SY-6BE+ Mainboard

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Pentium® II Processor supported

82440 BX AGP/PCI Mainboard

66&100MHz Front Side Bus supported

ATX Form Factor

****

User's Guide

&

Technical Reference

About This Guide

This User's Guide is for assisting system manufacturers and end users in setting up and installing the mainboard. Information in this guide has been carefully checked for reliability; however, no guarantee is given as to the correctness of the contents. The information in this document is subject to change without notice.

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6BE+ SERIAL

FC Tested To Comply With FCC Standards
FOR HOME OR OFFICE USE

100% POST CONSUMER RECYCLED PAPER

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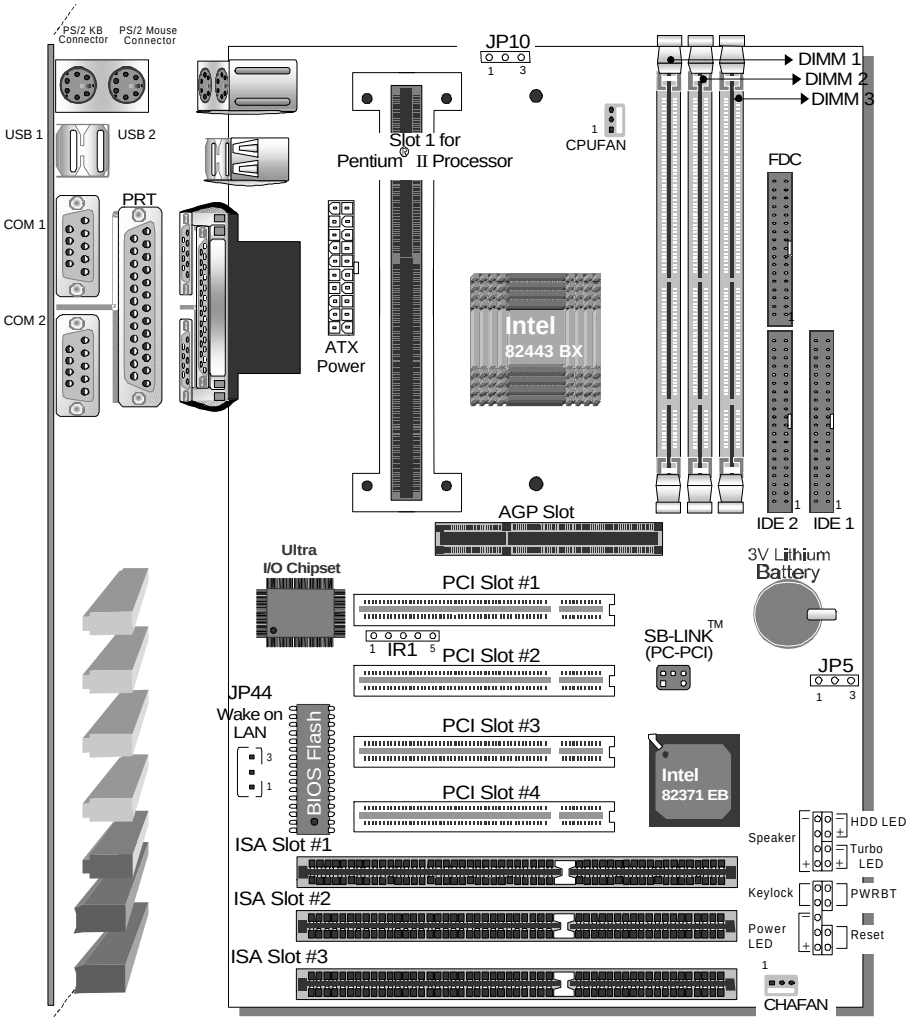
SY-6BE+ MAINBOARD LAYOUT



Back Panel **SY-6BE+ Platform**

Chapter 1

INTRODUCTION

The **SY-6BE+** AGP/PCI mainboard is a high-performance Pentium® II processor supported ATX form-factor system board. **SY-6BE+** uses the 82440 BX Chipset technology and supports Pentium® II class processors. This mainboard is fully compatible with industry standards and adds many technical enhancements.

1-1 KEY FEATURES

Supports Intel Pentium® II processor (233-550MHz) & Celeron™ processor (266~366 MHz)
Auto-detect CPU voltage
PC97, ACPI, Ultra DMA/33
Supports system memory up to 768 MBytes
Power-on by modem or alarm
Supports Wake-On-LAN (WOL)
Supports power-on by keyboard
Supports onboard hardware monitoring
and includes Hardware Doctor ™utility
Supports Creative SB-LINK ™(PC-PCI) for PCI audio
1 x 32-bit AGP slot
4 x 32-bit bus mastering PCI slots
2 x USB ports onboard
1 x IrDA port
Supports multiple-boot function
DMI utility
SOYO COMBO Setup

SY-6BE+ PLATFORM FEATURES

Board Size 4-layer PCB, 18x30.5cm(7.1"x12"), ATX Form Factor

Slot1 Slot 1 for Pentium® II Processor

- Supports the following processors
  - **100MHz FSB**
    Pentium® II 350/400/450/500*/550* MHz
  - **66MHz FSB**
    Pentium® II 233/266/300/333 MHz
    Celeron™ 300A/333/366* MHz
    Celeron™ 266/300 MHz
- Supports both boxed and non-boxed type of CPUs
- Includes a CPU mount kit with retention clip
- Also includes a CPU Heat Sink support stand used for heavier non-boxed type CPUs
- Features Auto-detection of CPU voltage

*This main board is designed to be able to support up to 550MHz processors. However, the 500/550MHz processors are not available yet at this moment for testing.

Chipset 82440 BX AGP Set

ATX Power 20-pin Male Connector

CPUFAN 3-pin CPU Cooling Fan Connector

Memory DIMM Bank (DIMM1~3)

- Three strips of 168-pin Unbuffered or Registered SDRAM DIMM
- Supports 8/16/32/64/128/256MB DIMM modules in each bank
- Provides up to 768 MBytes of main memory
- Supports ECC configuration

BIOS System BIOS built-in, Award BIOS

- APM, ACPI and "Plug-and-Play" function
- Supports multiple-boot function
- Onboard FLASH memory for easy upgrade
- DMI utility

Bus Controller Compliant with v2.1 PCI specifications

PCI Slots	4 x 32-bit Bus Mastering Slots
AGP Slot	1 x 32-bit AGP Slot
ISA Slots	3 x 16-bit ISA Slots
IDE1, IDE2	2 x 40-pin Bus Mastering E-IDE/ATAPI Ports ➢ IDE1: Primary IDE Device Connector ➢ IDE2: Secondary IDE Device Connector ➢ Supports Ultra DMA/33MHz
FDC	1 Floppy Disk Drive (FDD) Port (Supports 1.2MB/1.44MB/2.88MB and LS120/3-mode FDD)
IR1	5-pin Serial Infrared Device Header
Keylock	5-pin KeyLock Header
Reset	2-pin Reset Switch Header
Speaker	4-pin PC Speaker Header
TB_LED	2-pin Turbo LED Header
HDD_LED	2-pin IDE Device LED Header
PWRBT	ATX Power On/Off Switch 2-pin Header
JP5	CMOS Clear Jumper
JP10	Power On by Keyboard Jumper
JP44	WOL (Wake-On-LAN) 3-pin Header
SBLINK ™	PCI Audio Card Header (PC-PCI)

SY-6BE+ BACK-PANEL FEATURES

PRT	1 x Onboard 26-pin Female Parallel Printer Port ➢ ECP/EPP/SPP multi-mode parallel printer port
COM1, COM2	2 x Onboard RS-232 Serial Ports ➢ Feature 2 x high-speed UARTs (with 16550 FIFO)
PS/2 KB	1 x Onboard PS/2 Keyboard Port
PS/2 Mouse	1 x Onboard PS/2 Mouse Port
USB1, USB2	2 x Onboard USB (Universal Serial Bus) Ports

1-2 HANDLING THE MAINBOARD

To avoid damage to your mainboard, follow these simple rules while unpacking:

- Before handling the mainboard, ground yourself by grasping an unpainted portion of the system's metal chassis.
- Remove the mainboard from its anti-static packaging. Hold the mainboard by the edges and avoid touching its components.
- Check the mainboard for damage. If any chip appears loose, press carefully to seat it firmly in its socket.

Warning: Do not apply power if the mainboard appears damaged. If there is damage to the board, contact your dealer immediately.

1-3 ELECTROSTATIC DISCHARGE PRECAUTIONS

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

To protect your equipment from electrostatic discharge, take the following precautions:

- Do not remove the anti-static packaging until you are ready to install.
- 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 mainboard by its edges and avoid touching its components.

Chapter 2

HARDWARE SETUP

Congratulations on your purchase of **SY-6BE+** Mainboard. You are about to install and connect your new mainboard.

Note: Do not unpack the mainboard from its protective anti-static packaging until you have made the following preparations.

2-1 PREPARATIONS

Gather and prepare all the following hardware equipment to complete the installation successfully:

1. Pentium® II processor with built-in CPU cooling fan (boxed type).

Note: This mainboard supports non-boxed type CPUs. The heavier CPU cooling fan requires the installation of a CPU support stand included in this mainboard package.

2. DIMM memory module
3. Computer case and chassis with adequate power supply unit
4. Monitor
5. PS/2 Keyboard
6. Pointing Device (PS/2 mouse)
7. Speaker(s) (optional)
8. Disk Drives: HDD, CD-ROM, Floppy drive …
9. External Peripherals: Printer, Plotter, and Modem (optional)
10. Internal Peripherals: Modem and LAN cards (optional)

2-2 UNPACKING THE MAINBOARD

When unpacking the mainboard, check for the following items:

- The **SY-6BE+** 82440 BX AGP/PCI Mainboard
- This *Quick Start Guide* *
- The Installation CD-ROM *
- One IDE Device Flat Cable
- One Floppy Disk Drive Flat Cable

* If your board comes with a driver disc and a paper manual, the Quick Start Guide and the CD-ROM are not included in the package.

Warning: Do not unpack the mainboard from its anti-static packaging until you are ready to install it.

Like most electronic equipment, your mainboard may be damaged by electrostatic discharge. To avoid permanent damage to components ground yourself while working by using a grounding strap. Otherwise, ground yourself frequently by touching the unpainted portion of the computer chassis to drain the static charges.

Handle the mainboard carefully, holding it by the edges.

You are now ready to start the installation.

2-3 INSTALLATION GUIDE

We will now begin the installation of the mainboard. Please follow the step-by-step procedure designed to lead you to a complete and correct installation.

Warning: Turn off the power to the mainboard, system chassis, and peripheral devices before performing any work on the mainboard or system.

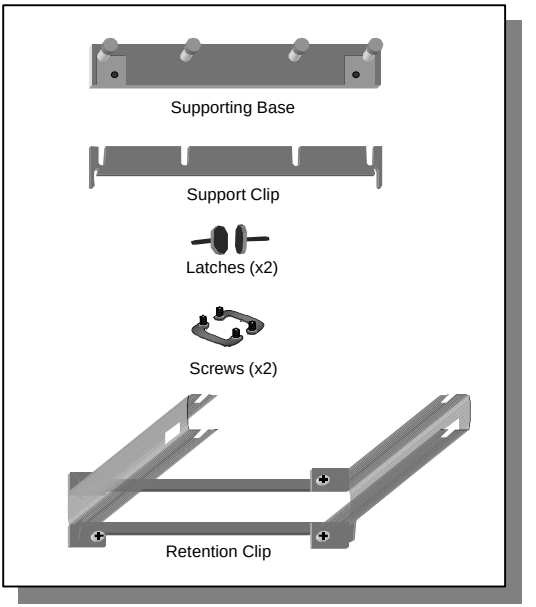
Step 1. CPU Installation

Your SY-6BE+ mainboard comes with a CPU retention set kit. The retention set is used to hold the Pentium® II processor attached to the Slot 1 CPU connector on the mainboard.

Follow these instructions to install your Pentium® II processor correctly.

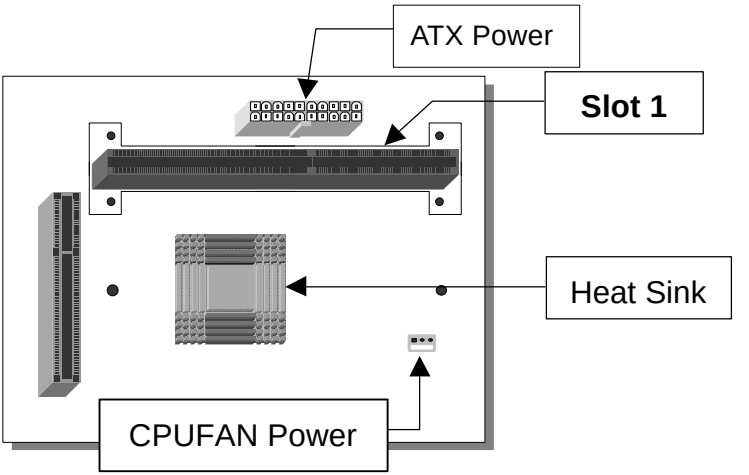
1. Unpack the Retention Set Kit

Gather all of the items included in the retention set kit, as shown in the following figure:



2. Position the Mainboard

Locate **Slot 1** on the mainboard and position the board in the direction as shown in the following figure:



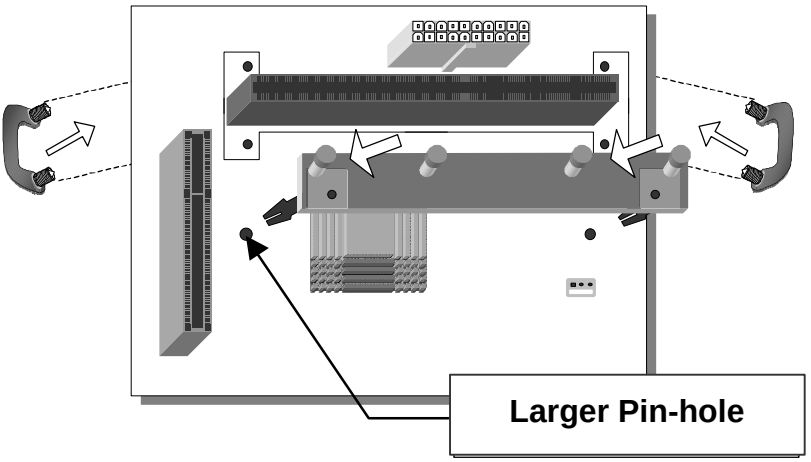
3. Insert the Screws

Install the two pairs of screws used to set the retention clip in the two pairs of holes at both ends of Slot 1. Insert the screws from below the mainboard upward, as shown in the figure below.

4. Install the Supporting Base

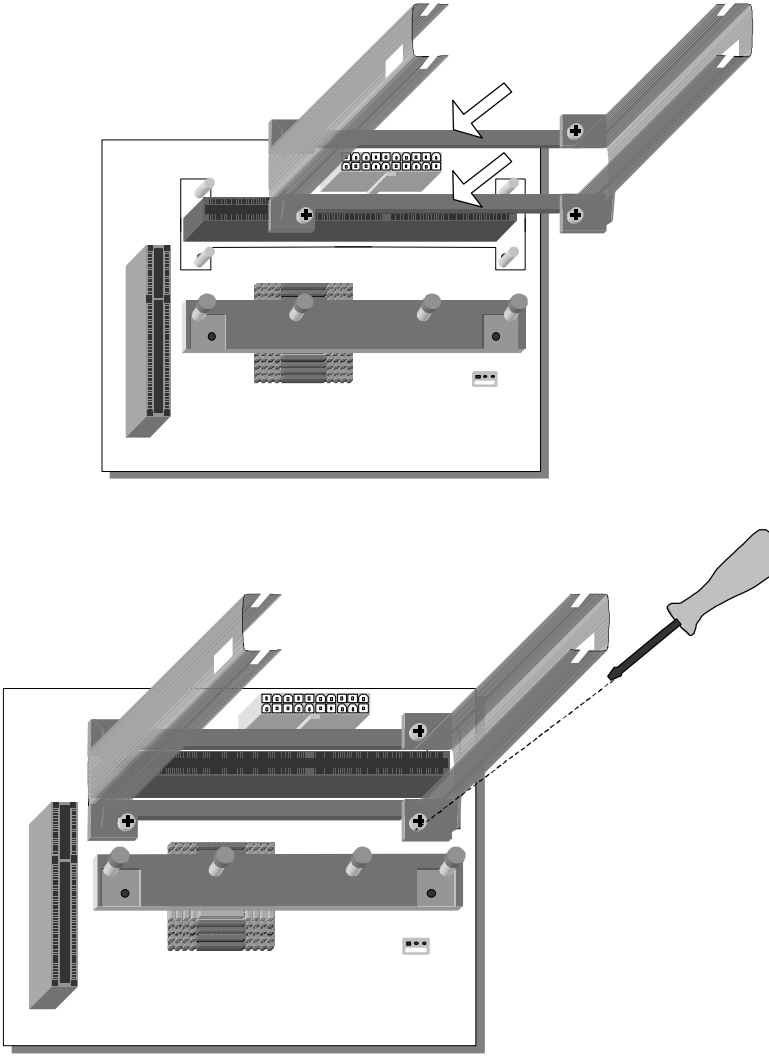
Insert the supporting base into the two holes adjacent to the two sets of screws previously installed.

Pay special attention to the directionality provided by the larger pin-hole on the AGP port side. Do not apply excessive force when inserting the supporting base. If the supporting base does not go in, check the orientation with the following figure and position the supporting base so as to match the larger pinhole.



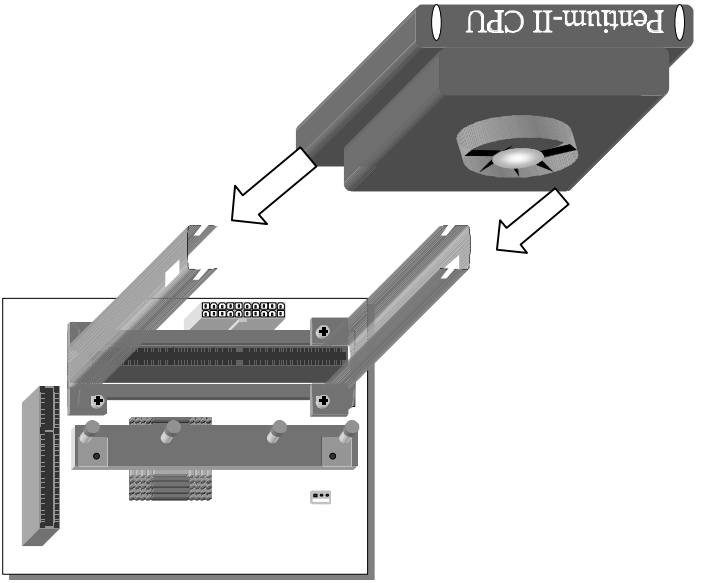
5. Install the Retention Clip

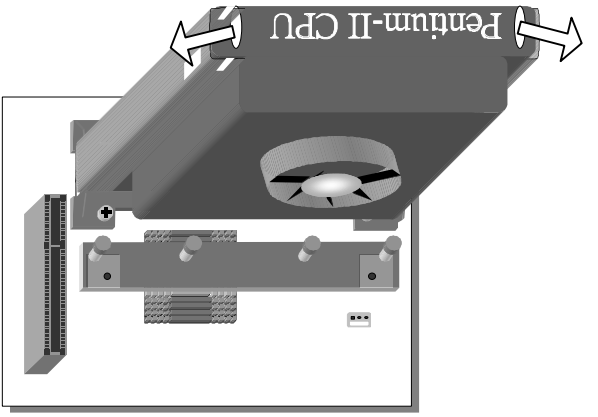
Set the retention clip centered on Slot 1 and right on top of the two sets of screws along side Slot 1, as shown in the following figure. Then tighten the four screws on the retention clip.



6. Install the CPU

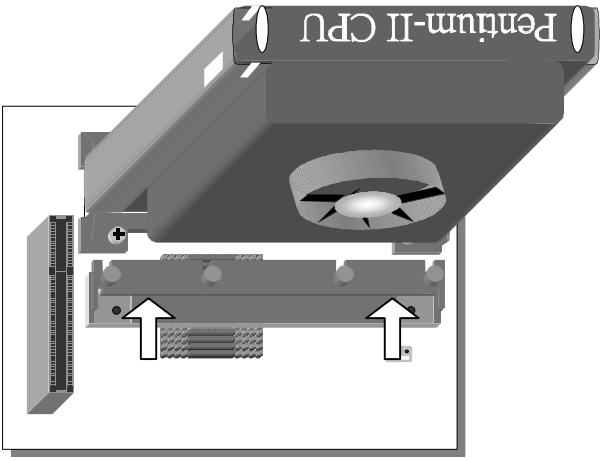
Insert the CPU into the retention clip and lock the two latches on the sides of the CPU to secure the Pentium® II processor in place, as shown in the following figures.





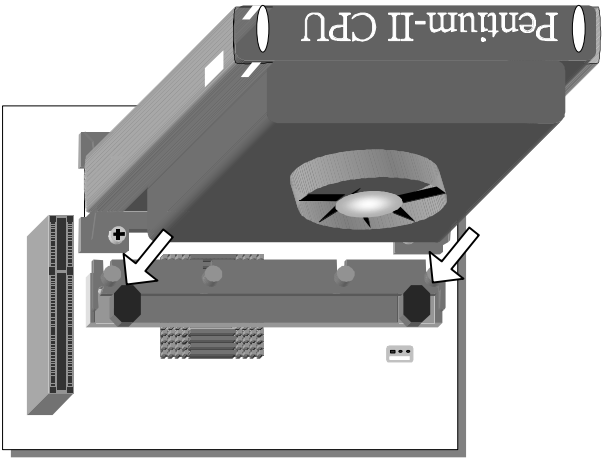
7. Install the Support Clip

Insert the support clip on the supporting base so that the CPU heat sink can seat on top of the supporting base, as shown in the following figure.



8. Insert the Latches

Insert the two latches in the corresponding pinholes on the supporting base and then turn them 90 degrees to secure the CPU, as shown in the following figure.



Step 2. CPU Fan Installation

Your Pentium® II processor kit comes with a cooling fan. Mount the fan on the processor according to the instructions provided by the manufacturer. The fan is a key component that will ensure system stability. The fan prevents overheating, therefore prolonging the life of your CPU.

Note: Remember to connect the fan to the appropriate power source.

Step 3. SDRAM Memory Module Installation

This mainboard features 3 x DIMM Banks for 168-pin 3.3V unbuffered and registered DIMM modules, providing support for up to 768MB of main memory using DIMM modules from 8MB to 256MB. For 66MHz front side bus CPUs use 12ns or faster memory; for 100MHz front side bus CPUs use 8ns (100MHz, PC100 compliant) memory.

Number of Memory Modules	DIMM 1	DIMM 2	DIMM 3
1	1st		
2	1st	2nd	
3	1st	2nd	3rd

RAM Type	SDRAM
Memory Module Size (MB)	8/16/32/64/128/256 Mbytes

Note: **(1) 256 MB memory modules available on PC registered DIMM only.**
(2) Always install memory modules in the order prescribed in this table.
(3) Do not install unbuffered and registered memory modules together.

Important: It is of prime importance that you install DIMM modules as outlined in the table above in order to preserve signal integrity on 100MHz front side bus systems.

Step 4. IDE Device Installation (HDD, CD-ROM)

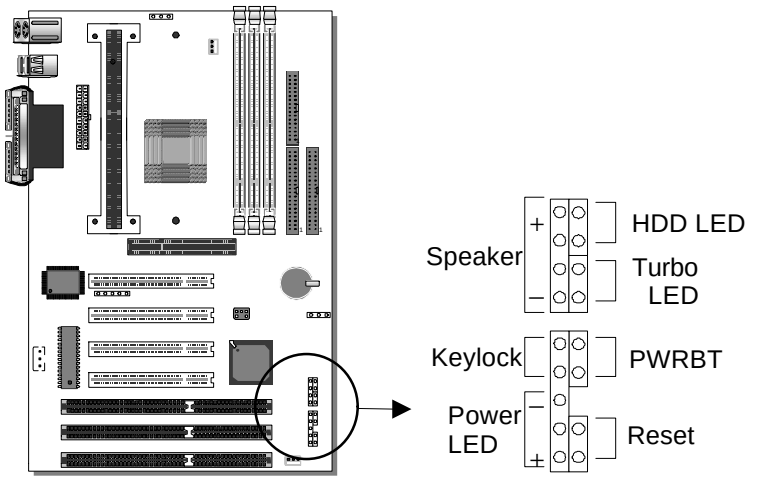
This mainboard offers two primary and secondary IDE device connectors (IDE1, IDE2). It can support up to four high-speed HDD or CD-ROM.

Connect one side of the 40-pin flat cable to the IDE device (HDD or CD-ROM) and plug the other end to the primary (IDE1) or secondary (IDE2) directionally keyed IDE connector on the mainboard.
This mainboard can support up to four HDDs.

Step 5. Floppy Drive Installation

The system supports 5 possible floppy drive types: 720 KB, 1.2 MB, 1.44 MB, 2.88 MB, and LS-120. In addition, this mainboard supports a 3-mode (720KB/1.25MB/1.44MB) floppy commonly used in Japan.
Connect one side of the 34-pin flat cable to the floppy drive and plug the other end to the floppy drive connector on the mainboard.
This mainboard can support up to 2 floppy drives.

Step 6. Front Panel Connections



Plug the computer case's front panel devices to the corresponding headers on the mainboard.

1. Power LED & KeyLock

Plug the Power LED cable into the 5-pin Keylock header.
Some systems may feature a KeyLock function with a front panel switch for enabling or disabling the keyboard. Connect the KeyLock switch to the 5-pin Keylock header on the mainboard.
Please install according to the following pin assignment: pin 1,3 are for Power LED and pin 4,5 are for Keylock.

2. Reset

Plug the Reset push-button cable into the 2-pin Reset header on the mainboard. Pushing the Reset button on the front panel will cause the system to restart the boot-up sequence.

3. Speaker

Attach the 4-pin PC speaker cable from the case to the Speaker header on the mainboard.

4. Turbo LED

Connecting the 2-pin Turbo LED cable to the corresponding Turbo LED header will cause the LED to light whenever the system is in Turbo mode.
The manufacturer has permanently set this mainboard in Turbo mode due to most hardware and software compliance to turbo mode.

5. IDE LED

Attach the 2-pin IDE device LED cable to the corresponding IDE LED header on the mainboard. This will cause the LED to lighten when an IDE (HDD, CD-ROM) device is active.

6. ATX Power On/Off Switch

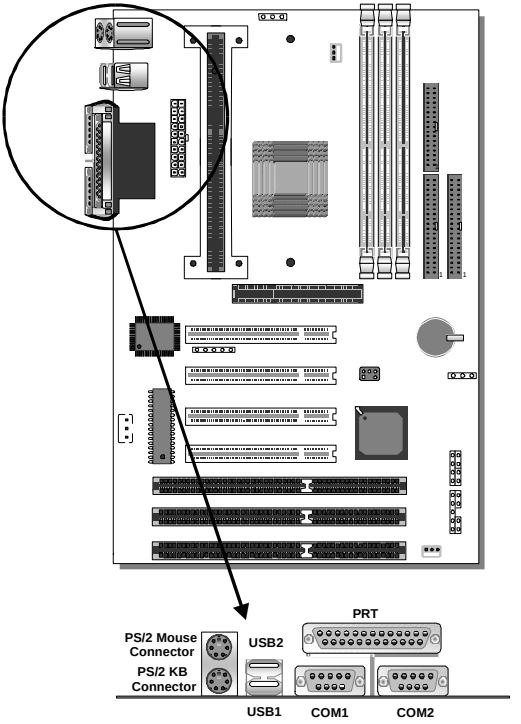
Attach the 2-pin momentary type switch to the PWRBT header for turning On or Off your ATX power supply.

Step 7. Back Panel Connections

All external devices such as the PS/2 keyboard, PS/2 mouse, printer, modem, USB can be plugged directly onto the mainboard back panel.

Only after you have fixed and locked the mainboard to the computer case can you start connecting the external peripheral devices.

When connecting an external device, use the following figure to locate and identify which back panel connector to plug the device to.



1. Onboard Serial Ports COM1/COM2

External peripherals that use serial transmission scheme include:

- serial mouse,
- and modem.

Plug the serial device cables directly into the COM1/COM2 9-pin male connectors located at the rear panel of the mainboard.

2. Parallel Port PRT

This parallel port is used to connect the printer or other parallel devices.

Plug the parallel device cable into the 26-pin female connector located at the rear panel of the mainboard.

3. PS/2 Keyboard

Plug the keyboard jack directly into the 6-pin female PS/2 keyboard connector located at the rear panel of the mainboard.

4. PS/2 Mouse

Similarly, plug the mouse jack directly into the 6-pin female PS/2 mouse connector.

5. Universal Serial Bus USB1/USB2

This mainboard provides two USB ports for your additional devices. Plug the USB device jack into the available USB connector USB1 or USB2.

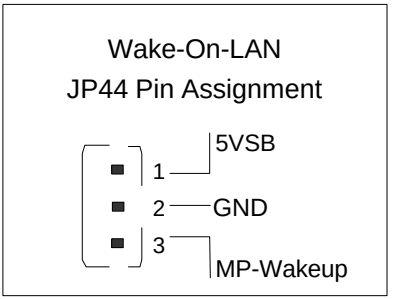
- USB devices under Win98 are allowed.
- With Win95, use the flow OpenHCI specifications.

Step 8. Other Connections

1. Wake-On-LAN (WOL)

Attach the 3-pin connector from the LAN card which supports the Wake-On-LAN (WOL) function to the JP44 header on the mainboard. This WOL function lets users wake up the connected computer through the LAN card.

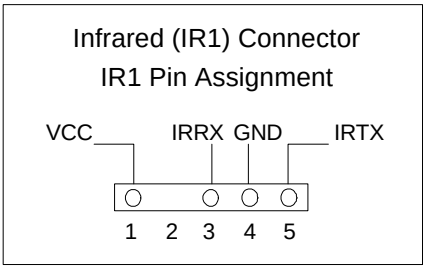
Please install according to the following pin assignment:



2. Infrared (IR1)

Plug the 5-pin infrared device cable to the IR1 header. This will enable the infrared transfer function. This mainboard meets both the ASKIR and HPSIR specifications.

Please install according to the following pin assignment:



3. Other Display Cards

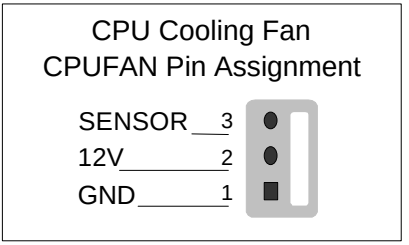
Insert other types of VGA cards into the PCI or ISA expansion slots according to card specifications.

Step 9. Cooling Fan Installation

1. CPU Cooling Fan

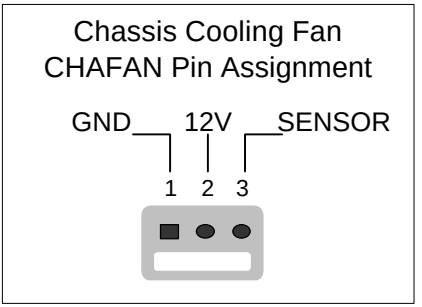
After you have seated the CPU properly on the processor, attach the 3-pin fan cable to the CPUFAN connector on the mainboard. The fan will stop when the system enters into Suspend Mode. (Suspend mode can be enabled from the BIOS Setup Utility, [POWER MANAGEMENT] menu.)

To avoid damage to the system, install according to the following pin assignment:



2. Chassis Cooling Fan

Some chassis also feature a cooling fan. This mainboard features a CHAFAN connector to provide 12V power to the chassis fan. Connect the cable from the chassis fan to the CHAFAN 3-pin connector. Install according to the following pin assignment:



Note: CPUFAN must be installed for this mainboard, CHAFAN and PWRFAN are optional.

Step 10. AGP VGA Card

Insert the AGP VGA card into the AGP slot. Then connect the monitor information cable to the AGP card back plane external connector.

Follow the manufacturer's instructions to perform the AGP VGA drivers installation.

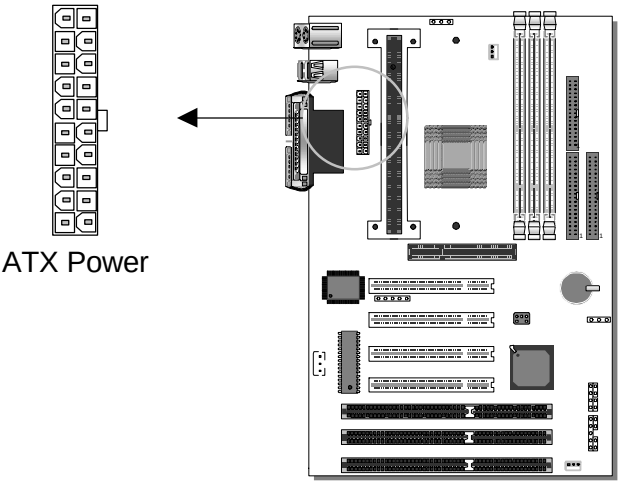
Other Display Cards: Insert other types of VGA cards into the PCI or ISA expansion slots according to card specifications.

Step 11. PCI Audio Card

Some PCI soundcards require a PC-PCI DMA channel. Attach the 5-pin cable from your PCI audio card to the SB-LINK ™header on the mainboard. The SB-LINK ™will forward requests for legacy DMA channel to the PCI Bus.

Step 12. ATX Power Supply

Plug the connector from the power directly into the 20-pin male ATX PW connector on the mainboard, as shown in the following figure.



Warning: Follow these precautions to preserve your mainboard from any remnant currents when connecting to ATX power supply:

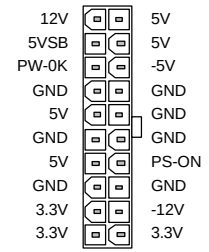
Turn off the power supply and unplug the power cord of the ATX power supply before connecting to ATX PW connector.

The mainboard requires a power supply with at least 200 Watts and a "power good" signal. Make sure the ATX power supply can take at least 720 mA * load on the 5V Standby lead (5VSB) to meet the standard ATX specification.

**** Note:*** If you use the Wake-On-LAN (WOL) function, make sure the ATX power supply can support at least 720 mAmp on the 5V Standby lead (5VSB).

Please install the ATX power according to the following pin assignment:

ATX Power



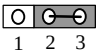
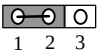
- **Pay special care to the directionality.**
- **Make sure pin 1 is in its position.**

Step 13. CMOS Clearing (JP5)

After you have turned off your computer, clear the CMOS memory by momentarily shorting pins 2-3 on jumper JP5, for a few seconds. Then restore JP5 to the initial 1-2 jumper setting in order to recover and retain the default settings.

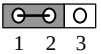
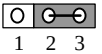
After you have turned off your computer, clear the CMOS memory by momentarily shorting pin 2-3 on jumper JP5 for at least 5 seconds. Then permanently short pin 1-2 to retain new settings.

Jumper JP5 can be easily identified by its white colored cap.

CMOS Clearing	Clear CMOS Data	Retain CMOS Data (Default)
JP5 Setting	Short pin 2-3 for ***at least 5 seconds*** to clear the CMOS 	Short pin 1-2 to retain new settings 
Note: You must unplug the ATX power cable from the ATX power connector when performing the CMOS Clear operation.		

Step 14. Power-On by Keyboard Jumper (JP10)

You can choose to enable the Power-On by Keyboard function by shorting pin 1-2 on jumper JP10, otherwise, short pin 2-3 to disable this function.

Power-On by Keyboard	Enable	Disable
JP10 Setting	Short pin 1-2 to enable the Power-On by Keyboard function. 	Short pin 2-3 and the Power-On by Keyboard function is disabled. 

Note: When using the Power-On by Keyboard function, please make sure the ATX power supply can take at least 720mA load on the 5V Standby lead (5VSB) to meet the standard ATX specification.

Step 15. Power On

You have now completed the hardware installation of your mainboard successfully.

1. Turn the power on
2. To enter the BIOS Setup Utility, press the <DEL> key while the system is performing the diagnostic checks,

Note: If you have failed to enter the BIOS, wait until the boot up sequence is completed. Then push the RESET button and press <DEL> key again at the beginning of boot-up, during diagnostic checks.

Repeat this operation until you get the following screen.

3. The BIOS Setup screen appears:

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

Step 16. Quick BIOS Setup

This mainboard does not use any hardware jumpers to set the CPU frequency. Instead, CPU settings are software configurable with the BIOS **[SOYO COMBO SETUP]**. The [SOYO COMBO SETUP] menu combines the main parameters that you need to configure, all in one menu, for a quick setup in BIOS.

After the hardware installation is complete, turn the power switch on, then press the <DEL> key during the system diagnostic checks to enter the Award BIOS Setup program. The CMOS SETUP UTILITY will display on screen. Follow these steps to configure the CPU settings.

1. Select [LOAD SETUP DEFAULT]

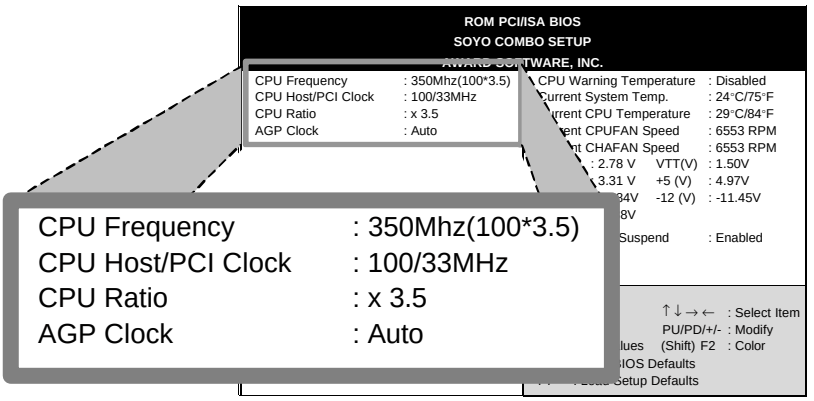
Select the "LOAD SETUP DEFAULT" menu and type "Y" at the prompt to load the BIOS optimal setup.

2. Select [STANDARD CMOS SETUP]

Set [Date/Time] and [Floppy drive type], then set [Hard Disk Type] to "Auto".

3. Select [SOYO COMBO SETUP]

Move the cursor to the [CPU Frequency] field to set the CPU frequency, as shown in the following display.



Available [CPU Frequency] settings on your SY-6BE+ Mainboard are detailed in the following table. If you set this field to [Manual], you are then required to fill in the next two consecutive fields: (1) the CPU Host/PCI Clock, and (2) the CPU Ratio.

CPU Frequency		Select the working frequency of your Pentium®II processor among these preset values. *Note:* ☑ Mark the checkbox that corresponds to the working frequency of your Pentium®II processor in case the CMOS configuration should be lost.
☐ 233MHz (66 x 3.5)	☐ 400MHz (100 x 4.0)	
☐ 266MHz (66 x 4.0)	☐ 450MHz (100 x 4.5)	
☐ 300MHz (66 x 4.5)	☐ 500MHz (100 x 5.0)	
☐ 333MHz (66 x 5.0)	☐ 550MHz (100 x 5.5)	
☐ 350MHz (100 x 3.5)		

Note: if you use Bus Frequencies of 75 MHz, make sure that your PCI cards can cope with the higher PCI clock.

4. Select [SAVE & EXIT SETUP]

Press **<Enter>** to save the new configuration to the CMOS memory, and continue the boot sequence.

Troubleshooting at First Start

- ***What should I do if the mainboard refuses to start?***

The 350MHz setting is used as default so whenever the BIOS settings are erased or reset, the board will be able to boot up.
If the CPU frequency was set too high and the mainboard refuses to start up, you can always load the default values by pressing the [Ins] key during boot up.

Step 17. Power Off

There are two possible ways to turn off the system:

1. Use the **Shutdown** command in the **Start Menu** of Windows 95/98 to turn off your computer.
2. Press the mechanical power-button and **hold down for over 4 seconds,** to shutdown the computer. If you press the power-button for less than 4 seconds, then your system will enter into **Suspend Mode.**

You are now ready to configure your system with the BIOS setup program. Go to ***Chapter 3: BIOS SETUP***

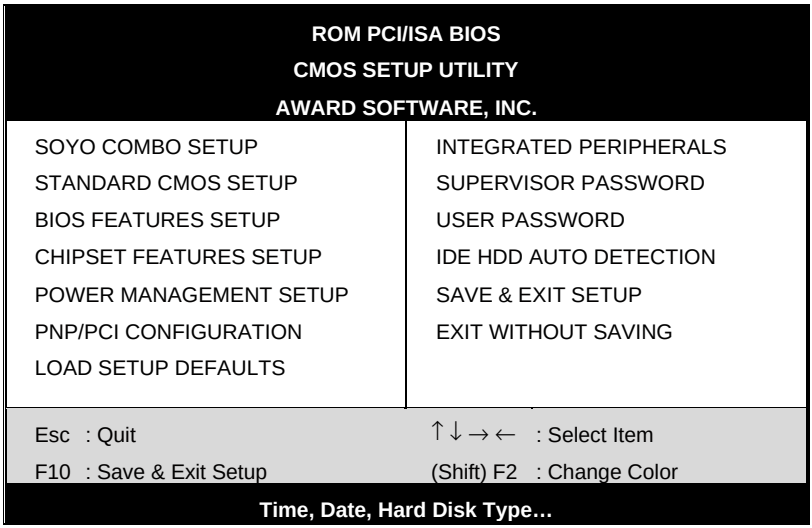
Chapter 3

BIOS SETUP UTILITY

This mainboard's BIOS setup program uses the ROM PCI/ISA BIOS program from Award Software Inc.

To enter the Award BIOS program's Main Menu:

1. Turn on or reboot the system.
2. After the diagnostic checks, press the [Del] key to enter the Award BIOS Setup Utility.



Selecting items

- Use the arrow keys to move between items and select fields.
- From the Main Menu press arrow keys to enter the selected submenu.

Modifying selected items

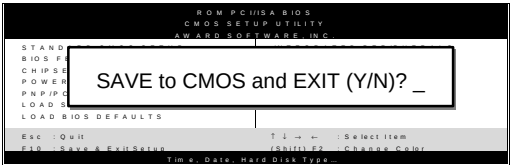
- Use the [Up]/[Down] keys to modify values within the selected fields. Some fields let you enter values directly.

Hot Keys: Function keys give you access to a group of commands throughout the BIOS utility.

Function	Command	Description
F1	Help	Gives the list of options available for each item.
Shift F2	Color	Change the color of the display window.
F5	Old values	Restore the old values. These are the values that the user started the current session with.
F6	Load BIOS Defaults	Loads all options with the BIOS Setup default values.
F7	Load Setup Defaults	Loads all options with the Power-On default values.
F10	Save & Exit Setup	Saves your changes and reboots the system.
[Esc]	Quit	Lets you return at anytime and from any location to the Main Menu.

SAVE AND EXIT SETUP

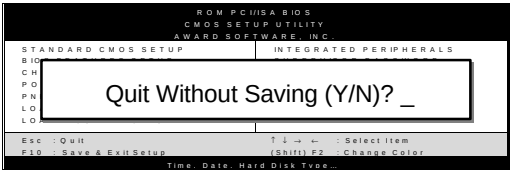
Select the [SAVE & EXIT SETUP] option from the Main Menu to save data to CMOS and exit the setup utility. This option saves all your changes and causes the system to reboot.



Type [Y] to save the changes and exit or [N] to return to the Main Menu and keep current values.

EXIT WITHOUT SAVING

Selecting the [EXIT WITHOUT SAVING] option allows you to abandon all data and exit setup, therefore ignoring all your changes.



Type [Y] to abandon changes and exit or [N] to return to the Main Menu and keep current values.

3-1 SOYO COMBO SETUP

This mainboard does not use any hardware jumpers to set the CPU frequency. Instead, CPU settings are software configurable with the BIOS **[SOYO COMBO SETUP].**

After the hardware installation is complete, turn the power switch on, then press the <DEL> key during the system diagnostic checks to enter the Award BIOS Setup program. The CMOS SETUP UTILITY will display on screen. Then, select the [SOYO COMBO SETUP] option from the main menu and press the <Enter> key.

ROM PCI/ISA BIOS
SOYO COMBO SETUP
AWARD SOFTWARE, INC.

CPU Frequency	: 350Mhz(100*3.5)	CPU Warning Temperature	: Disabled
CPU Host/PCI Clock	: 100/33MHz	Current System Temp.	: 24°C/75°
CPU Ratio	: x 3.5	Current CPU Temperature	: 29 C/84 F
AGP Clock	: Auto	Current CPUFAN Speed	
		Current CHAFAN Speed	: 6553 RPM
	: Enabled		: 1.50V
		3.3(V) : 3.31 V +5 (V)	
	: A, C, SCSI		: -11.45V
	: Enabled	-5(V) : -4.88V	
			: Enabled
POWER ON Function	: BUTTON ONLY		
KB Power ON Password	: Enter		
	: Ctrl-F1		
Soft-Off by PWR-BTTN	: Instant-Off		
Power-On by Ring/LAN	: Enabled		
	: Disabled		

: Quit ↑
F1 PU/PD/+/- : Modify
: Old Values (Shift) F2
F6 : Load BIOS Defaults
F7 : Load Setup Defaults

The [SOYO COMBO SETUP] menu combines the main parameters that you need to configure, all in one menu, for a quick setup in BIOS.

3-1.1 Quick CPU Frequency Setup

Quick CPU Frequency Setup	Setting	Description	Note
CPU Frequency	Manual	Select the working frequency of your Pentium® II processor among these preset values. Note: Setting this field to [Manual] requires you to fill in the next two consecutive fields: (1) the CPU Host/PCI Clock, and (2) the CPU Ratio.	
	133MHz (66 x 2)		
	166MHz (66 x 2.5)		
	200MHz (66 x 3)		
	233MHz (66 x 3.5)		
	266MHz (66 x 4)		
	300MHz (66 x 4.5)		
	333MHz (66 x 5)		
(*Default)	350MHz (100 x 3.5)		
	400MHz (100 x 4)		
	450MHz (100 x 4.5)		
	550MHz (100 x 5.5)		
If [CPU Frequency] field is set to [Manual]			
CPU Host/PCI Clock	66/33 MHz	Select the host clock of your Pentium® II processor among these values. ***Note:*** For the BX chipset, 66 and 100 MHz host clock frequencies are acceptable. However, the system stability is not guaranteed for other frequencies due to the limitations of this chipset.	
	103/34 MHz		
	112/33 MHz		
	133/44 MHz		
	100/33 MHz		
	124/41 MHz		
	75/37 MHz		
If [CPU Frequency] field is set to [Manual]			
CPU Ratio	After you have selected the host clock, choose the right multiplier for the CPU. Options are: [2, 2.5, 3., 3.5, 4, 4.5, 5, 5.5]. The CPU frequency is then defined as [host clock freq.]x[multiplier], and should the working frequency of your Pentium® II processor.		
AGP Clock	Auto		Default
	/ 1	This option allows you to manually adjust the AGP host bus clock frequency to a value determined as a fraction of the CPU host clock. ***For example:*** With a CPU front side bus of 66MHz, [/ 1] sets → AGP Clock = 66MHz [/ 1.5] sets → AGP Clock = 44MHz	
	/ 1.5		

3-1.2 L2 Cache Memory

	Setting	Description	Note
CPU L2 Cache ECC Checking	Disabled		
	Enabled	This option activates the CPU L2 cache ECC checking function.	Default

3-1.3 System Boot Control Settings

System Boot Control Settings	Setting	Description	Note
Boot Sequence	A, C, SCSI	Choose the boot sequence adapted to your needs, for example: ● [A, C, SCSI] means the BIOS will look for an operating system first in drive A, then in drive C, and eventually in SCSI device.	
	C, A, SCSI		
	C, CD-ROM, A		
	CD-ROM, C, A		
	D, A, SCSI		
	E, A, SCSI		
	F, A, SCSI		
	SCSI, A, C		
	SCSI, C, A		
	C only		
	LS/ZIP, C		
Quick Power On Self Test	Disabled		
	Enabled	Provides a fast POTS at boot-up.	Default

3-1.4 Power Management

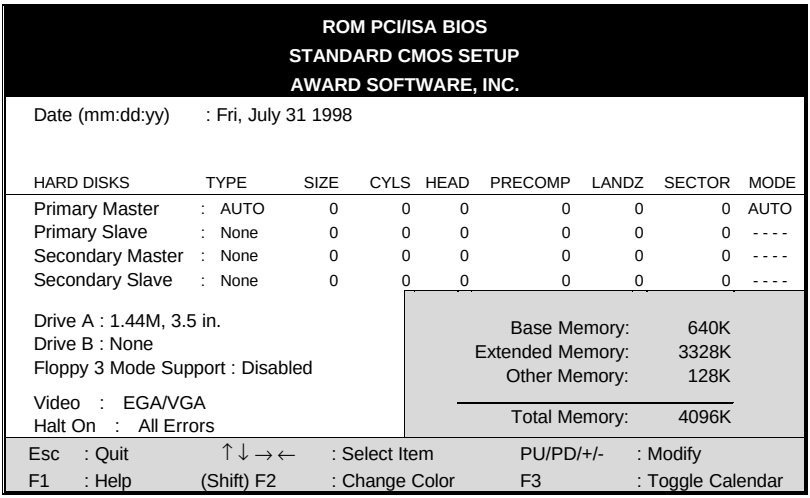
PM Events	Setting	Description	Note
POWER ON Function	BUTTON-ONLY	Disables the Wake-Up by Keyboard function.	Default
	KB Power ON Password	Enables you to wake-up the system by entering a password at the keyboard.	
	Hot Key	You can wake-up the system by pressing the key combination of your choice (Ctrl-F1~F12).	
If [POWER ON Function] is set to [KB Power ON Password]			
KB Power ON Password	Enter (your password)	Set the password that will wake-up your system.	
If [POWER ON Function] is set to [Hot Key]			
KB Power ON Password	Ctrl-F1~F12	Choose the key combination that will wake-up the system. [Ctrl-F1 to Ctrl-F12]	
Soft-Off by PWR-BTTN	Instant-off		Default
	Delay 4 Sec.	Turns off the system power 4 seconds after pushing the power button.	
Power-On by Ring/LAN	Disabled		Default
	Enabled	The system will self-power on me when the modem is ringing.	
Power-On by Alarm	Disabled	The system ignores the alarm.	Default
	Enabled	Set alarm to power on the system by the date (1-31) or time (hh:mm:ss). If the date is set to [0], the system will self-power on by alarm everyday at the set time.	

3-1.5 CPU Device Monitoring

CPU Device Monitoring	Setting	Description	Note
CPU Warning Temperature	Disabled		Default
	Enabled	Set CPU temperature from 50°C to 70°C. The CPU will slow down when CPU temperature goes beyond the preset value. The CPU will continue to run slow until the temperature returns back within the safe range.	
Current System Temp.	°C/°F	Show the current status of the system temperature.	
Current CPU Temperature	°C/°F	Show the current status of CPU temperature.	
Current CPUFAN Speed	°C/°F	Show the current status of CPU Fan	
Current CHAFAN Speed	°C/°F	Show the current status of the chassis Fan	
VID, VTT, 3.3V, +12V, -5V, +5V, -12V	V	Show the current voltage status.	
CPUFAN Off In Suspend	Disabled	Disables the PM timer.	
	Enabled	Switches off the CPU Fan when the system enters Suspend Mode.	Default

3-2 STANDARD CMOS SETUP

Select the [STANDARD CMOS SETUP] option from the Main Menu and press [Enter] key.



This screen allows you to modify the basic CMOS settings.
After you have completed the changes, press [Esc] key to return to the Main Menu.

3-2.1 Date & Time

	Display	Setting	Please Note
Date	mm/dd/yyyy	Type the current date	You can also the PUp/PDn keys to toggle
Time	hh:mm:ss	Type the current time	24-hour clock format 3:15 PM is displayed as 15:15:00

3-2.2 Hard Disks Type & Mode

Choose the type and mode for the hard disks that you have already installed.

Primary (Secondary) Master & Slave	Setting	Description	Note
Type	Auto	BIOS detects hard disk type automatically.	Default
	User	User defines the type of hard disk.	
	None		
Mode	Auto	BIOS detects hard disk mode automatically.	Default
	Normal	Normal IDE hard disk	<528MB
	LBA	Enhanced IDE hard disk	>528MB
	Large	Large IDE hard disk (for certain hard disk)	

Note: If you have any questions on your hard disk type or mode, ask your hard disk provider or previous user for details.

3-2.3 Floppy Drives

Floppy Drives	Setting	Description	Note
Drives A & B	360KB, 5.25 in.		
	1.2MB, 5.25 in.		
	720KB, 3.5 in.		
	1.44MB, 3.5 in.		Default
	2.88MB, 3.5 in.		
	None	Not installed	
Floppy 3-Mode Support	Disabled		Default
	Drive A Drive B Both	Supports 3-mode floppy diskette: 740KB/1.2MB/ 1.44MB on selected disk drive.	Special disk drive commonly used in Japan

3-2.4 Video

Select the video mode: EGA/VGA (Default), CGA 40, CGA 80, Mono (Monochrome).

3-2.5 Halt On

When the BIOS detects system errors, this function will stop the system. Select which type of error will cause the system halt: All Errors (Default), No Errors, All But Diskette, All But Keyboard, All But Disk/Key.

3-3 BIOS FEATURES SETUP

Select the [BIOS FEATURES SETUP] option from the Main Menu and press [Enter] key.

ROM PCI/ISA BIOS
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
Swap Floppy Drive	: Disabled	D0000-D3FFF Shadow	: Disabled
Boot Up NumLock Status	: On	D4000-D7FFF Shadow	: Disabled
Typematic Rate Setting	: Disabled	D8000-DBFFF Shadow	: Disabled
Typematic Rate (Chars/Sec)	: 6	DC000-DFFFF Shadow	: Disabled
Typematic Delay (Msec)	: 250		
Security Option	: Setup		
PCI/VGA Palette Snoop	: Disabled		
Assign IRQ for VGA	: Enabled		
OS Select for DRAM >64MB	: Non-OS2		
HDD S.M.A.R.T. capability	: Disabled	ESC : Quit	↑ ↓ → ← : Select Item
Report No FDD For WIN 95	: No	F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values	(Shift) F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

After you have completed the changes, press [Esc] key and follow the instructions on your screen to save your settings or exit without saving.

3-3.1 Virus Warning

	Setting	Description	Note
Virus Warning	Disabled		Default
	Enabled	Enable this option to protect the boot sectors and partition tables of your hard disk. Any attempt to write to them will the system to halt and display a warning message.	

3-3.2 Cache Memory Options

	Setting	Description	Note
CPU Internal Cache	Disabled		
	Enabled	Enables the CPU's internal cache.	Default
External Cache	Disabled		
	Enabled	Enables the external memory.	Default

3-3.3 System Boot Control Settings

System Boot Control Settings	Setting	Description	Note
Swap Floppy Drive	Disabled		Default
	Enabled	Changes the sequence of A and B drives.	
Boot Up NumLock Status	On	Puts numeric keypad in NumLock mode at boot-up.	Default
	Off	Puts numeric keypad in arrow key mode at boot-up.	

3-3.4 Typematic Settings

Typematic Settings	Setting	Description	Note
Typematic Rate Setting	Disabled		Default
	Enabled	Enables to adjust the keystroke repeat rate.	
The following [Typematic Rate] and [Typematic Delay] fields are active only if [Typematic Rate Setting] is set to [Enabled]			
Typematic Rate	6 (Char/sec) 8 (Char/sec) 10 (Char/sec) 12 (Char/sec) 15 (Char/sec) 20 (Char/sec) 24 (Char/sec) 30 (Char/sec)	Choose the rate at which a character is repeated when holding down a key.	Default
Typematic Delay	250 (msec) 500 (msec) 750 (msec) 1000 (msec)	Choose how long after you press a key down the character begins repeating.	Default

3-3.5 Security Option

Use this feature to prevent unauthorized system boot-up or use of BIOS Setup. The following table describes the security settings.

	Setting	Description
Security Option	System	Each time the system is booted, the password prompt appears.
	Setup	If a password is set, the password prompt only appears when you attempt to enter the BIOS Setup program.

3-3.6 Other Control Options

Other Control Options	Setting	Description	Note
PCI/VGA Palette Snoop	Disabled		Default
	Enabled	The color of the monitor may be altered when using an MPEG card. Enable this option to restore the monitor's normal color.	
Assign IRQ For VGA	Disabled		
	Enabled	Use this default setting.	Default
OS Select for DRAM>64MB	OS2	When using an OS2 operating system.	
	Non-OS2	When using another, non-OS2 operating system.	Default
HDD S.M.A.R.T. capability	Disabled		
	Enabled	Enable this field when your HDD supports the S.M.A.R.T. function. Consult your HDD provider for details.	
Report No FDD For WIN 95	Yes	Windows will release IRQ line 6 (normally used by the Floppy Disk Drive) after you disable your on-board FDD and set this field to [Yes].	
	No	Windows will reserve INT 6 for your FDD, whether it is disabled or not.	
Video or Adapter BIOS Shadow	Disabled		
	Enabled	The BIOS is shadowed in a 16K segment if it is enabled and if it has BIOS present. These 16 segments can be shadowed from ROM to RAM. BIOS shadow copies BIOS code from slower ROM to faster RAM. BIOS can then execute from RAM.	Default

3-4 CHIPSET FEATURES SETUP

Caution: Change these settings only if you are already familiar with the Chipset.

The [CHIPSET FEATURES SETUP] option changes the values of the chipset registers. These registers control the system options in the computer.

CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.

Auto Configuration	: Enabled
SDRAM RAS-to-CAS Delay	: 3
SDRAM RAS Precharge Time	: 3
SDRAM CAS latency Time	: 3
SDRAM Precharge Control	: 3
DRAM Data Integrity Mode	: Non-ECC
System BIOS Cacheable	: Disabled
Video BIOS Cacheable	: Disabled
Video RAM Cacheable	: Disabled
8 Bit I/O Recovery Time	: 1
16 Bit I/O Recovery Time	: 1
Memory Hole At 15M-16M	: Disabled
Passive Release	: Enabled
Delay Transaction	: Enabled
AGP Aperture Size (MB)	: 64
Spread Spectrum Modulated	: Disabled

ESC	: Quit	↑ ↓ → ←	: Select Item
F1	: Help	PU/PD/+/-	: Modify
F5	: Old Values	(Shift) F2	: Color
F6	: Load BIOS Defaults		
F7	: Load Setup Defaults		

After you have completed the changes, press [Esc] and follow the instructions on your screen to save your settings or exit without saving.

The following table describes each field in the CHIPSET FEATURES SETUP Menu and how to configure each parameter.

CHIPSET FEATURES SETUP

CHIPSET FEATURES	Setting	Description	Note
Auto Configuration	Disabled		
	Enabled	It is strongly recommended to enable this option so that the system automatically sets all chipset feature options on the left panel of the screen (except for cache update & BIOS cacheable).	Default
SDRAM RAS-to-CAS Delay	3 2	Use the default setting	Default
SDRAM RAS Precharge Time	3 2	Use the default setting	Default
SDRAM Cache Latency Time	3	Use the default setting	Default
SDRAM Precharge Control	Disabled Enabled	Use the default setting	Default
DRAM Data Integrity Mode	Non-ECC	Choose according to the DRAM type you have.	Default
	ECC		
System BIOS Cacheable	Disabled		
	Enabled	The ROM area F0000H-FFFFFH is cacheable.	Default
Video BIOS Cacheable	Disabled		
	Enabled	The video BIOS C0000H-C7FFFH is cacheable.	Default
Video RAM Cacheable	Disabled		Default
	Enabled	The ROM area A0000-BFFFF is cacheable.	
8 BIT I/O Recovery Time	1	Use the default setting	Default

CHIPSET FEATURES SETUP (Continued)

CHIPSET FEATURES	Setting	Description	Note
16 BIT I/O Recovery Time	1	Use the default setting	Default
Memory Hole At 15M-16M	Disabled		Default
	Enabled	Some interface cards will map their ROM address to this area. If this occurs, select [Enabled] in this field.	
Passive Release	Enabled	Use the default setting	Default
Delayed Transaction	Enabled	Use the default setting	Default
AGP Aperture Size	64 4-256MB	AGP could use the DRAM as its video RAM. Choose the DRAM size that you wish to allocate as video RAM.	Default
Spread Spectrum Modulated	Disabled		Default
	Enabled	When using Spread Spectrum Modulated 1.5% or 6% for FCC or DOC testing.	

3-5 POWER MANAGEMENT SETUP

The [POWER MANAGEMENT SETUP] sets the system's power saving functions.

AWARD SOFTWARE, INC.

ACPI Function	: Disabled
Power Management	: User Define
PM Control by APM	: Yes
Video Off Method	: V/H SYNC+Blank
Video Off After	: Standby
MODEM Use IRQ	: 3
Doze Mode	: Disabled
Standby Mode	: Disabled
Suspend Mode	: Disabled
HDD Power Down	: Disabled
VGA Active Monitor	: Enabled

IRQ 8 Break Suspend	: Disabled
** Reload Global Timer Events **	
IRQ [3-7,9-15], NMI	: Enabled
Primary IDE 0	: Disabled
Primary IDE 1	: Disabled
Secondary IDE 0	: Disabled
Secondary IDE 1	: Disabled
Floppy Disk	: Disabled
Serial Port	: Enabled
Parallel Port	: Disabled

ESC	: Quit	↑ ↓ → ←	: Select Item
F1	: Help	PU/PD/+/-	: Modify
F5	: Old Values	(Shift) F2	: Color
F6	: Load BIOS Defaults		
F7	: Load Setup Defaults		

After you have completed the Power Management Setup, press [Esc] to return to the Main Menu.

3-5.1 Power Management Controls

Power Management Controls	Setting	Description			Note
ACPI function	Disabled				Default
	Enabled	ACPI (Advanced Configuration Power Management Interface)			
Power Management	User Define	Lets you define the HDD and system power down times.			Default
	Disable	Disables the Green PC Features.			
		Doze timer	Standby timer	Suspend timer	HDD power down
	Min Saving	1 Hour	1 Hour	1 Hour	15 Min
	Max Saving	1 Min	1 Min	1 Min	1 Min
PM Control by APM	Yes	To use Advanced Power Management (APM) you must run [power.exe] under DOS V6.0 or later version.			Default
	No				
Video Off Method	V/H Sync+Blank	Selects the method by which the monitor is blanked.			Default
	Blank screen				
	DPMS Supported				
Video Off After	Standby	Choose the PM mode you want video to go off after the mode is being active.			
	Suspend				
	Doze				
MODEM Use IRQ	3	Assigns an IRQ# to the modem device.			Default
	3-11, NA				

3-5.2 PM Timers

PM Timers	Setting	Description	Note
The following [Doze Mode] field may be configured only if [Power Management] is set to [User Define]			
Doze Mode	Disable		Default
	1Min-1Hour	When the set time has elapsed, BIOS sends a command to the system to enter Doze Mode.	System clock drops to 33MHz.
The following [Standby Mode] field may be configured only if [Power Management] is set to [User Define]			
Standby Mode	Disable		Default
	1Min-1Hour	When the set time has elapsed, BIOS sends a command to the system to enter Standby Mode.	
The following [Suspend Mode] field may be configured only if [Power Management] is set to [User Define]			
Suspend Mode	Disable		Default
	1Min-1Hour	In Suspend mode, the CPU stops completely (no instructions are executed.)	Only an SL-Enhanced (or SMI) CPU can enter this mode.
HDD Power Down	Disabled		Default
	1-15Min	When the set time has elapsed, BIOS sends a command to the HDD to power down. This turns off the HDD motor.	Some older model HDDs may not support this advanced function.

3-5.3 PM Events

PM Events	Setting	Description	Note
VGA Active Monitor	Disabled		
	Enabled	Enables the power management timers when a [no activity] event is detected.	Default
IRQ 8 Break Suspend	Disabled		Default
	Enabled	Alarm function is active.	

3-5.4 Reload Global Timer Events

Power Down & Resume Events	Setting	Description	Note
IRQ [3-7,9-15], NMI	Disabled		
	Enabled	The system monitors these elements for activity. The system will resume if [IRQ activity] is detected.	Default
IDE0, IDE1 ➢ **Primary** ➢ **Secondary**	Disabled		Default
	Enabled	Enables the PM timers when [No Activity Event] is detected.	
Floppy Disk **Serial Port** **Parallel Port**	Disabled		Default
	Enabled	Enables the PM timers when [No Activity Event] is detected.	

3-6 PNP/PCI CONFIGURATION SETUP

This option sets the mainboard's PCI Slots.

ROM PCI/ISA BIOS
PNP/PCI CONFIGURATION
AWARD SOFTWARE, INC.

PnP OS Installed		: No	Based MEM base addr		: N/A
Resources Controlled By		: Manual	Based MEM Length		: 8K
Reset Configuration Data		: Disabled	Assign IRQ For USB		: Enabled
IRQ-3	assigned to	: Legacy ISA*			
IRQ-4	assigned to	: Legacy ISA*			
IRQ-5	assigned to	: PCI/ISA PnP*			
IRQ-6	assigned to	: PCI/ISA PnP*			
IRQ-7	assigned to	: PCI/ISA PnP*			
IRQ-8	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-13	assigned to	: PCI/ISA PnP*	ESC	: Quit	↑ ↓ → ← : Select Item
IRQ-14	assigned to	: PCI/ISA PnP*	F1	: Help	PU/PD/+/- : Modify
IRQ-15	assigned to	: PCI/ISA PnP*	F5	: Old Values	(Shift) F2 : Color
DMA-1	assigned to	: PCI/ISA PnP*	F6	: Load BIOS Defaults	
DMA-3	assigned to	: PCI/ISA PnP*	F7	: Load Setup Defaults	
DMA-5	assigned to	: PCI/ISA PnP*			
DMA-6	assigned to	: PCI/ISA PnP*			
DMA-7	assigned to	: PCI/ISA PnP*			

Note: Starred (*) items will disappear when the [Resources Controlled By] option is set to [Auto].

After you have completed the PCI Slot Configuration, press [Esc] and follow the instructions on your screen to save your settings or exit without saving.

3-6.1 PNP/PCI Configuration Controls

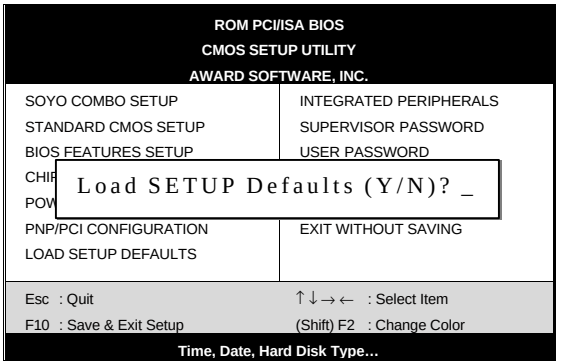
PNP/PCI Controls	Setting	Description	Note
PnP OS Installed	Yes	Set this field to [Yes] if you are running Windows 95, which is PnP compatible.	
	No	If the OS you are running does not support PnP configuration.	Default (If there is any doubt, set this field to [No])
Resources Controlled By	Manual	BIOS does not manage PCI/ISA PnP card IRQ assignment.	
	Requires to assign IRQ-# and DMA-# to PCI or ISA PnP manually. IRQ-3,4,5,7,9,10,11,12,14,15 assigned to: _ DMA-0,1,3,5,6,7 assigned to: _		
	Auto	The Plug-and-Play BIOS auto manages PCI/ISA PnP card IRQ assignment automatically.	**Recommended**
Reset Configuration Data	Disabled	Retain PnP configuration data in BIOS.	Default
	Enabled	Reset PnP configuration data in BIOS.	

3-6.2 PNP/PCI Configuration Setup

PNP/PCI Setup	Setting	Description	Note
If [Resources Controlled By] is set to [Manual]			
IRQ-# and DMA-# assigned to:	PCI/ISA PnP	Choose IRQ-# and DMA-# assigned to PCI/ISA PnP card.	IRQ-3,4,5,7,9,10, 11,12,14,15 DMA-0,1,3,5,6,7
	Legacy ISA	Choose IRQ-# and DMA-# assigned to Legacy ISA card.	IRQ-3,4,5,7,9,10, 11,12,14,15 DMA-0,1,3,5,6,7
Based MEM base addr	N/A		Default
	I/O address	C800,CC00,D000,D400,D800,DC00. (Asking card provider for the exactly I/O address of this add-on card.)	Use this function only when problems occur while using some certain add-on cards.
Based MEM Length	Memory length	8K,16K,32K,64K. (Please ask your card provider for the exactly memory length of this add-on card.)	This item appears only when the [Based MEM base addr] set to I/O address.
Assign IRQ For USB	Enabled	BIOS will assign IRQ for USB port.	Default
	Disabled	BIOS won't assign IRQ for USB port.	

3-7 LOAD SETUP DEFAULTS

Select the [LOAD SETUP DEFAULTS] option from the Main Menu to load the system values you have previously saved. This option is recommended if you need to reset the system setup and to retrieve the old values.



Type [Y] to use the Setup Defaults followed by [Enter] or otherwise [N] to return to the Main Menu and keep current values.

Warning: If you run into any problem after changing the BIOS configuration, please load the SETUP DEFAULTS for stable performance.

3-8 INTEGRATED PERIPHERALS

Caution: Change these settings only if you are already familiar with the Chipset.

The [INTEGRATED PERIPHERALS] option changes the values of the chipset registers. These registers control the system options in the computer.

The following screen shows setup default settings.

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

IDE HDD Block Mode	: Enabled	Onboard Parallel Port	: 378/IRQ7
IDE Primary Master PIO	: Auto	Parallel Port Mode	: ECP+EPP
IDE Primary Slave PIO	: Auto	ECP Mode Use DMA	: 3
IDE Secondary Master PIO	: Auto		
IDE Secondary Slave PIO	: Auto		
IDE Secondary Master UDMA	: Auto		
IDE Secondary Slave UDMA	: Auto		
On-Chip Primary PCI IDE	: Enabled		
On-Chip Secondary PCI IDE	: Enabled		
USB Keyboard Support	: Disabled		
Init Display First	: PCI Slot		
Onboard PDC Controller	: Enabled		
Onboard Serial Port 1	: 3F8/IRQ4		
Onboard Serial Port 2	: 2F8/IRQ3		
UR2 Mode	: Normal		
UR2 Duplex Mode	: Half		

ESC	: Quit	↑ ↓ → ←	: Select Item
F1	: Help	PU/PD/+/-	: Modify
F5	: Old Values	(Shift) F2	: Color
F6	: Load BIOS Defaults		
F7	: Load Setup Defaults		

The following tables describe each field in the INTEGRATED PERIPHERALS Menu and provide instructions on how to configure the IDE controls, FDC controls, and the onboard serial and parallel ports.

3-8.1 IDE Device Controls

IDE Controls	Setting	Description	Note
IDE HDD Block Mode	Disabled		
	Enabled	Invokes multi-sector transfer instead of one sector per transfer. Not all HDDs support this function.	Default
IDE ➢ **Primary Master PIO** ➢ **Primary Slave PIO** ➢ **Secondary Master PIO** ➢ **Secondary Slave PIO**	mode 0-4	0 is the slowest speed 4 is the fastest speed	
	Auto	For better performance and stability, we suggest you use the Auto setting to set the HDD control timing.	Default
IDE ➢**Primary Master UDMA** ➢**Primary Slave UDMA**	Disabled		
	Auto	Select Auto to enable Ultra DMA Mode support.	Default
On-Chip PCI IDE ➢ **Primary** ➢ **Secondary**	Disabled	Turn off the on-board IDE	
	Enabled	Use the on-board IDE	Default

3-8.2 Keyboard Controls

Keyboard Controls	Setting	Description	Note
USB Keyboard Support	Disabled	Turn off the on-board IDE	Default
	Enabled	Use a USB keyboard	
Init Display First	PCI Slot	Choose which card – AGP Display card or PCI VGA card – to initialize first.	Default
	AGP		

3-8.3 FDC Controls

FDC Controls	Setting	Description	Note
Onboard FDC controller	Disabled	Turn off the on-board floppy controller	
	Enabled	Use the on-board floppy controller	Default

3-8.4 Onboard Serial Ports

Onboard Serial Ports	Setting	Description	Note
Onboard UART 1 **Onboard UART 2**	Disabled		
	3F8/IRQ4	Choose serial port 1 & 2's I/O address.	Default (port 1)
	2F8/IRQ3	Do not set port 1 & 2 to the same address except for Disabled or Auto.	Default (port 2)
	3E8/IRQ4		
	2E8/IRQ3		
	Auto		
UR2 Mode	Standard	Supports a Standard serial infrared IrDA.	Default
	IrDA 1.0		
	ASKIR	Supports a Sharp serial interface format.	
	FIR	Fast Infrared Interface	
If [UR2 Mode] is set to [IrDA 1.0]/[ASKIR]/[FIR]			
UR2 Duplex Mode	Half	Choose [Half] or [Duplex] to set UR2 in half duplex mode or full duplex mode respectively. Refer to your IR device specifications to select the suitable mode.	Default
	Duplex		

3-8.5 Onboard Parallel Ports

Onboard Parallel Ports	Setting	Description	Note
Onboard Parallel Port	378H/IRQ7	Choose the printer I/O address.	Default
	3BCH/IRQ7		
	278H/IRQ5		
Parallel Port Mode	ECP/EPP	The mode depends on your external device that connects to this port.	Default
	SPP		
	ECP		
	EPP/SPP		
If [Parallel Port Mode] is set to [ECP] mode			
ECP Mode use DMA	3	Choose DMA3	Default
	1	Choose DMA1	

3-8.6 MULTI I/O ADDRESSES

Default settings for multi-I/O addresses are as follows:

Port	I/O Address	IRQ	Status
LPT1	378H	7	ECP/EPP
COM1	3F8H	4	
COM2	2F8H	3	

Warning: If a default I/O address conflicts with other I/O cards such as sound card, you must change one of the I/O addresses to remedy to this address conflict. (I/O addresses can be adjusted from the BIOS Setup Utility)

3-9 SUPERVISOR PASSWORD

Based on the setting you have made in the [Security Option] of the [BIOS FEATURES SETUP] section, the password prevents access to the system or the setup program by unauthorized users. Follow this procedure to set a new password or disable the password:

1. Choose [BIOS FEATURES SETUP] in the Main Menu and press [Enter]. Select the [Security Options] item and set the field to:
   a. [System]: The password is required every time the system is booted. This means only a person who knows the password can use this computer.
   b. [Setup]: The password is required only when you attempt to enter the BIOS Setup program.

2. Choose [SUPERVISOR PASSWORD] from the Main Menu and press [Enter]. The following prompt appear:

Enter Password:

Warning: If you forget or lose the password, the only way to access the system is to set jumper JP5 to clear the CMOS RAM. All setup information is lost and you must run the BIOS setup program again.

Note: If you do not wish to use the password function, press [Enter] directly and the following message appears:

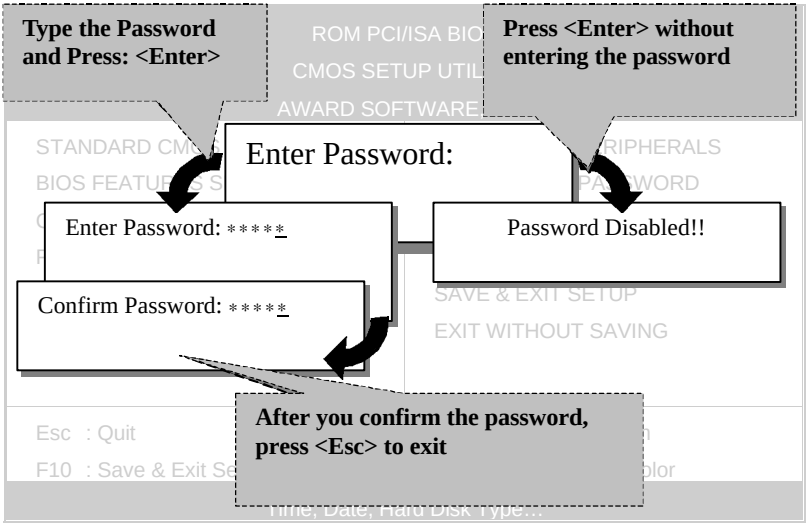
Password Disabled!!

3. Enter your new password and press [Enter]. The following message appears, prompting to confirm the new password:

Confirm Password:

4. Re-enter your password and then press [Enter] to exit to the Main Menu.

This diagram outlines the password selection procedure:



3-10 USER PASSWORD

When the user password option is on, you are not allowed to change any setting in the [CMOS SETUP UTILITY] except for changing the user's password.

The password setting procedure is similar to that for the [SUPERVISOR PASSWORD] (Refer to section 3-9).

3-11 IDE HDD AUTO DETECTION

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

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

HARD DISKS		TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	:	AUTO	0	0	0	0	0	0	AUTO
Primary Slave	:	None	0	0	0	0	0	0	- - - -
Secondary Master	:	None	0	0	0	0	0	0	- - - -
Secondary Slave	:	None	0	0	0	0	0	0	- - - -

Do you accept this drive C (Y/N)? _

ESC : Skip

Note: This function is only valid for IDE type of hard disk drives.

Chapter 4

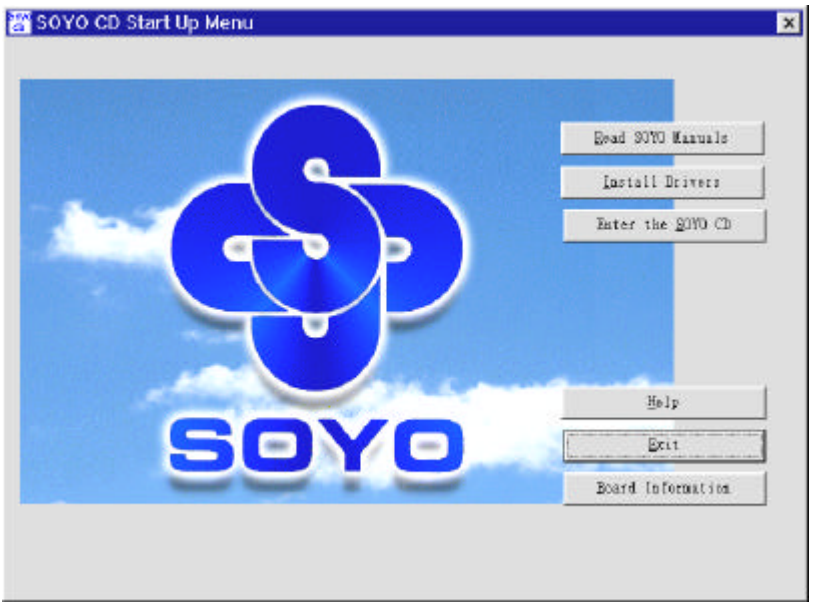
DRIVERS INSTALLATION

Your SY-6BE+ Mainboard comes with a CD-ROM labeled "SOYO CD." The SOYO CD contains the user's manual file for your new mainboard, the drivers software available for installation, and a database in HTML format with information on SOYO mainboards and other products.

The SOYO CD Start Up Program automatically detects which SOYO mainboard you own and displays the corresponding model name.

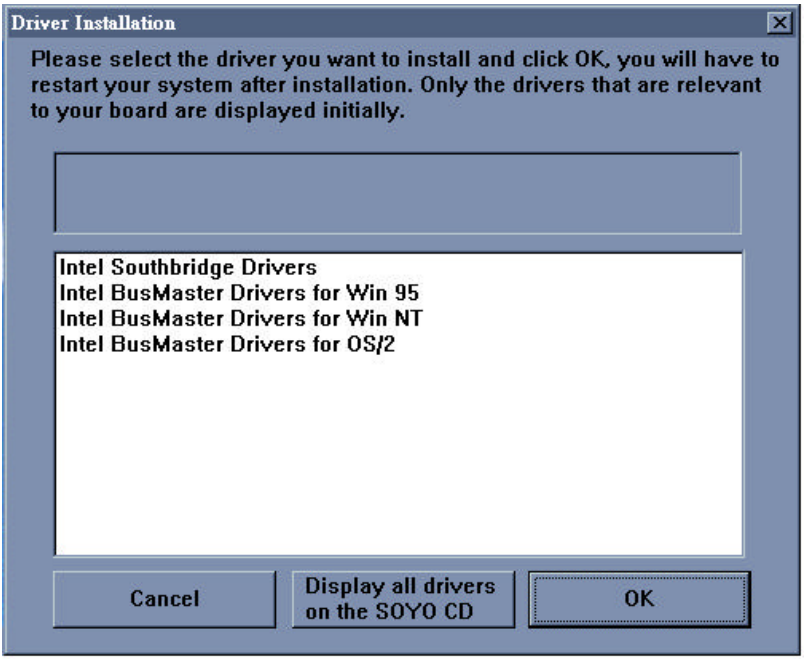
Step 1. Insert the SOYO CD into the CD-ROM drive

The SOYO CD will auto-run, and the SOYO CD Start Up Menu will display as shown below.



Step 2. Install Drivers

Click the ***Install Drivers*** button to display the list of drivers software that can be installed with your mainboard. The Start Up program displays the drivers available for the particular model of mainboard you own. We recommend that you only install those drivers.



However, to display the list of all drivers software available with SOYO mainboards, click the Display all drivers on the SOYO CD button. Please make sure to install only the drivers adapted to your system, or otherwise this cause system malfunctions.

Step 3. Select which driver you want to install and click *OK*

Notice 1: You may click ***Cancel*** to abort the driver installation and return to the main menu.

Notice 2: Once you have selected a driver, the system will automatically exit the SOYO CD to begin the driver installation program. When the installation is complete, most drivers require to restart your system before they can become active.


SOYO