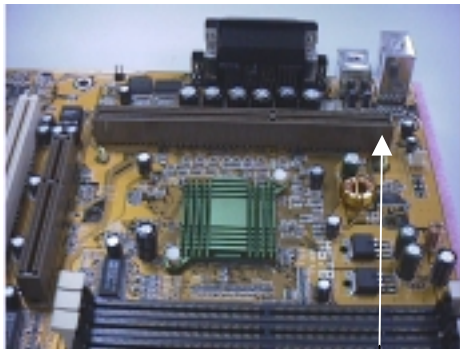


The correct direction to insert the Heat Sink and CPU into the Heat Sink Support Frame should allow you to easily insert them

4. Pushing the CPU unit into the frame, wait until the CPU unit is firmly in position before securing. The notches are pushed out. They will fit tightly into the Heat Sink Frame Notch holes.



5. Firmly secure the Heat Sink by attaching the Heat Sink Frame TOP-Bar. Please verify that the Heat Sink and CPU are tightly pressed together. Please check that the entire Frame, Heat Sink, and CPU unit are tightly installed and that there is no possible movement or looseness in the assembly.

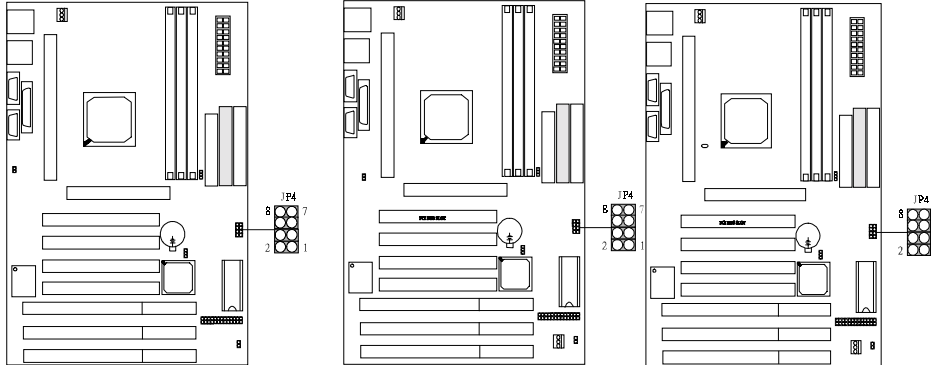


Heat Sink Support

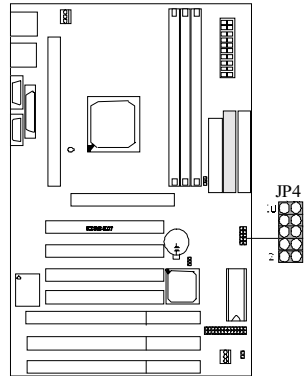


Place the Top-Bar over the Support Frame

The Top-Bar should conveniently lock out the plastic notches at the end of the Support Frame.

(A) JP4 INTEL CPU Clock Select**Ver:1.0****Ver:1.1****Ver:1.2**

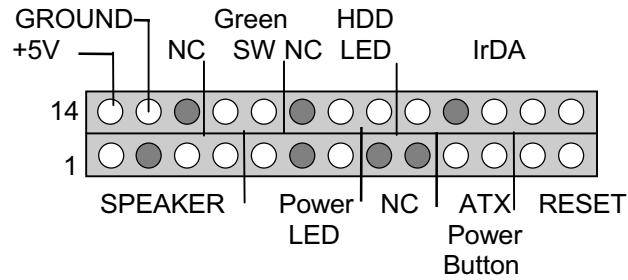
CPU Speed	CLK RATIO	JP4 (1-2)	JP4 (3-4)	JP4 (5-6)	JP4 (7-8)
233MHz	66 X 3.5	closed	open	open	closed
266MHz	66 X 4	closed	closed	closed	open
300MHz	66 X 4.5	closed	open	closed	open
333MHz	66 X 5	closed	closed	open	open
366MHz	66 X5.5	closed	open	open	open
350MHz	100 X 3.5	open	open	open	closed
400MHz	100 X 4	open	closed	closed	open
450MHz	100 X 4.5	open	open	closed	open
500MHz	100 X5	open	closed	open	open
550MHz	100 X5.5	open	open	open	open

Ver:1.3 and afterwards

CPU Speed	CLK RATIO	JP4 (1-2)	JP4 (3-4)	JP4 (5-6)	JP4 (7-8)	JP4(9-10)
233MHz	66 X 3.5	closed	open	open	closed	closed
266MHz	66 X 4	closed	closed	closed	open	closed
300MHz	66 X 4.5	closed	open	closed	open	closed
333MHz	66 X 5	closed	closed	open	open	closed
366MHz	66 X5.5	closed	open	open	open	closed
400MHz	66 X6	closed	closed	closed	closed	open
433MHz	66 X6.5	closed	open	closed	closed	open
466MHz	66 X7	closed	closed	open	closed	open
500MHz	66 X7.5	closed	open	open	closed	open
533MHz	66 X8	closed	closed	closed	open	open
350MHz	100 X 3.5	open	open	open	closed	closed
400MHz	100 X 4	open	closed	closed	open	closed
450MHz	100 X 4.5	open	open	closed	open	closed
500MHz	100 X5	open	closed	open	open	closed
550MHz	100 X5.5	open	open	open	open	closed
600MHz	100 X6	open	closed	closed	closed	open
650MHz	100 X6.5	open	open	closed	closed	open
700MHz	100 X7	open	closed	open	closed	open
750MHz	100 X7.5	open	open	open	closed	open
800MHz	100 X8	open	closed	closed	open	open

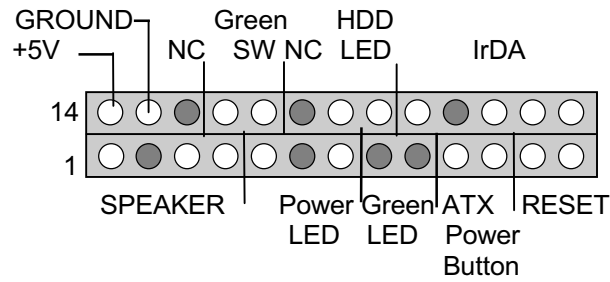
Connectors

(A) J14 Ver 1.0



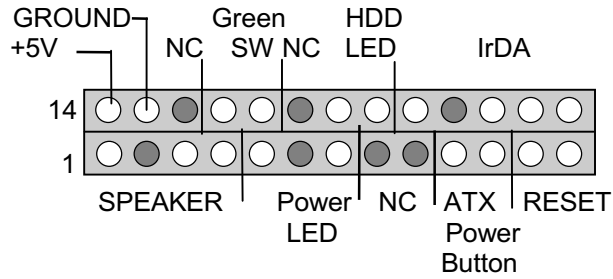
Pin No.	Assignment	Function	Pin No.	Assignment	Function
1	Speaker	Speaker Connector	14	+5V	VCC
2	NC		15	Ground	Ground
3	Ground		16	NC	
4	+5V		17	Green Control	Green
5	Power LED(+)	Power LED	18	Green Control	Switch
6	NC		19	NC	
7	Ground		20	HDD LED(-)	HDD LED
8	NC	21	HDD LED(+)		
9	NC	NC	22	+5V	IrDA Connector
10	Power Switch	ATX Power Button	23	NC	
11	Standby Voltage		24	IRRX	
12	Reset Control	Reset	25	Ground	
13	Ground		26	IRTX	

(A)

J14**Ver 1.1**

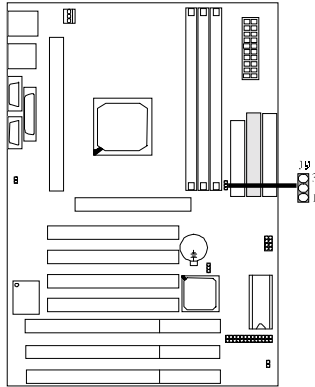
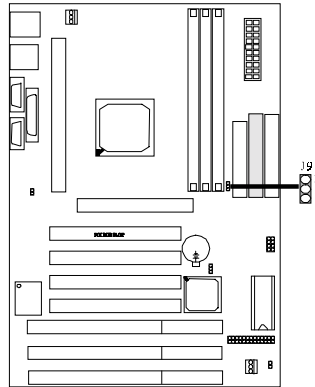
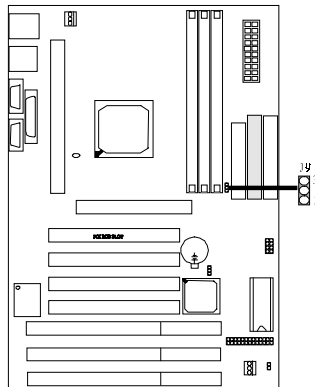
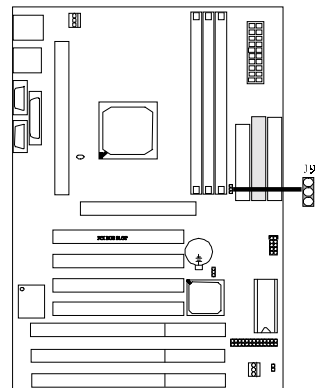
Pin No.	Assignment	Function	Pin No.	Assignment	Function
1	Speaker	Speaker Connector	14	+5V	VCC
2	NC		15	Ground	Ground
3	Ground		16	NC	
4	+5V		17	Green Control	Green
5	Power LED(+)	Power LED	18	Green Control	Switch
6	NC		19	NC	
7	Ground		20	HDD LED(-)	HDD LED
8	Green LED (+)	Green LED	21	HDD LED(+)	
9	Green LED (-)		22	+5V	IrDA Connector
10	Power Switch	ATX Power Button	23	NC	
11	Standby Voltage		24	IRRX	
12	Reset Control	Reset	25	Ground	
13	Ground		26	IRTX	

J14 Ver 1.2 and afterwards



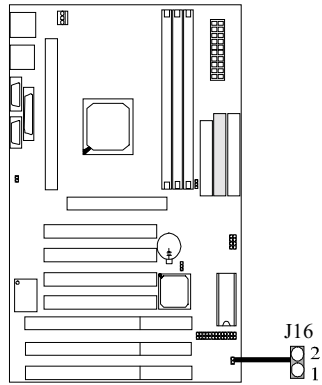
Pin No.	Assignment	Function	Pin No.	Assignment	Function
1	Speaker	Speaker Connector	14	+5V	VCC
2	NC		15	Ground	Ground
3	Ground		16	NC	
4	+5V		17	Green Control	Green
5	Power LED(+)	Power LED	18	Green Control	Switch
6	NC		19	NC	
7	Ground		20	HDD LED(-)	HDD LED
8	NC	21	HDD LED(+)		
9	NC	NC	22	+5V	IrDA Connector
10	Power Switch	ATX Power Button	23	NC	
11	Standby Voltage		24	IRRX	
12	Reset Control	Reset	25	Ground	
13	Ground		26	IRTX	

NOTE: Ver: 1.2 and Afterwards Power LED flash to indicate into Green Mode

(B) J9 Wake-On-LAN Header**Ver:1.0****Ver:1.1****Ver:1.2****Ver:1.3 and afterwards**

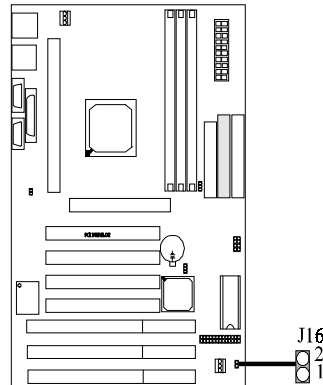
Pin No.	Assignment
1	+5 VSB
2	Ground
3	MP-Wakeup

(C) J16 Wake-On-Internal Modem



Ver:1.0

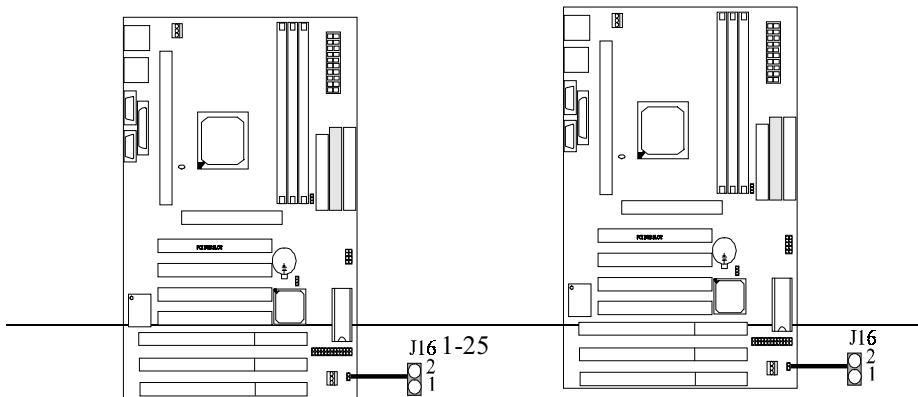
Ver:1.2



Ver:1.1

Ver:1.3 and afterwards

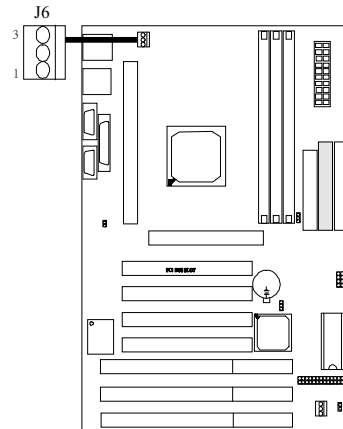
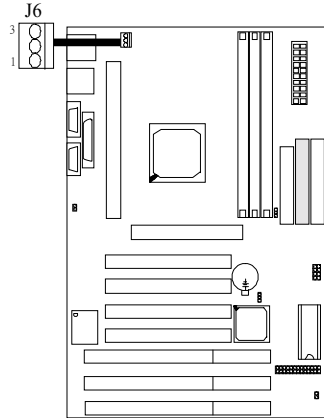
Pin No.	Assignment
1	Ring
2	GND



(D) J6 CPU Cooling Fan Power Connector

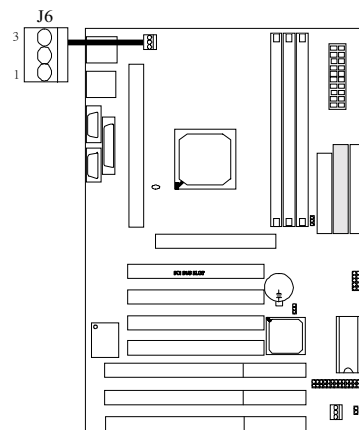
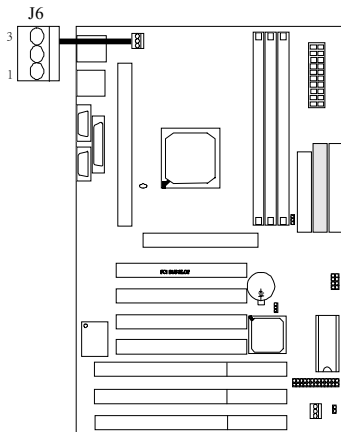
Ver:1.0

Ver:1.1



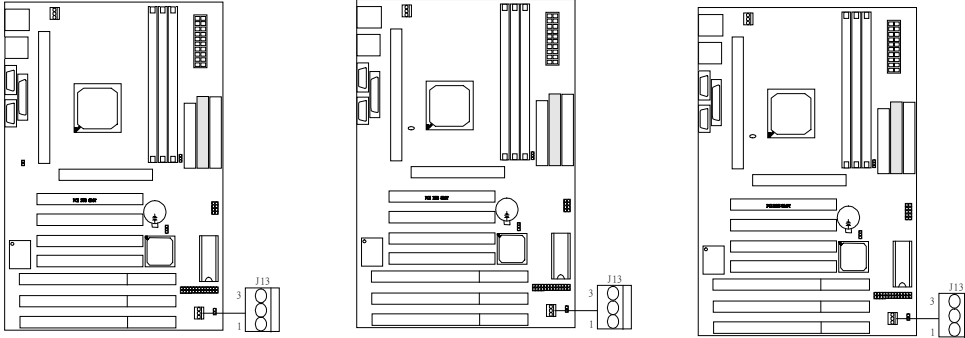
Ver:1.2

Ver:1.3 and afterwards



Pin No.	Assignment
1	Ground
2	+12V
3	Sensor

(E) J13 Chassis Fan Connector (for Ver:1.1 & Afterward)
Ver:1.1 Ver:1.2 Ver:1.3 and afterwards

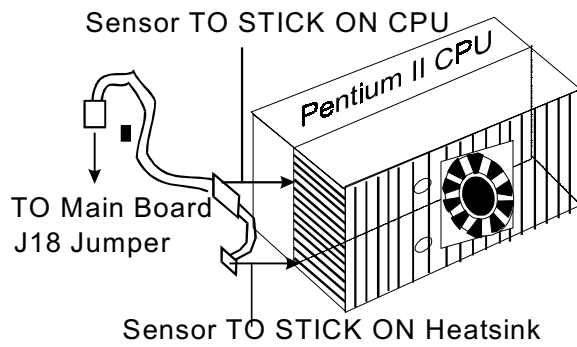
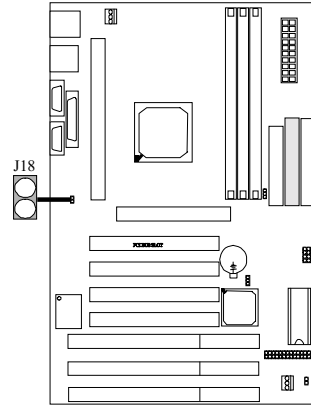
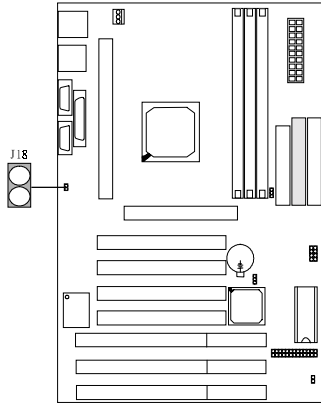


Pin No.	Assignment
1	Ground
2	+12V
3	Sensor

**(F) J18 CPU Temperature Sensor Connector
(for Ver:1.0 and Ver:1.1)**

Ver:1.0

Ver:1.1

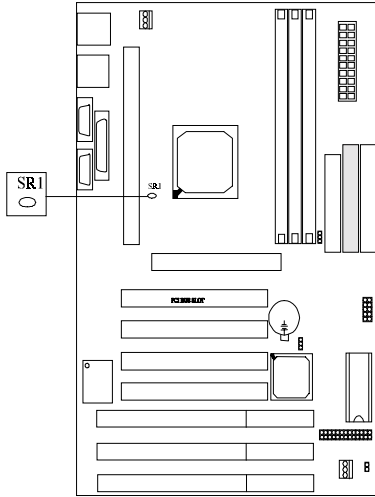


(Ver:1.0&1.1)

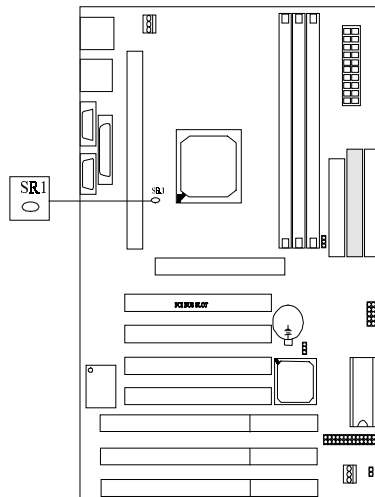
(G) SR1 CPU Temperature Sensor Resistor

(Ver:1.2& Ver:1.3 and afterwards)

Ver:1.2



Ver:1.3 and afterwards



DRAM Installation

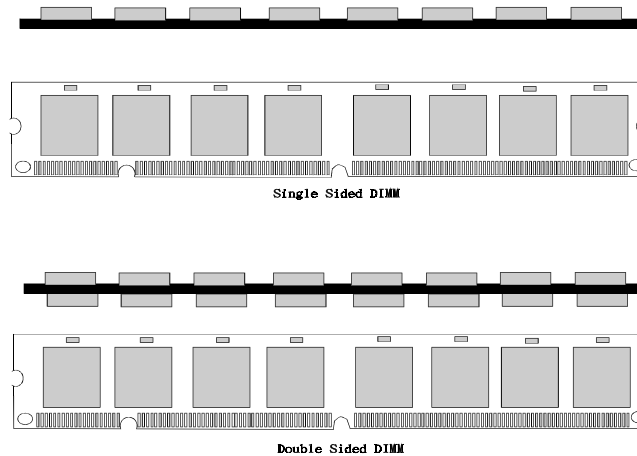
(a) DIMM

DRAM Access Time : 3.3V Unbuffered SDRAM 10ns required.

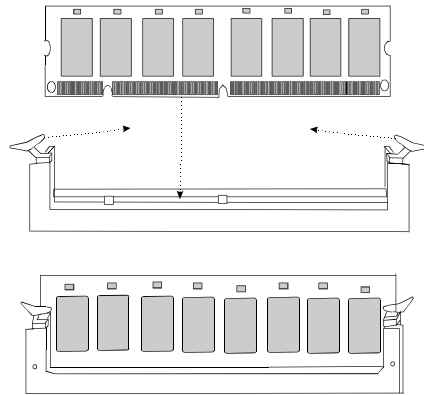
DRAM Type : 8MB/16MB/32MB/64MB/128MB DIMM Module (168pin)

Total	Bank 0	Bank 1	Bank 2
Memory Size (MB)	J 4	J 5	J 6
8M	8M x 1 pc	----	----
16M	16M x 1 pc	----	----
32M	32M x 1 pc	----	----
64M	64M x 1 pc	----	----
128M	128M x 1 pc	----	----
16M	8M x 1 pc	8M x 1 pc	----
32M	16M x 1 pc	16M x 1 pc	----
64M	32M x 1 pc	32M x 1 pc	----
128M	64M x 1 pc	64M x 1 pc	----
24M	8M x 1 pc	8M x 1 pc	8M x 1 pc
40M	16M x 1 pc	16M x 1 pc	8M x 1 pc
72M	32M x 1 pc	32M x 1 pc	8M x 1 pc
136M	64M x 1 pc	64M x 1 pc	8M x 1 pc
32M	8M x 1 pc	8M x 1 pc	16M x 1 pc
48M	16M x 1 pc	16M x 1 pc	16M x 1 pc
80M	32M x 1 pc	32M x 1 pc	16M x 1 pc
144M	64M x 1 pc	64M x 1 pc	16M x 1 pc
48M	8M x 1 pc	8M x 1 pc	32M x 1 pc
64M	16M x 1 pc	16M x 1 pc	32M x 1 pc
96M	32M x 1 pc	32M x 1 pc	32M x 1 pc
160M	64M x 1 pc	64M x 1 pc	32M x 1 pc
80M	8M x 1 pc	8M x 1 pc	64M x 1 pc
96M	16M x 1 pc	16M x 1 pc	64M x 1 pc
128M	32M x 1 pc	32M x 1 pc	64M x 1 pc
192M	64M x 1 pc	64M x 1 pc	64M x 1 pc
384M	128M x 1 pc	128M x 1 pc	128M x 1 pc

How to install a DIMM Module



1. The DIMM slot has a “*Plastic Safety Tab*” and the DIMM memory module has a “an asymmetrical notch”, so the DIMM memory module can only fit properly in one direction.
2. Push the tabs out. Insert the DIMM memory modules into the socket at 90-degree angle, then push down a vertically so that it will snap in place.
3. The mounting holes and plastic tabs should fit over the top edge of The DIMM and hold it in place.



AWARD BIOS Setup

Entering Setup

Power on the computer and press immediately, allowing you to enter Setup. The other way to enter Setup is to power on the Computer, and when the below message appears briefly at the bottom of the screen during the POST (Power On Self Test), press the key or simultaneously press the <CTRL>, <Alt>, and <Esc> keys.

TO ENTER SETUP BEFORE BOOT PRESS CTRL-ALT-ESC OR DEL KEY

If the message disappears before you respond and you still wish to enter Setup, restart the system again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing the < CTRL>, <Alt>, and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to:

PRESS F1 TO CONTINUE, CTRL-ALT-ESC OR DEL TO ENTER SETUP

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu/Option Page Setup Menu

Press <F1> to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window Press <Esc>.

Control Keys

Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item in left hand
Right arrow	Move to the item in right hand
Esc key	Main Menu-Quit:and do not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu, Exit current page and return to Main Menu
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
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu
(Shift) F2 key	Change color from total 16 colors. F2 to select color forward, (Shift) F2 to select backward
F3 key	Reserved
F4 key	Reserved
F5 key	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
F6 key	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
F7 key	Load the default
F8 key	Reserved
F9 key	Reserved
F10 key	Save all the CMOS changes, only for Main Menu

Main Menu

Once you enter the AWARD BIOS CMOS Setup Utility, the Main Menu (**Figure 1**) will appear on the screen. The Main Menu allows you to select among the items and press <Enter> to accept or to enter sub-menus.

■ **Figure 1. Main Menu**

ROM PCI/ISA BIOS (xxxxxxxx)
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	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	(Shift) F2 : Change Color
Time, Date, Hard Disk Type...	

Standard CMOS Setup

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

BIOS Features Setup

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

Chipset Features Setup

This setup page includes all the items of chipset special features.

Power Management Setup

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

PnP / PCI Configuration

This category specifies the value (in units of PCI bus clocks) of the latency timer for this PCI bus master and the IRQ level for PCI device.

Load Setup Defaults

Chipset defaults indicates the values required by the system for the maximum performance. The OEM manufacturer may change to defaults through MODBIN before the binary image burn into the ROM.

Integrated Peripherals

This setup page includes all the items of Integrated Peripheral features.

Supervisor Password / User Password

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

IDE HDD Auto Detection

Automatically configure hard disk parameters.

Save & Exit Setup

Save CMOS values, including changes, to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

Standard CMOS Setup Menu

The items in the Standard CMOS Setup Menu are divided into categories.

Each category includes none, one, or more than one setup item. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

■ **Figure 2. Standard CMOS Setup Menu**

ROM PCI/ISA BIOS (xxxxxxx)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Date (mm:dd:yy) : Mon Mar 3 1997										
Time (hh:mm:ss) : 11 : 37 : 30										
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LAND	SECTOR	MODE		
Primary Master	: Auto	0	0	0	0	0	0	Auto		
Primary Slave	: Auto	0	0	0	0	0	0	Auto		
Secondary Master	: Auto	0	0	0	0	0	0	Auto		
Secondary Slave	: Auto	0	0	0	0	0	0	Auto		
Drive A	:1.44MB, 3.5 in.									
Drive B	:None									
Video	:EGA/VGA									
Halt On	:All, But Keyboard									
Base Memory		:							0K	
Extended Memory		:							0K	
Other Memory		:							512K	
Total Memory		:							512K	
Esc : Quit			↑ ↓ → ← : Select Item				PU/PD/+/-:Modify			
F1 : Help			(Shift) F2 : Change Color							

Date

The Date format is <day><month><date><year>.

Day	The day, from Sun to Sat, determined by the BIOS and is display-only
Date	The date, from 1 to 31 (or the maximum allowed in the month)

Month	The month, Jan through Dec
Year	The year, from 1994 through 2079

Time

The time format is **<hour><minute><second>**. The time is calculated based on the 24-hour military-time clock. For example, 2 p.m. is 14:00:00.

Hard Disk Types

This category identifies the types of hard disk(s) that have been installed in the computer. There are 46 predefined types and a user definable type. Type 1 to Type 45 are predefined. Type "User" is user-definable. Type Auto is automatically defined by BIOS.

Press **<PgUp>** or **<PgDn>** to select a numbered hard disk type or type the number and press **<Enter>**. Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category. If your hard disk drive type is not matched or listed, you can use Type "User" to define your own drive type manually.

If you select Type "User", related information is asked to be entered for several items. Enter the information directly from the keyboard and press **<Enter>**. This information should be provided in the documentation from your hard disk vendor or the system manufacturer. Most new drives will also have the parameters given on the label on top the drive.

CYLN	number of cylinders
HEAD	number of heads
WPCOM	write precom
SEC	number of sectors
LBA MODE	type of LBA mode
BLK MODE	type of Block mode
PIO MODE	type of PIO
32BIT MODE	type of 32-Bit transfer mode

If a hard disk has not been installed, select NOT Installed and press <Enter>.

Driver A Type/Drive B Type

The category identifies the type of floppy disk drive A or drive B that has been installed in the computer.

None	No floppy drive installed
360K, 5 1/4"	5-1/4 inch PC-type standard drive; 360 kilobyte capacity
1.2M, 5 1/4"	5-1/4 inch AT-type high-density drive; 1.2 megabyte capacity
720K, 3 1/2"	3-1/2 inch double-sided drive; 720 kilobyte capacity
1.44M, 3 1/2"	3-1/2 inch double-sided drive; 1.44 megabyte capacity
2.88M, 3 1/2"	3-1/2 inch double-sided drive; 2.88 megabyte capacity

Video

This category identifies the type of adapter used for the primary system monitor. It must match your video display card and monitor. Although secondary monitors are supported, you do not have to select the type in Setup.

EGA/VGA	Enhanced Graphics Adapter/Video Graphics Array. FOR EGA, VGA, SEGA, or PGA monitor adapters.
CGA 40	Color Graphics Adapter, power up in 40 column mode
CGA 80	Color Graphics Adapter, power up in 80 column mode
MONO	Monochrome adapter, includes high resolution monochrome adapters

Halt On

The category determines whether the computer will stop if an error is detected during power up.

No errors	Whenever the BIOS detects a non-fatal error the system will be stopped and you will be prompted.
All errors	The system boot will not be stopped for any error that may be detected.
All, But Keyboard	The system boot will not stop for a keyboard error, it will stop for all other errors.
All, But Diskette	The system boot will not stop for a disk error, it will stop

	for all other errors.
All, But Disk/Key	The system boot will not stop for a keyboard or disk error, it will stop for all other errors.

Memory

This category is display-only which is determined by POST (Power On Self-Test) of the BIOS.

Base Memory

The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system. The value of the base memory is typically 512K for system with 512K memory installed on the motherboard, or 640K for system with 640K or more memory installed on the motherboard.

Extended Memory

The BIOS determines how much extended memory is presented during the POST. This is the amount of memory located above 1MB in the CPU's memory address map.

Other Memory

This refers to the memory located in the 640K address space. This is the memory that can be used for different applications. DOS uses this area to load device drivers to keep as much base memory free for application programs. The most common use for this area is Shadow RAM.

BIOS Features Setup

!! WARNING !! The information about BIOS defaults on manual (**Figure 3.4.5.6.8**) is just for reference, please refer to the BIOS installed on board, for update information.

■ Figure 3. BIOS Features Setup Menu

ROM PCI/ISA BIOS (xxxxxxxx)
BIOS FEATURES SETUP

AWARD SOFTWARE, INC.

Virus Warning	: Enabled	Video BIOS Shadow	: Disabled
CPU Internal Cache	: Disabled	C8000-CBFFF Shadow	: Disabled
External Cache	: Disabled	CC000-CFFFF Shadow	: Disabled
CPU L2 Cache ECC Checking	: Enabled	D0000-D3FFF Shadow	: Disabled
Processor Number Feature	: Disabled	D4000-D7FFF Shadow	: Disabled
Quick Power On Self Test	: Disabled	D8000-DBFFF Shadow	: Disabled
Boot From LAN First	: Disabled	DC000-DFFFF Shadow	: Disabled
Boot Sequence	: A,C,SCSI		
Swap Floppy Drive	: Disabled		
Boot Up Floppy Seek	: Disabled		
Boot Up NumLock Status	: Off		
Gate A20 Option	: Normal		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250		
Security Option	: Setup	ESC : Quit	↑ ↓ → ← : Select Item
PCI/VGA Palette Snoop	: Disabled	F1 : Help	PU/PD/+/- : Modify
OS Select For DRAM > 64MB	: Non-OS2	F5 : Old Values	<Shift> F2 : Color
Report No FDD For WIN 95	: No	F7 : Load Setup Defaults	

Virus Warning

This category flashes on the screen. During and after the system boot up, any attempt to write to the boot sector or partition table of the hard disk drive will halt the system and the error message will appear. In the mean time, you can run an anti-virus program to locate the problem.

Disabled

No warning message to appear when anything attempts to access the boot sector or hard disk partition table.

Enabled

Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector of hard disk partition table.

CPU Internal Cache

Enabled Enable cache
Disabled Disable cache

External Cache

Cache memory is additional memory that is much faster than conventional DRAM (system memory). Most, but not all, modern PCs have additional (external) cache memory. When the CPU requests data, the system transfers the requested data from the main DRAM into cache memory, for even faster access by the CPU.

Enabled	Enable cache
Disabled	Disable cache

CPU L2 Cache ECC Checking

This item allows you to select between two methods of L2 Cache error checking.

Enabled
Disabled

Processor Number Feature(Support Pentium III only)

The Intel processor serial number control option.

Enabled
Disabled

Quick Power On Self Test

This option enables the level 2 external cache memory.

Enabled	Enable quick POST
Disabled	Normal POST

Boot From Lan First

During Enabled, If there's a LAN card onboard the priority from booting will be from the LAN.

Boot Sequence

This option determines which drive the computer searches the OS for boot-up. The settings are "A, C, SCSI", "C, A, SCSI", "C, CDROM, A", "CDROM, C, A", "D, A, SCSI", "E, A, SCSI", "F, A, SCSI", "SCSI, A, C", "SCSI, C, A" or "C only", etc. **The default is "A, C, SCSI".**

Swap Floppy Drive

Switches the floppy disk drive between being designated as A and B.
Default is disabled.

Boot Up Floppy Seek

During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360K type is 40 tracks while 720K, 1.2M and 1.44M are all 80 tracks.

Enabled BIOS searches for floppy disk drive to determine if it is 40 or 80 tracks. Note that BIOS cannot tell from 720K, 1.2M or 1.44M drive type, as they are all 80 tracks.

Disabled BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360K.

Boot Up NumLock Status

On Keypad is number keys.
Off Keypad are arrow keys.

Gate A20 Option

This entry allows you to select how the gate A20 is handled. The gate A20 is a device used to address memory above 1 Mbytes. Initially, the gate A20 was handled via a pin on the keyboard. Today, while keyboards still provide this support, it is more common, and much faster, for the system chipset to provide support for gate A20.

Typematic Rate Setting

This determines the typematic rate.

Enabled Enable typematic rate and typematic delay programming.

Disabled Disable typematic rate and typematic delay

programming. The system BIOS will use default value of these 2 items and the default is controlled by keyboard.

Typematic Rate (Chars/Sec)

6	6 characters per second
8	8 characters per second
10	10 characters per second
12	12 characters per second
15	15 characters per second
20	20 characters per second
24	24 characters per second
30	30 characters per second

Typematic Delay (Msec)

Choose the length of delay from the time you press a key and the character repeating. (Units are mil-sec)

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 denied if the correct password is not entered at the prompt.
Setup	The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt.

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 the boot information and the 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 VGA controller is on the PCI bus and a non-VGA graphic controller is on an ISA bus, the Write Access to the palette will not show up on the ISA bus if the PCI VGA controller responds to the Writes.

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

Disabled	Disables the function.
Enabled	Enables the function.

OS Selection for DRAM > 64MB

Allows OS/2 to be used with > 64MB of DRAM. Settings are Non-OS/2 (default) and OS/2. Set to OS/2 if using more than 64MB and running OS/2.

DEFAULT is Non-OS2.

Report No FDD FOR WIN95

This function is only use when you are testing SCT for Windows 95 Logo.

Video BIOS Shadow

Determines whether video BIOS will be copied to RAM for faster execution.

Enabled	Optional ROM is enabled.
----------------	--------------------------

Disabled (default) Optional ROM is disabled.

C8000 - CFFFF Shadow / E8000 - EFFFF Shadow

Determines whether the optional ROM will be copied to RAM for faster execution.

Enabled Optional ROM is shadowed.

Disabled (default) Optional ROM is not shadowed.

Note : For C8000 - DFFFF option - ROM on PCI BIOS, BIOS will automatically enable the shadow RAM. User does not have to select the item.

Chipset Features Setup

The Chipset Features Setup option is used to change the values of the chipset registers. These registers control most of the system options in the computer.

■ Figure 4. Chipset Feature Setup Menu

ROM PCI/ISA BIOS (xxxxxxxx)

CHIPSET FEATURES SETUP

AWARD SOFTWARE, INC.

SDRAM CAS latency Time	: 3	CPU Host / PCI Clock	: Hardware
DRAM Data Integrity Mode	: Non-ECC	CPU Warning Temperature	: Optional
System BIOS Cacheable	: Disabled	Current System Temp.	: Optional
Video BIOS Cacheable	: Disabled		

Video RAM Cacheable	: Disabled	Current CPU 1 Temperature	: Optional
8 Bit I/O Recovery Time	: NA	Current CPU FAN1 Speed	: Optional
16 Bit I/O Recovery Timing	: NA	IN0(V):	IN1(V): Optional
Memory Hole At 15M-16M	: Disabled	IN2(V):	+5V: Optional
Passive Release	: Enabled	+12V:	-12V: - Optional
Delayed Transaction	: Enabled	-5V: -	Optional
AGP Aperture Size (MB)	: 64		
		ESC : Quit	↑ ↓ → ← : Select Item
		F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values	<Shift> F2 : Color
		F7 : Load Setup Defaults	

CPU Host / PCI Clock

This function allows you to select the CPU host frequency (By pass the hardware setting). The over speed setting are not guaranteed by manufacture.

**CPU Host / PCI Clock: 75/37, 83/41, 112/37, 124/31,
133/33, 148/37
(NO GUARANTEE)**

DRAM Data Integrity Mode

Select Non-ECC or ECC(error-correcting code), according to the type of installed DRAM. The settings are Non-ECC or ECC.

Non-ECC

System BIOS Cacheable

When enabled, accesses to the system BIOS ROM addressed at F0000H-FFFFFH are cached, provided that the cache controller is enable.

Enabled BIOS access cached
Disabled BIOS access not cached

Video BIOS Cacheable

As with caching the System BIOS above, enabling the Video BIOS cache will cause access to video BIOS addressed at C0000H to C7FFFH to be cached, if the cache controller is also enabled. Data from the CPU to the PCI bus can be posted (buffered by the controller).

Enabled	Video BIOS access cached
Disabled	Video BIOS access not cache

Video RAM Cacheable

Select Enabled allows caching of the video RAM, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

8 Bit I / O Recovery Time

The recovery time is the length of time, measured in CPU clocks, which the system will delay after the completion of an input / output request. This delay takes place because the CPU is operating so much faster than the input / output bus that the CPU must be delayed to allow for the completion of the I / O.

The item allows you to determine the recovery time allowed for 8 bit I / O. Choices are from NA, 1 to 8 CPU clocks.

1 (default)

16 Bit I / O Recovery Time

This item allows you to determine the recovery time allowed for 16 bit I/O. Choices are from NA, 1 to 4 CPU clocks.

1 (default)

Memory Hole At 15M-16M

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. The user information of peripherals that need to use this area of system memory usually discusses their memory requirements.

Disabled

Passive Release

When Enabled, CPU to PCI bus accesses is allowed during passive release. Otherwise, the arbiter only accepts another PCI master access to local DRAM.

Enabled

Delayed Transaction(Optional)

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select Enabled to support compliance with PCI specification version 2.1.

Enabled

AGP Aperture Size (MB)(Optional)

Select the size of the Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation.

64

CPU Warning Temperature(Optional)

CPU Warning Temperature Select.

Monitor CPU Temp. at 50 °C/122 °F, if Temp.> 50 °C/122 °F will cause system alarming.

Current System Temperature(Optional)

Detect System Temperature automatically.

Current CPU 1 Temperature(Optional)

Detect CPU Temperature automatically.

Current CPU FAN1 Speed(Optional)

Detect CPU Fan speed status automatically.

IN0(V),IN1(V),IN2(V), ±12V, ±5V(Optional)

Detect system's voltage status automatically.

Power Management Setup

■ Figure 5. Power Management Setup Menu

ROM PCI/ISA BIOS (xxxxxxxx)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

Power Management	: Disabled	** Reload Global Timer Events **	
PM Control by APM	: No	IRQ [3-7 , 9-15] , NMI	: Disabled
Video Off Method	: Blank Screen	Primary IDE 0	: Disabled
Video Off After	: NA	Primary IDE 1	: Disabled
MODEM Use IRQ	: NA	Secondary IDE 0	: Disabled
		Secondary IDE 1	: Disabled
Doze Mode	: Disabled	Floppy Disk	: Disabled
Standby Mode	: Disabled	Serial Port	: Disabled
Suspend Mode	: Disabled	Parallel Port	: Disabled
HDD Power Down	: Disabled		

Throttle Duty Cycle	: 12.5 %	
VGA Active Monitor	: Disabled	
Soft-Off by PWR-BTTN	: Instant - Off	
Power On by Ring	: Disabled	
Wake up on LAN	: Disabled	
IRQ 8 Break Suspend	: Disabled	
		ESC : Quit ↑ ↓ → ← : Select Item
		F1 : Help PU/PD/+/- : Modify
		F5 : Old Values <Shift> F2 : Color
		F7 : Load Setup Defaults

Power Management

Disable (Min. Saving)	Global Power Management will be disabled.
User Define (Max. Saving)	Users can configure their own power management.
Min Saving	Pre-defined timer values are used such that all timers are at their MAX value.
Max Saving	Pre-defined timer values are used such that all timers are at their MIN value.

PM Control by APM

No	System BIOS will ignore APM when power managing the system.
Yes	System BIOS will wait for APM's prompt before it enters any PM mode.

Video Off Method

Blank Screen	The system BIOS will only blank the screen when disabling video.
V/H SYNC+Blank	In addition to the above, BIOS will also turn off the V-SYNC & H-SYNC signals from VGA card to monitor.
DPMS	This function is enabled only for VGA card supporting DPMS.

Video Off After

As the system moves from lesser to greater power-saving modes, select the mode in which you want the monitor to blank:

StandbyMODEM Use IRQ

Name the interrupt request (IRQ) line assigned to the modem (if any) on your system. Activity of the selected IRQ always awakens the system.

3

Doze Mode

This option specifies how long the CPU is continuously idle before entering the doze mode. When the system is in Doze mode, the screen will be blank.

Disabled

Standby Mode

After the selected period of system inactivity, the fixed disk drive and the video shut off while all other devices still operated at full speed.

Disabled

Suspend Mode

This options allows the user to indicate how long the system will be idle before entering the suspend mode, which turns off the CPU and saves the energy of the system.

HDD Power Down

After the selected period of drive inactivity, the hard disk drive powers down while all other devices remain active.

Disabled

Throttle Duty Cycle

When the system enters Doze mode, the CPU clock runs only part of the time. You may select the percent of time that the clock runs.

62.5 %

VGA Active Monitor

When enabled, any video activity restarts the global timer for Standby mode.

Disabled

Soft-Off by PWR-BTTN

This item allows you to set the off function of power button by software control.

Instant-Off

Power On by Ring

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.

Disabled

Wake Up On LAN

To use this function, you need a LAN add-on card which support power on functions. It should also support the wake-up on LAN jumper.

Disabled

IRQ 8 Break Suspend

You can turn On or Off monitoring of IRQ 8 (the Real Time Clock) so it does not awaken the system from Suspend mode.

Disabled

PNP / PCI Configuration Setup

■ **Figure 6. PNP / PCI Configuration Setup Menu**

ROM PCI/ISA BIOS (xxxxxxxx)
PNP / PCI FUNCTION SETUP
AWARD SOFTWARE, INC.

PNP OS Installed	: No
Resources Controlled BY	: Auto
Reset Configuration Data	: Disabled
ESC : Quit ↑ ↓ → ← : Select Item	

F1	: Help	PU/PD/+/-	: Modify
F5	: Old Values	<Shift> F2	: Color
F7	: Load Setup Defaults		

PnP OS Installed

When set to YES, BIOS will only initialize the PnP cards used for booting (VGA, IDE, SCSI). The rest of the cards will be initialized by the PnP operating system like WindowsTM95. When set to NO, BIOS will initialize all the PnP cards. Therefore for non-PnP operating system (DOS, NetwareTM), this option must set to NO.

Resources Controlled By “Auto” or “Manual”

By Choosing “Auto” the system BIOS will detect the system resource and automatically assign the relative IRQ and DMA channel for each peripheral.

By Choosing “Manual”(default), the user will need to assign IRQ & DMA for add-on cards. Be sure that there are no IRQ/DMA and I/O ports conflict.

Resources Configuration Data

The system BIOS supports the PnP feature so the system needs to record which resource is assigned and protects 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) are chosen, the system's ESCD will update only when the new configuration varies from the last one.

If Enabled is chosen, the system will be forced to update ESCDs if the system configuration has changed and then auto set this option to the “Disabled” mode.

IRQ-3	assigned to : PCI / ISA PnP
IRQ-4	assigned to : PCI / ISA PnP
IRQ-5	assigned to : PCI / ISA PnP

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
DMA-3	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.

PCI IDE IRQ Map To

This allows you to configure your system to the type of IDE disk controller in use. By default, Setup assumes that your controller is an ISA (Industry Standard Architecture) device rather than a PCI controller. The more apparent difference is the type of slot being used.

If you have equipped your system with a PCI controller, changing this allows you to specify which slot has the controller and which PCI interrupt (A, B, C or D) is associated with the connected hard drives.

Remember that this setting refers to the hard disk drive itself, rather than individual partitions. Since each IDE controller supports two separate hard drives, you can select the INT# for each. Again, you will note that the primary has a lower interrupt than the secondary as described in “lot x Using INT#” above.

Selecting “PCI Auto” allows the system to automatically determine how your IDE disk system is configured.

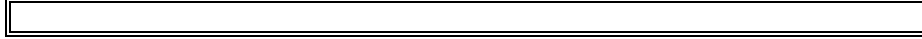
Load Setup Defaults

Chipset defaults indicate the values required by the system for maximum performance.

■ **Figure 7. Load Setup Defaults Screen**

ROM PCI/ISA BIOS (xxxxxxxx)
 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 SETUP	
LOAD SETUP DEFAULTS	SAVING
Load SETUP Defaults (Y/N) ? N	
Esc : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	(Shift) F2 : Change Color
Load SETUP Defaults except Standard CMOS SETUP	



If you wish to load the SETUP Defaults, change the prompt to <Y> and press <ENTER>.

Integrated Peripherals Setup

■ Figure 8. Integrated Peripherals Setup Menu

ROM PCI/ISA BIOS (xxxxxxx)
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.

IDE HDD Block Mode	: Enabled	Onboard Parallel Port	: 378/IRQ7
IDE Primary Master PIO	: Auto	Parallel Port Mode	: SPP
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 UDAM	: Auto		
On-Chip Primary PCI IDE	: Enabled		
On-Chip Secondary PCI IDE	: Enabled		
USB Keyboard Support	: Disabled		
Onboard FDC Controller	: Enabled		
Onboard Serial Port 1	: 3F8/IRQ4		
Onboard Serial Port 2	: 2F8/IRQ3		
UART2 Mode	: Standard		
		ESC : Quit	↑ ↓ → ← : Select Item
		F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values	<Shift> F2 : Color
		F7 : Load Setup Defaults	

IDE HDD Block Mode

Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/write per sector the drive can support.

Enabled (default)

IDE Primary / Secondary Master / Slave PIO

The IDE PIO (Programmed Input / Output) fields let you set a PIO mode (0-4) for each of the IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

Auto

IDE Primary / Secondary Master / Slave UDMA

Ultra DMA /33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA drive (Windows 95 OSR2 or a third party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33, select Auto to enable BIOS support.

Auto

On-Chip Primary IDE / Secondary PCI IDE

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select Enabled to activate each channel separately.

Enabled

USB Keyboard Support

Select Enabled if your system contains a Universal Serial Bus (USB)

controller and you have a USB keyboard.

Disabled
Enabled

Onboard FDC Controller

Enabled / Disabled The system has an on-board Super I/O chip with a FDD controller that supports 2 FDDs for 360K / 720K / 1.2M / 1.44M / 2.8M. Choose "Enabled" to use the on-board FDD controller for accessing the FDD. Otherwise choose "Disabled" to use the off-board FDD controller.

Onboard Serial Port 1

Disabled / (3F8 / IRQ4) / (2F8 / IRQ3) / (3E8 / IRQ4) / (2E8 / IRQ3)

Onboard Serial Port 2

Disabled / (3F8 / IRQ4) / (2F8 / IRQ3) / (3E8 / IRQ4) / (2E8 / IRQ3)
The system has an On-board Super I/O chipset with 2 serial ports.
The On-board serial ports can be selected as:

Disabled	
3F8 / IRQ4	COM1 uses IRQ4
2F8 / IRQ3	COM2 uses IRQ3
3F8 / IRQ4	COM3 uses IRQ4
2F8 / IRQ3	COM4 uses IRQ3

UART 2 Mode

Select an operating mode for the second serial port:

Standard (default)	RS-232C serial port
IrDA SIR	IrDA-compliant serial infrared port
IrDA MIR	1 MB/sec infrared port
IrDA FIR	Fast Infrared standard
Sharp IR	4-Mb/s data transmission

Onboard Parallel Port

**Disabled/
(3BC/IRQ7)/
(278 /IRQ5)/
(378 /IRQ7)**

There is a built-in parallel port on the on-board Super I/O chipset that provides standard, ECP, and EPP features. It has the following options:

Disable
(3BC/IRQ7)Line Printer port 0
(278 / IRQ5)Line Printer port 2
(378 / IRQ7)Line Printer port 1

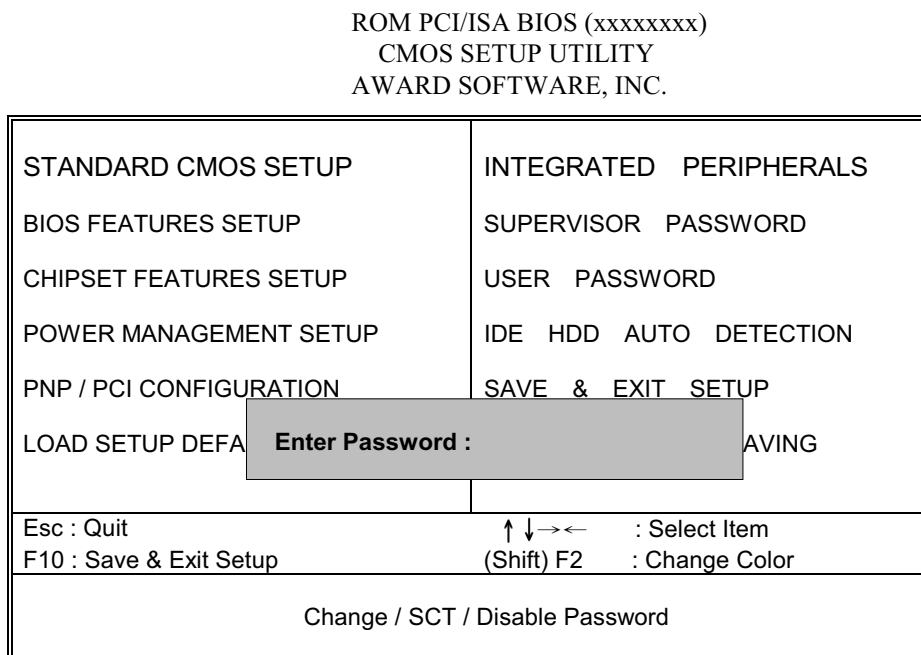
Parallel Port Mode

SPP : Standard Parallel Port
EPP : Enhanced Parallel Port
ECP : Extended Capability Port

To operate the onboard parallel port as Standard Parallel Port only, choose "SPP." To operate the onboard parallel port in the ECP and SPP modes simultaneously, choose "ECP/SPP." By choosing "ECP" the onboard parallel port will operate in ECP mode only. Choosing "ECP/EPP" will allow the onboard parallel port to support both the ECP and EPP modes simultaneously. The ECP mode has to use a DMA channel so choose the onboard parallel port with the ECP feature. After selecting it the following message will appear: "ECP Mode Use DMA". At this time the user can choose between DMA channels 3 or 1. The onboard parallel port is EPP Spec. Compliant so after the user chooses the onboard parallel port with the EPP function, the following message will be displayed on the screen: "Parallel port EPP Type." At this time either EPP 1.7 spec. Or EPP 1.9 spec. Can Be chosen.

Supervisor / User Password Setting

■ **Figure 9. Supervisor Password Setting**



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 typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <ESC> to abort the selection and not enter a password. To disable password, just press <Enter> when you are prompted to enter password. A message will confirm the disabling of the password. Once the password is disabled, the

system will boot and you can enter setup freely.

PASSWORD DISABLED

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

IDE HDD Auto Detection

Automatically configure hard disk parameters. The parameters on this figure are just for reference.

■ **Figure 10. Auto Configuration with Optimal Settings Screen**

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

HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LAND	SECTOR	MODE
Primary Master	:User	343	665	16	65535	664	63	NORMAL

Select Primary Slave Option (N=Skip) N							
OPTIONS	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
1(Y)	0	0	0	0	0	0	NORMAL

Note : Some "OS.s" (like SCO-UNIX) must use "NORMAL" for installation

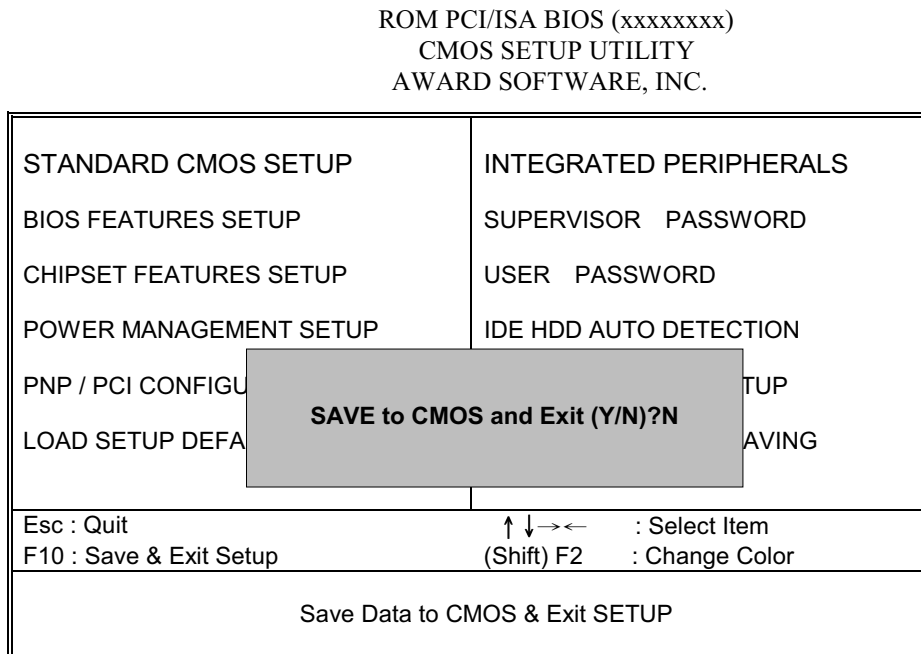
ESC : Skip

When you enter this utility, the screen asks you to select a specific hard disk for Primary Master. If you accept a hard disk detected by the BIOS, you can enter "Y" to confirm and then press <Enter> to check for another next hard disk. This function allows you to check four hard disks and you may press <Esc> after <Enter> to exit this function and go back to the Main Menu.

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

■ **Figure 11. Save & Exit Setup Screen**



Pressing **<N>** and **<ENTER>** will return you to the Main Menu.

Pressing **<Y>** and **<ENTER>** will save the system parameters and continue with the booting process.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

■ **Figure 12. Save Settings and Exit Screen**

ROM PCI/ISA BIOS (xxxxxxxx)
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	LOAD SETUP DEFAULTS
Quit Without Saving (Y/N)?N	
Esc : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	(Shift) F2 : Change Color
Abandon All Data & Exit SETUP	

Pressing **<N>** and **<ENTER>** will return you to the Main Menu.

Pressing **<Y>** and **<ENTER>** will continue with booting process without saving any system parameters.

Application Software

- Please use the “BIOS Utility” diskette to setup Flash Memory.
- The diskette contains the intelligent installation utility **AWDFLASH.EXE**, shown as follows:

■ **Figure 13. Flash Memory Writer**

FLASH MEMORY WRITER vX.X	
Copyright (C) 1992-1994 Award Software, Inc.,	
For xxxxxx-xxx-xxxxxxxxx	DATE: xx/xx/xxxx
Flash Type -	
File Name to Program:	<input type="text"/>
Error Message :	Do You Want To Save Bios (Y/N)?

Bus Master IDE Driver

This program is designed for versions of BIOSTAR Mainboard to fix the problem where the IDE BUS Master, USB and Power management entries cannot be configured correctly in the device manager.

This section describes how to install the software on a system where **Windows 95*** is installed.

"**Windows 95***" equals the following versions of the Windows 95 operating system:

Version 950 Windows 95 (**Retail Release**)
Version 950A Windows 95 OEM Service Release 1 (**OSR1**)
Version 950B Windows 95 OEM Service Release 2.0 (**OSR2**)
or Windows 95 OEM Service Release 2.0 plus
USB Supplement (**OSR2.1**)

1. Check the System Requirements. Windows 95* must be fully installed and running on the system prior to running this software.
2. Close any running applications.
3. Remove references to installed real-mode IDE device drivers in the **AUTOEXEC.BAT** and **CONFIG.SYS** files (especially any drivers that control ATAPI CD-ROM and special IDE features). Use the Notepad utility to do this.
4. Insert the Driver CD into your CD-ROM Drive (For example: D:) and the Driver Installation Wizard will be invoked automatically by Auto Run Function Provided by Windows 95*
5. In the Welcome Window of the Installation Wizard, click the "Next" button to the change to next window - Driver List Windows. In the Mainboard Software window, please select "Bus Master IDE Driver" to invoke IDE Driver Installation Program.
6. Click '**Start**' on the Main Screen to begin the installation procedure.

NOTE: If you click '**Cancel**', the program will terminate.

7. After the installation procedure is completed, click '**OK**' to restart the system when prompted to do so. If you don't want to reboot immediately, you must remember to reboot your system later!

8. Follow the screen instructions and use default settings to complete the setup when Windows 95* is re-started.

Upon re-starting, Windows 95* will display that it has found an **Intel PCI Bus Master IDE controller hardware** and the installing hardware.

If a "**New Hardware Found**" dialog box is displayed requesting the location of the drivers, use the mouse to click on the scrollbar and click on the **<Windows 95* directory> \ System \ IOSubSys path:**

For example:

- a. Click on '**C:\WINDOWS\SYSTEM\IOSUBSYS**
- b. Click '**OK**'.

9. Select '**Yes**', when prompted to re-start Windows 95*.

10. Select '**Yes**' again, when you are prompted to re-start Windows 95*.