



SY-7SBB

Motherboard

Socket 370 Celeron™ Processor supported

SIS600 Motherboard

66/100 MHz Front Side Bus supported

Baby AT Form Factor

User's Manual

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About This Guide:

This Quick Start Guide can help system manufacturers and end users in setting up and installing the Motherboard. Information in this guide has been carefully checked for reliability; however, to the correctness of the contents there is no guarantee given. The information in this document is subject to amend without notice.

For further information, please visit our **Web Site** on the Internet. The address is "<http://www.soyo.com.tw>".

Edition: July 1999
Version 1.0
7SBB SERIAL

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

100% POST CONSUMER
RECYCLED PAPER

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Chapter 1

MOTHEBOARD DESCRIPTION

1-1 INTRODUCTION

The **SY-7SBB** AGP/PCI Motherboard is a high-performance Socket 370 Baby AT form-factor system board. **SY-7SBB** uses the SIS600 Chipset technology and supports Socket 370 processors. This Motherboard is fully compatible with industry standards and adds many technical enhancements.

1-2 KEY FEATURES

- Supports Intel Celeron™ processors (300A-500MHz)
- Auto-detect CPU voltage
- PC98, ACPI, Ultra DMA/33
- Supports system memory up to 768MBytes
- SOYO COMBO Setup
- Power-on by modem or alarm
- Supports Wake-On-LAN (WOL)
- Supports onboard hardware monitoring and includes Hardware monitor utility
- Supports Keyboard Power On/Off.
- 1 x 32-bit AGP slot
- 3 x 32-bit bus mastering PCI slots
- 2 x 16-bit ISA slot
- 2 x USB ports onboard
- 1 x IrDA port
- Supports multiple-boot function
- AT & ATX power connectors
- Y2K Compliant

1-3 HANDLING THE MOTHERBOARD

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

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



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

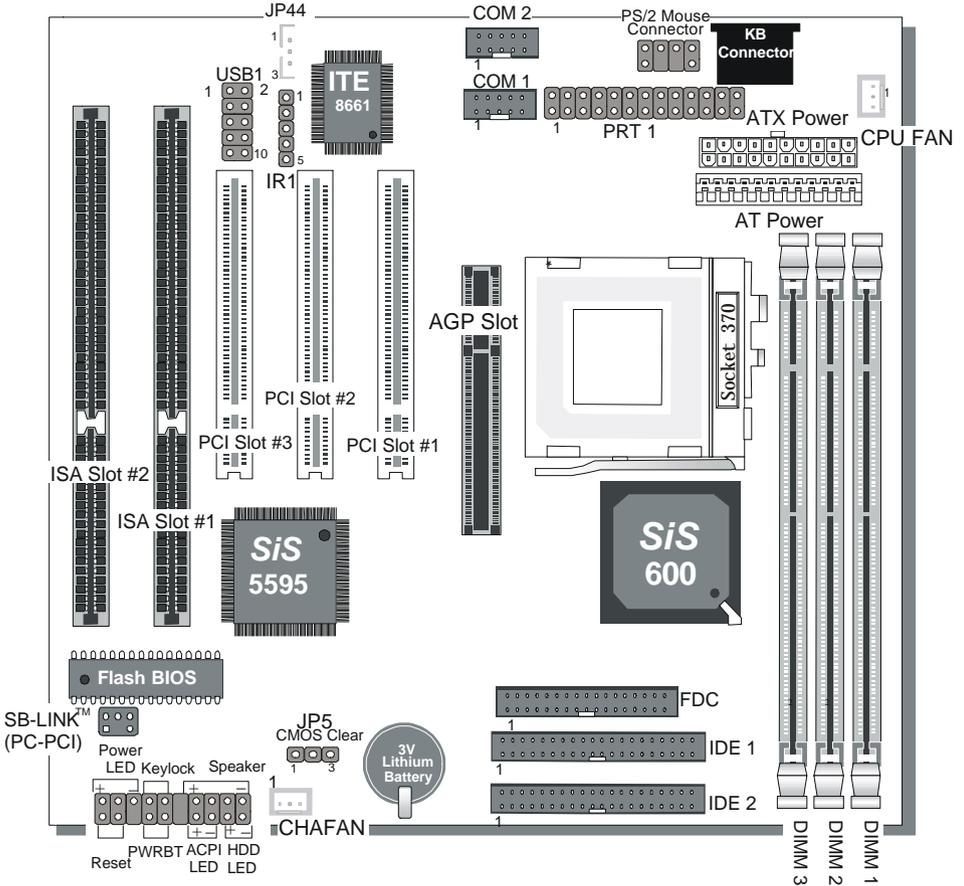
1-4 ELECTROSTATIC DISCHARGE PRECAUTIONS

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

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

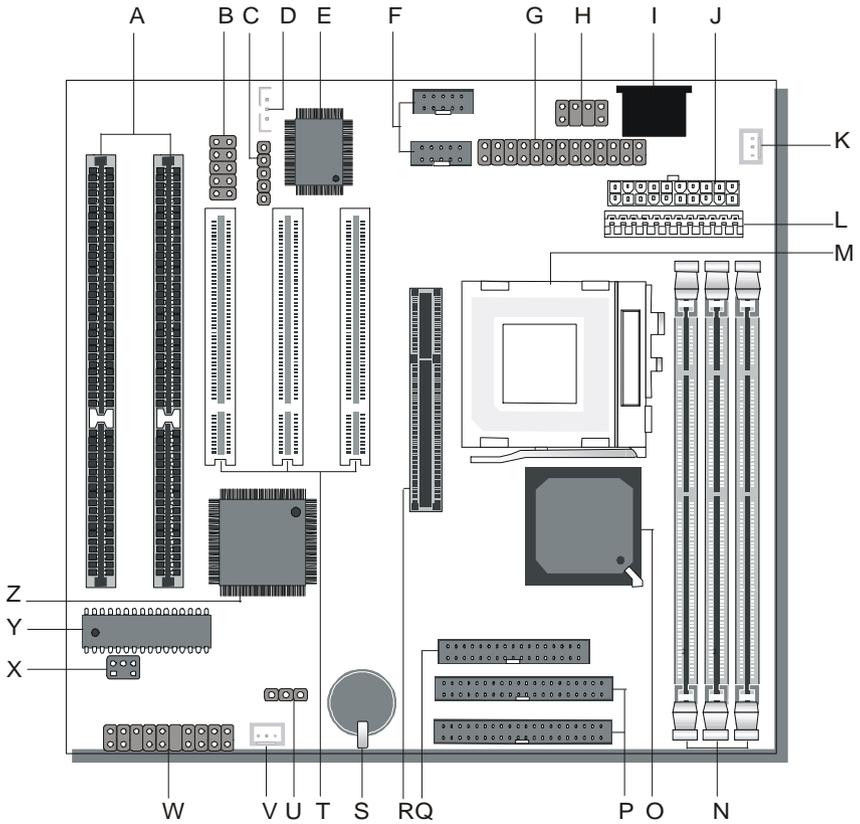
- Do not remove the anti-static packaging until you are ready to install.
- Ground yourself before removing any system component from its protective anti-static packaging. (To ground yourself, touch the expansion slot covers or other unpainted portions of the computer chassis.)
- Frequently ground yourself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

1-5 SY-7SBB MOTHERBOARD LAYOUT



SY-7SBB Platform

1-6 SY-7SBB MOTHERBOARD COMPONENTS



A	16-bit ISA Slot
B	USB Connector
C	Serial Infrared Device Header
D	Wake-On-LAN (WOL) Header
E	ITE 8661 I/O Controller
F	COM1/COM2 Connectors
G	Printer Connector
H	PS/2 mouse Connector
I	Keyboard Connector
J	ATX Power Supply Connector
K	CPU Cooling Fan Connector
L	AT Power Supply Connector
M	370-Pin PGA Socket
N	DIMM Socket
O	SiS 600 Chipset
P	Bus Mastering IDE/ATAPI Ports
Q	Floppy Disk Drive (FDD) Port
R	32-bit AGP Slot
S	3V Lithium Battery
T	32-bit PCI Mastering Slots
U	CMOS Clear Jumper
V	Chassis Cooling Fan
W	Front panel connectors
X	PCI Audio Card Header
Y	Flash ROM
Z	SiS 5595 Chip

Chapter 2

HARDWARE INSTALLATION

Congratulations on your purchase of the **SY-7SBB** Motherboard. This chapter will help you install and connect your new Motherboard.



Note: Do not unpack the Motherboard 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. Celeron processor with CPU cooling fan.
2. DIMM memory module
3. Computer case and chassis with adequate power supply unit
4. Monitor
5. Keyboard
6. Pointing Device (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 MOTHERBOARD

When unpacking the Motherboard, check for the following items:

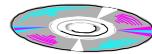
-
- ◆ The SY-7SBB SiS 600 AGP/PCI Motherboard



-
- ◆ The User's Manual



-
- ◆ The Installation CD-ROM



-
- ◆ One IDE Device Flat Cable



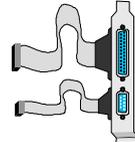
-
- ◆ One Floppy Disk Drive Flat Cable



-
- ◆ One 9-pin serial port connector with 9-pin flat cable and 6-pin PS/2 mouse connector with 6-pin cable



-
- ◆ One 25-pin parallel port connector with 25-pin flat cable and 9-pin serial port connector with 9-pin flat cable



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

Like most electronic equipment, your Motherboard 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 Motherboard 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 Motherboard. Please follow the step-by-step procedure designed to lead you to a complete and correct installation.



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

BEGIN THE INSTALLATION

2-3.1 CPU Installation

Follow the steps below in order to perform the installation of your new SY-7SBB Motherboard.

Mark your CPU Frequency: Record the working frequency of your CPU that should be clearly marked on the CPU cover.

<input type="checkbox"/> 300MHz (66 x 4.5)	<input type="checkbox"/> 333MHz (66 x 5.0)	<input type="checkbox"/> 366MHz (66 x 5.5)	<input type="checkbox"/> 400MHz (66 x 6.0)
<input type="checkbox"/> 433MHz (66 x 6.5)	<input type="checkbox"/> 466MHz (66 x 7.0)	<input type="checkbox"/> 500MHz (66 x 7.5)	<input type="checkbox"/>

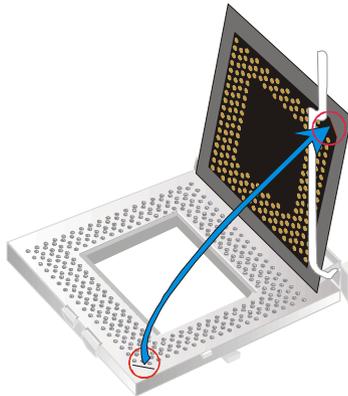
This Motherboard is designed to be able to support processors with 100MHz FSB. However, Socket 370 processors with 100MHz FSB are not available yet at this moment for testing.

CPU Mount Procedure: To mount the Celeron™ processor that you have purchased separately, follow these instructions.

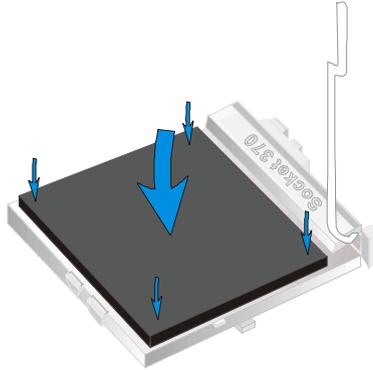
1. Lift the socket handle up to a vertical position.



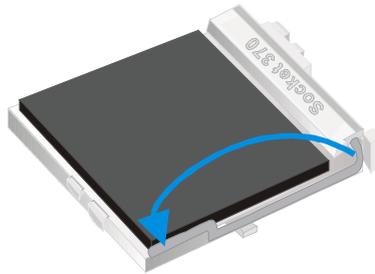
2. Align the blunt edge of the CPU with the matching pinhole on the socket.



3. Seat the processor in the socket completely and without forcing.



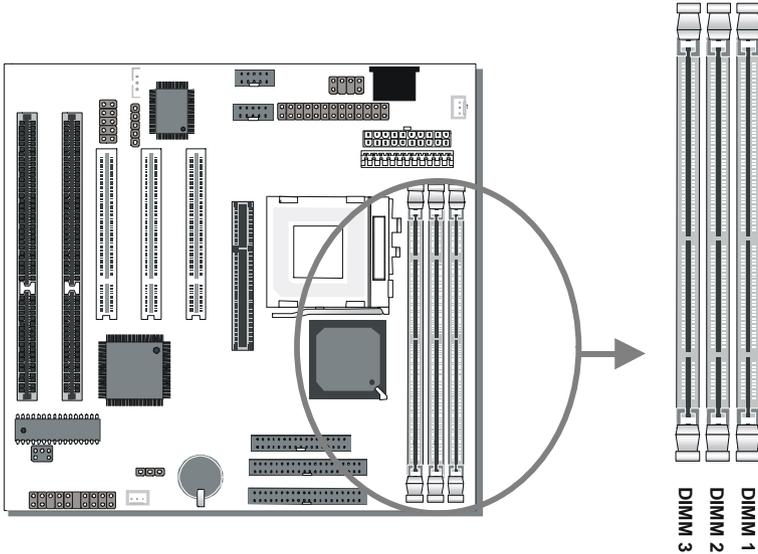
4. Then close the socket handle to secure the CPU in place.



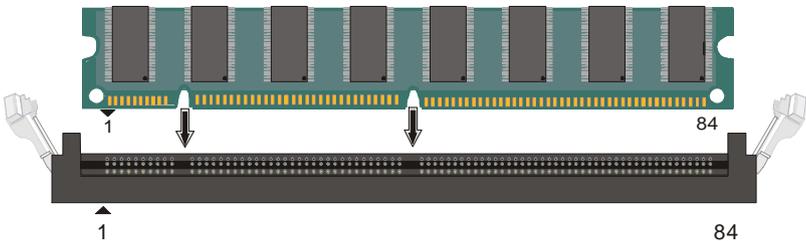
HOT

Remember to connect the CPU Cooling Fan to the appropriate power connector on the Motherboard. *The fan is a key component that will ensure system stability. The fan prevents overheating, therefore prolonging the life of your CPU.*

2-3.2 SDRAM Memory Module Installation



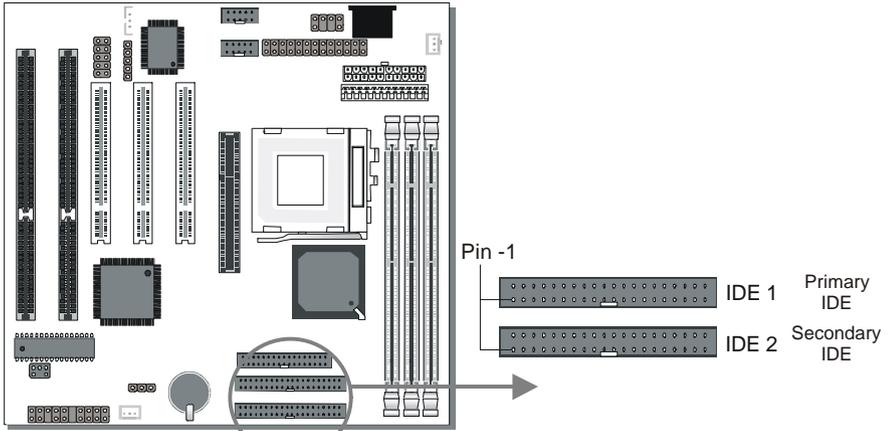
This Motherboard features 3 x DIMM Banks for 168-pin 3.3V unbuffered DIMM modules. Your board comes with three DIMM sockets, providing support for up to 768MB of main memory using DIMM modules from 8MB to 256MB. For 66MHz front side bus CPUs use 12ns or faster memory; for 100MHz front side bus CPUs use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



MEMORY CONFIGURATION	DIMM Banks		
	DIMM 1	DIMM 2	DIMM 3
RAM Type	EDO/SDRAM	EDO/SDRAM	EDO/SDRAM
RAM Module Size (MB)	8/16/32/64/128/256	8/16/32/64/128/256	8/16/32/64/128/256
Note : 1. There are two types of DIMM module with different operating voltages: 3.3V and 5.0V. Please note that only 3.3V EDO DIMM modules can be used on this Motherboard. 2. This motherboard does not support registered SDRAM DIMM Modules.			

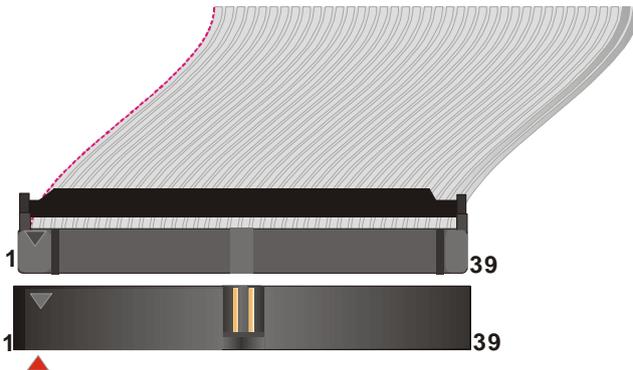
2-3.3 Motherboard Connector

2-3.3.1 IDE Device Installation (HDD, CD-ROM)

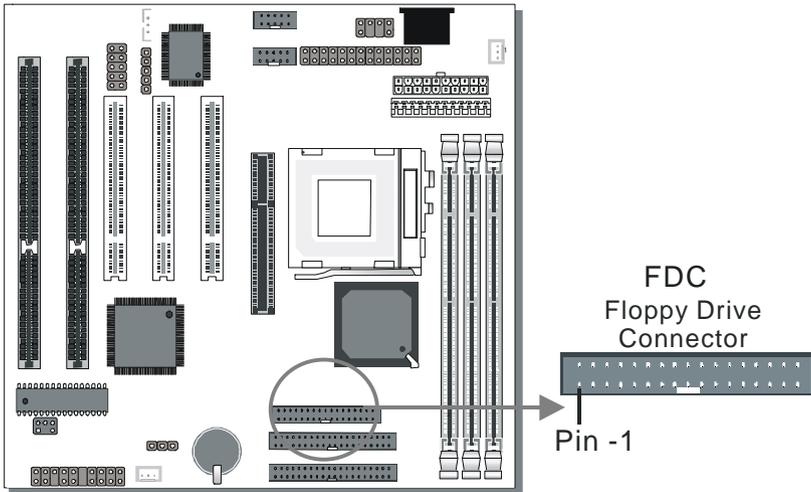


This Motherboard offers a primary and secondary IDE device connector (IDE1, IDE2). It can support up to four high-speed HDD or CD-ROM.

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) IDE connector on the Motherboard.



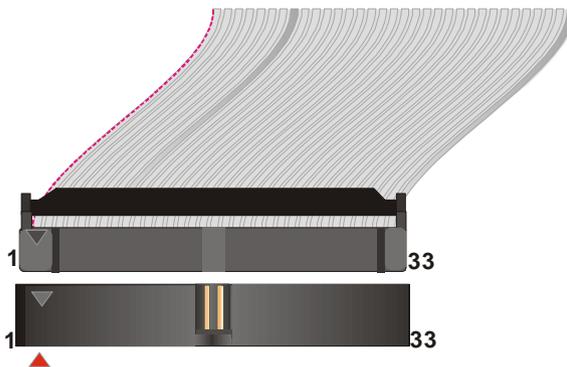
2-3.3.2 Floppy Drive Installation



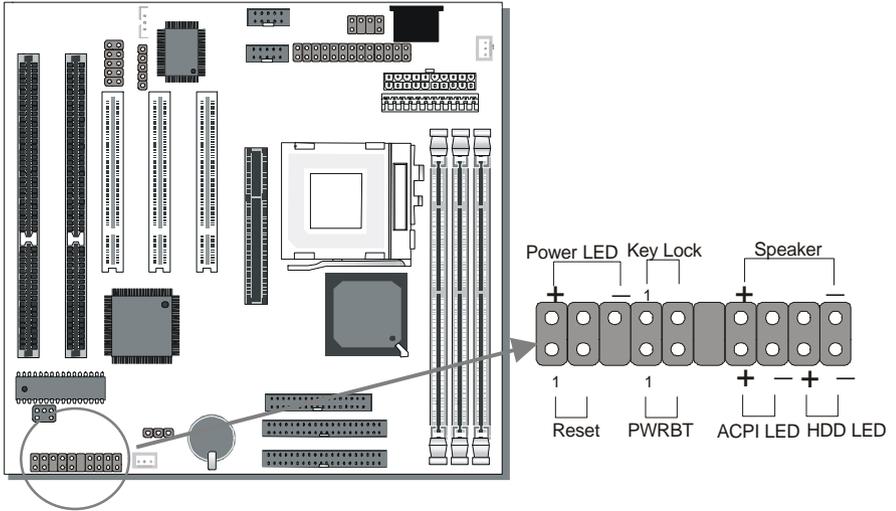
The system supports 5 possible floppy drive types: 720 KB, 1.2 MB, 1.44 MB, 2.88 MB, and LS-120. In addition, this Motherboard supports a 3-mode (720KB/1.2MB/1.44MB) floppy commonly used in Japan.

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 Motherboard.

This Motherboard can support up to 2 floppy drives.



2-3.3.3 Front Panel Connections



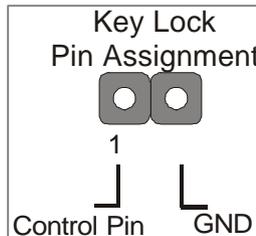
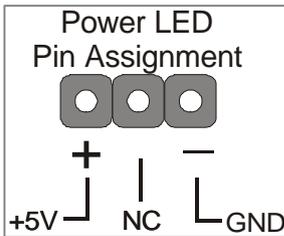
Plug the computer case's front panel devices to the corresponding headers on the Motherboard.

1. Power LED & KeyLock

Plug the Power LED cable into the 5-pin Keylock header.

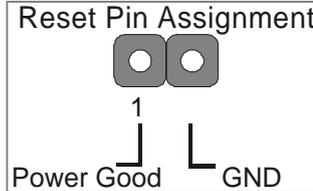
Some systems may feature a KeyLock function with a front panel switch for enabling or disabling the keyboard. Connect the KeyLock switch to the 5-pin Keylock header on the Motherboard.

Please install according to the following pin assignment: pin 1,3 are for Power LED and pin 4,5 are for Keylock.



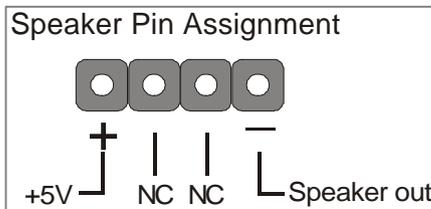
2. Reset

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



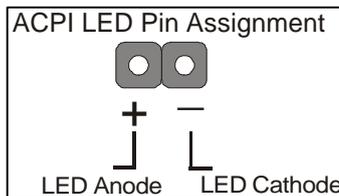
3. Speaker

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



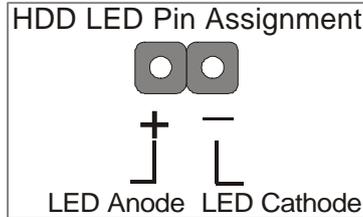
4. ACPI LED

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



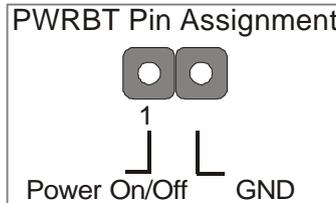
5. IDE LED

Attach the 2-pin IDE device LED cable to the corresponding IDE LED header on the Motherboard. 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.



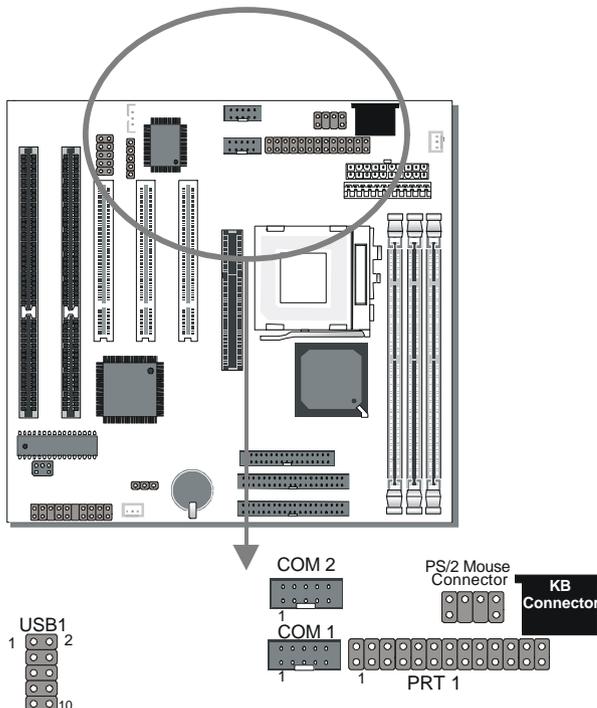
2-3.3.4 External Peripherals Connections

External devices such as the keyboard, printer, PS/2 mouse, modem, USB can be connected to the Motherboard. Normally, you can not plug your devices directly onto the Motherboard, except for the keyboard that plugs directly into the back panel KB connector.

For other parallel (PRT1) and serial devices (COM1, COM2), first install the bracket panels that come with your Motherboard on the computer case, then plug the other end of the flat cable to their respective connectors.

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

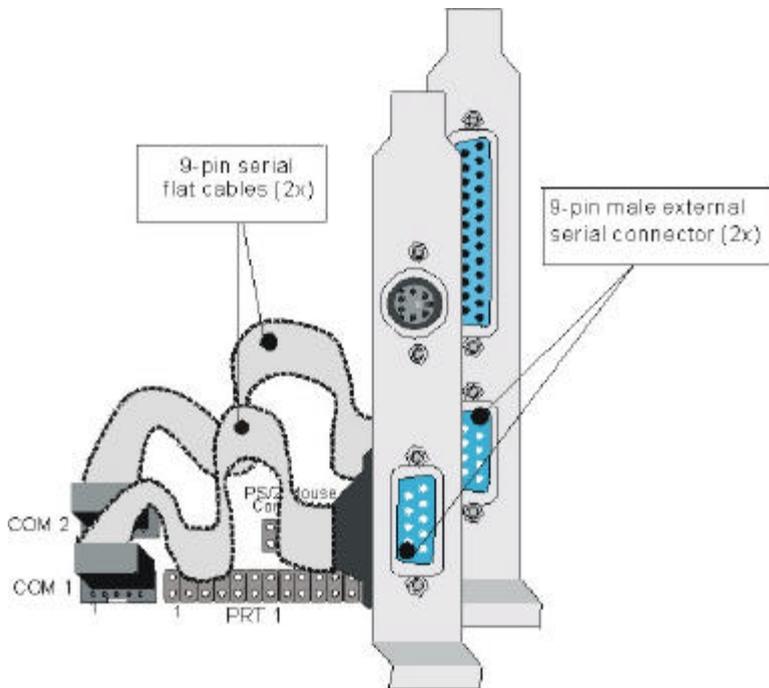
When connecting an external device, use the following figure to locate and identify which back panel connector to plug the device or flat cable to.



1. Serial Ports COM1/COM2

External Devices that use the COM ports include serial mice and modems. The COM port connectors are located on 2 separate brackets panels, as shown on the figure below. Please plug their respective 10 pin flat cable connectors into the COM1 and COM 2 serial port connectors on the Motherboard.

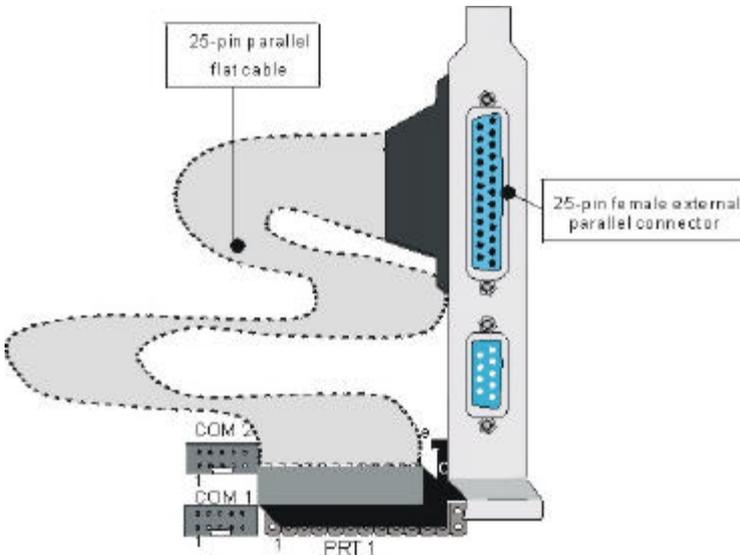
The bracket panels should be fixed to one of the slots at the back of the computer case using a screw, after having finished this you can plug any serial device into the back panel connectors.



2. Parallel Port PRT1

This parallel port is used to connect the printer or other parallel devices. Your Motherboard comes with one 25-pin female external parallel connector with 25-pin flat cable.

Plug the 25-pin end of the flat cable into the PRT1 parallel connector on the Motherboard, as shown in the figure below, then fix the bracket to one of the slots at the back of the computer case using a screw. After having finished this you can plug any parallel device into the back panel connectors.



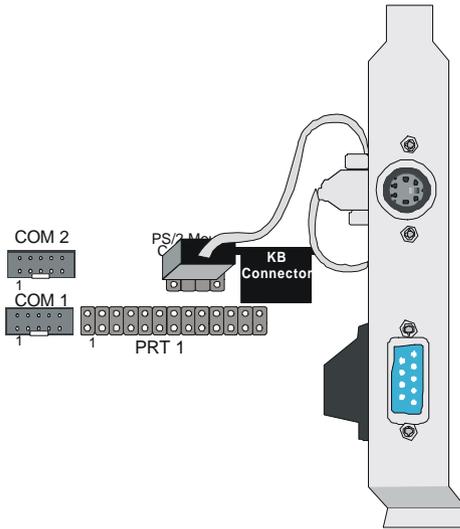
3. AT Keyboard

Plug the keyboard jack directly into the 5-pin female AT keyboard connector located at the rear panel of the Motherboard.



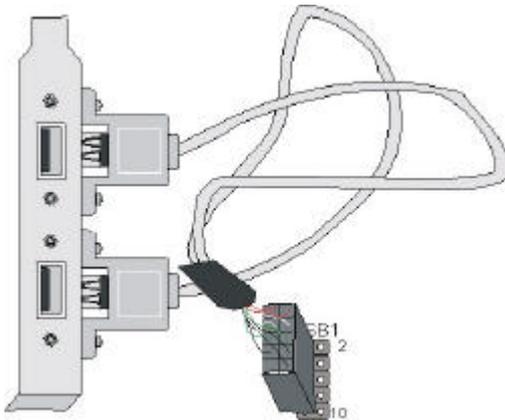
4. PS/2 Mouse

Attach the mouse cable to the 6-pin male PS/2 mouse connector on the Motherboard to make use of a PS/2 mouse.



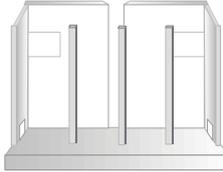
5. Universal Serial Bus (USB)

This Motherboard provides a dual-row 10-pin header (one pin is empty) to support two USB ports for your additional devices. Attach the USB cable (**Optional**) to this header as shown in the diagram below. The USB cable has two USB ports mounted on a bracket.



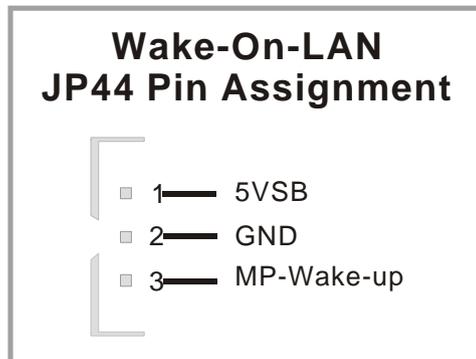
2-3.3.5 Other Connections

1. Wake-On-LAN (WOL)



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

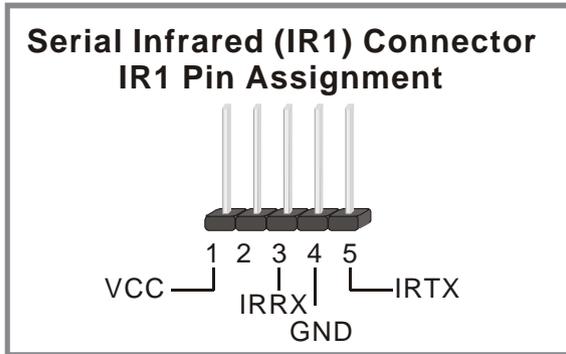
Please install according to the following pin assignment:



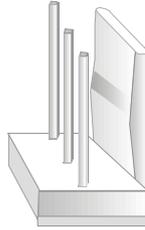
2. Infrared (IR1)

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

Please install according to the following pin assignment:

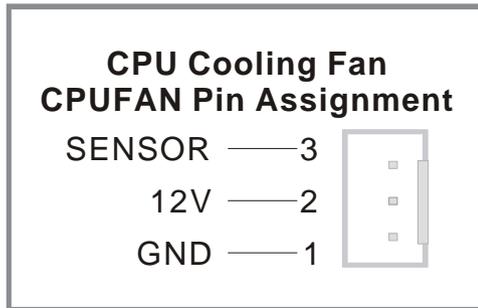


3. Cooling Fan Installation



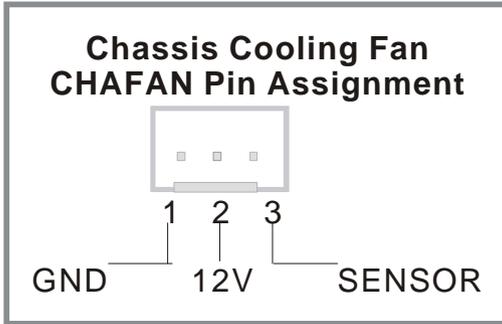
(1) CPU Cooling Fan

After you have seated the CPU properly into its socket, attach the 3-pin fan cable to the CPUFAN connector on the Motherboard. 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:



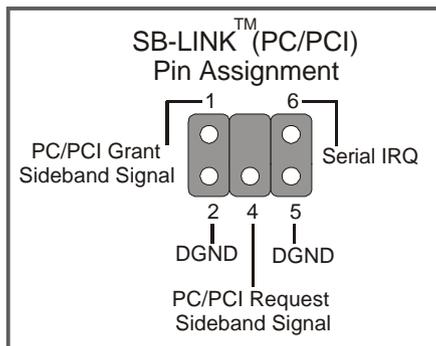
(2) Chassis Cooling Fan

Some cases also feature a cooling fan. This Motherboard 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:



2-3.3.6 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 Motherboard. The SB-LINK™ will forward requests for legacy DMA channel to the PCI Bus.



2-3.3.7 AGP VGA Card

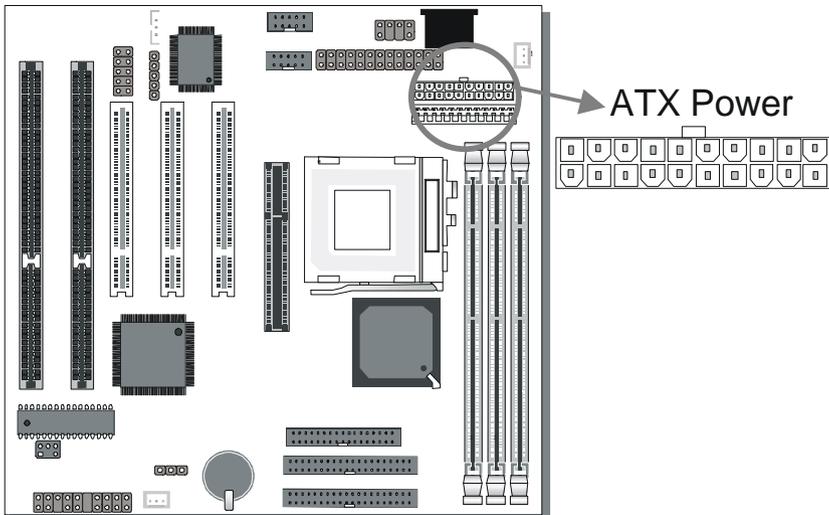
Insert the AGP VGA card into the AGP slot. Then connect the monitor cable to the AGP card back panel connector.

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

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

2-3.3.8 ATX Power Supply

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



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



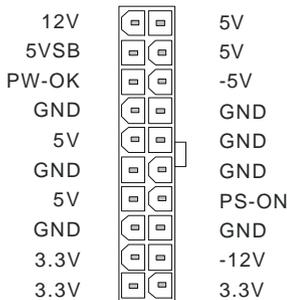
Turn off the power supply and unplug the power cord of the ATX power supply before connecting to ATX PW connector.

The Motherboard 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, the current requirement is even more critical, make sure to use an ATX powersupply that can at least supply 720mA on the 5STB line.

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

ATX Power



➤ **Pay special care to the notch.**

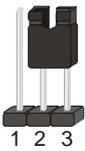
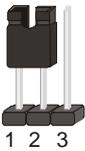
2-3.3.9 AT Power Supply

If you are using AT power, plug the dual 6-pin headers from the power directly into the 12-pin male AT Power connector on the motherboard. Make sure black leads of the 6-pin AT power headers are in the center.

Note: *DO NOT use an AT powersupply if you already use an ATX powersupply. Use only one type of powersupply at the same time.*

2-3.4 CMOS Clear(JP5)

After you have turned off your computer, clear the CMOS memory by 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. Jumper JP5 can be easily identified by its white colored cap.

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

2-3.5 Power On

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

1. Turn the power on
2. To enter the BIOS Setup Utility, press the 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 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 . . .	

2-3.6 Quick BIOS Setup

This Motherboard does not use any hardware jumpers to set the CPU frequency. Instead, CPU settings are software configurable through the BIOS [**Soyo Combo Feature**]. The [**Soyo Combo Feature**] menu combines the main parameters that you need to configure, all in one menu, for a quick setup in BIOS.

Follow these steps to configure your CPU.

Step 1. Select [STANDARD CMOS SETUP]

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

Step 2. Select [Load Optimized Defaults]

Select the “Load Optimized Defaults” menu and type “Y” at the prompt to load the BIOS optimal setup.

Step 3. Select [Soyo Combo Feature]**(a) CPU Host/PCI Clock**

CPU Host / PCI Clock		Under this item you find the frequencies your PCI and AGP slots run at. These frequencies are derived from the CPU host clock in the following way: CPU host clock > 100MHz PCI = CPU host clock /3, CPU host clock < 100MHz PCI = CPU host clock /2,
<input type="checkbox"/> 66/33	<input type="checkbox"/> 133/33	
<input type="checkbox"/> 75/37	<input type="checkbox"/> 133/44	
<input type="checkbox"/> 83/41	<input type="checkbox"/> 140/35	
<input type="checkbox"/> 95/31	<input type="checkbox"/> 150/37	
<input type="checkbox"/> 100/33		
<input type="checkbox"/> 124/41		

(b) CPU Ratio

After you have selected the CPU Host/ PCI Clock, choose the right multiplier for the CPU. CPU Ratio options are:

<input type="checkbox"/> x 2	<input type="checkbox"/> x 2.5	<input type="checkbox"/> x 3	<input type="checkbox"/> x 3.5	<input type="checkbox"/> x 4
<input type="checkbox"/> x 4.5	<input type="checkbox"/> x 5	<input type="checkbox"/> x 5.5	<input type="checkbox"/> x 6	<input type="checkbox"/> x 6.5
<input type="checkbox"/> x 7	<input type="checkbox"/> x 7.5	<input type="checkbox"/> x 8		

The CPU frequency is then defined as [host clock freq.] x [multiplier], and should be the working frequency of your CPU's processor.

Step 4. Select [Save & Exit Setup]

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

2-3.7 Troubleshooting at First Start

- **What should I do if the Motherboard refuses to start?**
 1. Check that all DIMM memory modules are inserted completely. Sometimes a DIMM that is not inserted properly can cause boot problems.
 2. Check whether all Add-on cards have been inserted properly. Re-insert the Add-on cards to make sure that they make proper contact with the slots. Try removing all Add-on cards one by one to see whether or not one of them is causing problems. (Switch the system off before removing any of the cards.)
 3. Verify that speed settings are not exceeding specifications. This applies to the PCI bus, that is specified to run at 33 MHz. Also check the speed setting for the memory, make sure conservative setting. If the CPU is overclocked the system may not start up, read the section below.
 4. Make sure that the Harddisk IDE cables are attached properly, if not the system will not boot. In case of doubt try reversing the IDE connector on one end of the cable.
 5. Verify that the 110/220V switch on the back of the power supply is set correctly.
 6. Go through the jumper setting section again to make sure that all jumpers are set correctly.



Note on Over-clocking Capability

The SY-7SBB provides over-clocking capability. If overclocked, your system may fail to boot up or hang during run time. Please perform the following steps to recover your system from the abnormal situation :

1. Turn off system power (If you use an ATX power supply, and depending on your system, you may have to press the power button for more than 4 seconds to shut down the system.)
 2. Press and hold down the <Insert> key while turning on the system
-

power. Keep holding down the <Insert> key until you see the CPU type and frequency message shown on the screen.

3. Press the key during the system diagnostic checks to enter the Award BIOS Setup program.
4. Select [Save & Exit SETUP] and press <Enter> to save the new configuration to the CMOS memory, and continue the boot sequence.

Note: SOYO does not guarantee system stability if the user over clocks the system. Any malfunctions due to over-clocking are not covered by the warranty.

2-3.8 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 Motherboard'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.

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

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

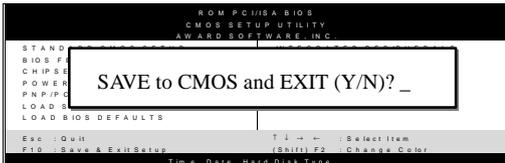
- Use the [Up]/[Down] keys to modify values within the selected fields. Some fields let you enter values directly.

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.
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

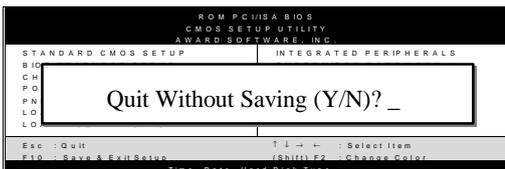
Select the [SAVE & EXIT SETUP] option from the Main Menu to save data to CMOS and exit the setup utility. This option saves all your changes and causes the system to reboot.



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 Motherboard 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 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 Host Clock (CPU /PCI) : Default	Current CPU Temperature :
Processor Core Frequency : x 4.0	Current FAN1 Speed :
Boot Sequence : A,C, SCSI	Current FAN2 Speed :
Quick Power On Self Test : Disabled	+5.0 V : +3.3 V :
Ring Power Up Control : Enabled	+2.5 V : Vcore :
KB Power ON Password : Enter	
Hot Key Function As : Disable	
Power Button Over Ride : Delay 4 Sec	
Power Up by Alarm : Disabled	
	ESC : Quit ↑↓→← : Select Item:
	F1 : Help PU / PD / + / - : Modify
	F5 : Old Values (Shift) F2 : Color
	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
CPU Host Clock (CPU/PCI)	Default	112/37 MHz	Select the host clock of your Celeron™ processor from these values. <i>Note:</i> For the ZX chipset, a 66 MHz host clock frequency is acceptable. However, system stability is not guaranteed for other frequencies due to the limitations of this chipset.
	66/33 MHz	118/39 MHz	
	75/37 MHz	124/31 MHz	
	83/33 MHz	128/32 MHz	
	90/36 MHz	133/33 MHz	
	95/31 MHz	137/34 MHz	
	100/33 MHz	140/35 MHz	
	105/34 MHz		
CPU Frequency	The BIOS will detect the fixed multiplier value of your Socket 370 CPU. It will display that value here. Combined with the CPU host clock settings above, the CPU work frequency is displayed as well.		

3-1.2 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: <ul style="list-style-type: none"> ● [A, C, SCSI] means the BIOS will look for an operating system first in drive A, then in drive C, and eventually in the first 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		Default
	Enabled	Provides a fast POTS at boot-up.	

3-1.3 Power Management

PM Events	Setting	Description	Note
Ring Power Up Control	Disabled		
	Enabled	When you select <i>Enabled</i> , a ring signal from the modem returns the system to Full On state.	Default
KB Power ON Password	Enter (your password)	Set the password that will wake-up your system.	

Power Management (Continued)

PM Events	Setting	Description	Note
Hot Key Function As	Disabled		Default
	Enabled	Pressing <Ctrl><Alt> <Backspace (←)> will shut down the system immediately. Caution: Using this function under Windows will lead to data corruption.	
Power Button Over Ride	Instant-off		Default
	Delay 4 Sec.	Turns off the system power 4 seconds after pushing the power button.	
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.	

3-1.4 CPU Device Monitoring

CPU Device Monitoring	Setting	Description	Note
Current CPU Temperature	°C/°F	Show the current status of CPU temperature.	
Current CPUFAN1/ CPUFAN2 Speed	RPM	Show the current status of CPU Fan	
+5V, +3.3V +2.5, Vcore	V	Show the current voltage status.	

3-2 STANDARD CMOS SETUP

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

ROM PCI/ISA BIOS STANDARD CMOS SETUP AWARD SOFTWARE, INC.									
Date (mm:dd:yy)	: Thu, Jan 1 1998								
Time (hh:mm:ss)	: 1 : 9 :25								
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	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	: 1.44M, 3.5 in.								
Drive B	: None								
Floppy 3 Mode Support	: Disabled								
Video	: EGA/VGA								
Halt On	: All, But Keyboard								
					Base Memory: 640K				
					Extended Memory: 31744K				
					Other Memory: 384K				

					Total Memory: 32768K				
ESC	: Quit	- - ® - -			: Select Item			PU / PD / + / - : Modify	
F1	: Help	(Shift)			F2 : Change Color				

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 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.			
Anti - Virus Protection	: Disabled	Video BIOS	Shadow : Enabled
CPU Internal Cache	: Enabled	C8000-CBFFF	Shadow : Disabled
External Cache	: Enabled	CC000-CFFF	Shadow : Disabled
Swap Floppy Drive	: Disabled	D0000-D3FFF	Shadow : Disabled
Boot Up NumLock Status	: On	D4000-D7FFF	Shadow : Disabled
Boot Up System Speed	: High	D8000-DBFFF	Shadow : Disabled
Memory Parity Check	: Enabled	DC000-DFFFF	Shadow : Disabled
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250		
Security Option	: Setup		
PCI/VGA Palette Snoop	: Disabled		
Assign IRQ For VGA	: Disabled		
OS Select For DRAM > 64 MB	: Non-OS2	ESC : Quit	- ® - : Select Item
HDD S.M.A.R.T. capability	: Disabled	F1 : Help	PU/PD/+/- : Modify
Report No FDD For WIN 95	: Yes	F5 : Old Values	(Shift) F2 : Color
		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
Anti - Virus Protection	Disabled		
	Enabled	If set to enabled, the Paragon Anti-Virus. Function will scan your boot drive for boot viruses. If a boot virus is detected, the BIOS will display a warning message.	Default

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 cache 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)	Choose the rate at which a character is repeated when holding down a key.	Default
	8 (Char/sec)		
	10 (Char/sec)		
	12 (Char/sec)		
	15 (Char/sec)		
	20 (Char/sec)		
	24 (Char/sec)		
30 (Char/sec)			
Typematic Delay	250 (msec)	Choose how long after you press a key the character begins repeating.	Default
	500 (msec)		
	750 (msec)		
	1000 (msec)		

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.

Security Option	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		Default
	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].	Default
	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.

ROM PCI/ISA BIOS CMOS SETUP UTILITY CHIPSET FEATURES SETUP			
Auto Configuration	: Enabled	AGP Aperture Size	: 64
RAS Pulse Width Refresh	: 6T	System BIOS Cacheable	: Enabled
RAS Precharge Time	: 4T	Video BIOS Cacheable	: Enabled
RAS to CAS Delay	: 4T	Memory Hole At 15M -16M	: Disabled
CPU to PCI Post Write	: Enabled	Concurrent function (MEM)	: Disabled
Starting Point of Paging	: 1T		
ECC Function for Bank 0	: Disabled	CPU Pipeline Control	: Enabled
ECC Function for Bank 1	: Disabled	PCI Delay Transaction	: Disabled
ECC Function for Bank 2	: Disabled	Spread Spectrum	: Disabled
SDRAM CAS Latency	: 2T		
SDRAM WR Retire Rate	: X-1-1-1		
SDRAM Wait State Control	: 0WS		
RAMW# Assertion Timing	: 2T		
CAS Precharge Time (EDO)	: 2T		
CAS# Pulse Width for EDO	: 2T		
CAS Precharge Time (FP)	: 2T		
CAS# Pulse Width for FP	: 2T		
CPU to PCI Burst Mem_ WR	: Enabled	ESC	: Quit
SDRAM Input Signals	: Delay 0.5ns	- - ® -	: Select Item
SDRAM Output Signals	: Lead 0.0ns	F1	: Help
		PU/PD/+/-	: Modify
		F5	: Old Values (Shift) F2 : Color
		F7	: Load Setup Defaults

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

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.

3-4.1 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
RAS Pulse Width Refresh	6T	The system designer must select the number of CPU clock	
	3T,4T,5T,7T		
RAS Precharge Time	4T	The precharge time is the number of cycles it takes for the RAS to accumulate its charge before DRAM refresh. If insufficient time is allowed, refresh may be incomplete and the DRAM may fail to retain data.	
	2T,3T,5T		
RAS to CAS Delay	4T	When DRAM is refreshed, both rows and columns are addressed separately. This setup item allows you to determine the timing of the transition from RAS (row address strobe) to CAS (column address strobe).	
	2T,3T,5T		
CPU to PCI Post Write	Disabled		
	Enabled	Select enabled to use a fast buffer for posting writes to memory. Using a fast buffer releases the CPU before completion of a write cycle to DRAM.	Default

CHIPSET FEATURES SETUP (Continued)

CHIPSET FEATURES	Setting	Description	Note
Starting Point of Paging	1T 2T,4T,8T	This value controls the start timing of memory paging operations.	Default
ECC Function for Bank 0/1/2	Disabled	Enable/Disable the ECC function for Bank 0/1/2.	Default
	Enabled		
SDRAM CAS Latency	2T 3T	When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. Do not reset this field from the default value specified by the system designer.	Default
SDRAM WR Refire Rate	X-1-1-1 X-2-2-2	This item determines the timing that the chipset uses to write data into the SDRAM during burst cycles.	Default
SDRAM Wait State Control	0WS 1WS	This item controls the timing for the precharge command that is issued when the address of the next memory access cycle is located at a different page than the current one.	Default
RAMW# Assertion Timing	2T 2T,3T	RAMW is an output signal to enable local memory writes. The system designer select <i>Normal</i> or <i>Faster</i> (by one timer tick) according to DRAM specifications.	Default
CAS Precharge Time (EDO)	2T 1T,1T/2T	Select the number of CPU clocks allocated for the CAS# signal to accumulate its charge before the EDO RAM is refreshed. If insufficient time is allowed, refresh may be incomplete and data lost.	Default

CHIPSET FEATURES SETUP (Continued)

CHIPSET FEATURES	Setting	Description	Note
CAS# Pulse Width for EDO	2T	The system designer must set duration of a CAS signal pulse (in timer ticks).	Default
	0T,1T,1T/2T		
CAS Precharge Time (FP)	2T	This item allows you to select CAS precharge time for FP RAM.	Default
	1T,1T/2T		
CAS# Pulse Width for FP	2T	The system designer must set duration of a CAS signal pulse for FP RAM.	Default
	1T		
CPU to PCI Burst Mem. WR	Disabled	Select enabled permits PCI burst memory write cycles, for faster performance. When disabled, performance is slightly slower, but more reliable.	Default
	Enabled		
SDRAM Input Signals	Delay 0.5ns	This item determines the DRAM input signal timing, in reference to the chipset CCLK signal.	Default
	Lead 0.0, Delay 1.0/1.5/2.0/2.5		
SDRAM output Signals	Lead 0.0	This item determines the DRAM output signal timing, in reference to the chipset CCLK signal.	Default
	Delay 0.5/1.0/1.5/2.0/2.5		
SDRAM Precharge Control	Disabled	Use the default setting	Default
	Enabled		
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

CHIPSET FEATURES SETUP (Continued)

CHIPSET FEATURES	Setting	Description	Note
System BIOS Cacheable	Disabled		Default
	Enabled	The ROM area F0000H-FFFFFH is cacheable.	
Video BIOS Cacheable	Disabled		Default
	Enabled	The video BIOS C0000H-C7FFFH is cacheable.	
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.	
Concurrent function (MEM)	Disabled	Enable/disable the concurrent function for memory.	
	Enabled		
CPU Pipeline Control	Disabled	Pipelining allows the system controller to signal the CPU for a new memory address even before all data transfers for the current cycle are complete, resulting in increased throughput.	Default
	Enabled		
PCI Delayed Transaction	Disabled	Use the default setting	Default
	Enabled		
Spread Spectrum	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.

ROM PCI/ISA BIOS POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.			
ACPI function	: Enabled	IRQ [3-7, 9-15], NMI	: Enabled
Power Management	: Max Saving	IRQ 8 Break Suspend	: Disabled
PM Control by APM	: No		
Video Off Option	: Susp, Stby -> Off		
Video Off Method	: DPMS Supported		
Switch Function	: Disabled		
Doze Speed (div by)	: 1/8		
Stdby Speed (div by)	: 1/8		
MODEM Use IRQ	: NA		
** PM Timers **			
HDD Off After	: Disabled		
Doze Mode	: Disable		
Standby Mode	: Disable		
Suspend Mode	: Disable		
** PM Events **			
HDD Ports Activity	: Enabled	ESC	: Quit
COM Ports Activity	: Enabled	-	: Select Item
LPT Ports Activity	: Enabled	F1	: Help
VGA Activity	: Enabled	F5	: Old Values (Shift) F2 : Color
		F7	: Load Setup Defaults
		PU/PD/+/-	: Modify

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

3-5.1 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.			
	No				Default
Video Off Option	Susp,Stby --> Off	When enabled, this feature allows the VGA adapter to operate in a power saving mode.			Default
	Always On				
	Suspend --> Off				
	All Modes --> Off				
Video Off Method	V/H SYNC+Blank	Selects the method by which the monitor is blanked.			Default
	DPMS Supported, Blank Screen				
Switch Function	Disabled	You can choose whether or not to permit your system to enter complete Suspend mode. Suspend mode offers greater power savings, with a correspondingly longer awakening period.			Default
	Break/Wake				

Power Management Controls (Continued)

	Setting	Description	Note
Doze Speed (div by)	1/8	Sets the CPU's speed during Doze mode. The speed is reduced to a fraction of the CPU's normal speed. The divisors range from 1 to 8	Default
	1~8		
Stdby Speed (div by)	1/8	Select a divisor to reduce the CPU speed during <i>Standby</i> mode to a fraction of the full CPU speed. The speed is reduced to a fraction of the CPU's normal speed. The divisors range from 1 to 8-0.	Default
	1~8		
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 [HDD Off After] field may be configured only if [Power Management] is set to [User Define]			
HDD Off After	Disabled	By default, this item is Disabled, meaning that no matter what mode the rest of the system is in, the hard drive will remain ready. Otherwise, you have a range of choices from 1 to 15 minutes or Suspend. This means that you can elect to have your hard disk drive to be turned off after a selected number of minutes or when the rest of the system goes into Suspend mode.	Default
	1Min-15Min		
The following [Doze Mode] field may be configured only if [Power Management] is set to [User Define]			
Doze Mode	Disable	When the set time has elapsed, BIOS sends a command to the system to enter Doze Mode.	Default System clock drops to 33MHz.
	1Min-1Hour		

PM Timers (Continued)

PM Timers	Setting	Description	Note
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.

3-5.3 PM Events

PM Events	Setting	Description	Note
HDD/COM/P CI/VGA Act- 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

3-6 PNP/PCI CONFIGURATION SETUP

This option sets the Motherboard's PCI Slots.

ROM PCI/ISA BIOS					
PNP/PCI CONFIGURATION					
AWARD SOFTWARE, INC.					
Resources Controlled By	:	Manual	PCI IRQ Activated By	:	Edge
Reset Configuration Data	:	Disabled	PCI IDE IRQ Map To	:	PCI-AUTO
IRQ - 3	Assigned to	: Legacy ISA	Primary IDE INT#	:	A
IRQ - 4	Assigned to	: Legacy ISA	Secondary IDE INT#	:	A
IRQ - 5	Assigned to	: PCI/ISA PnP	Assign IRQ For USB	:	Enabled
IRQ - 7	Assigned to	: PCI/ISA PnP			
IRQ - 9	Assigned to	: PCI/ISA PnP			
IRQ - 10	Assigned to	: PCI/ISA PnP			
IRQ - 11	Assigned to	: PCI/ISA PnP			
IRQ - 12	Assigned to	: PCI/ISA PnP			
IRQ - 14	Assigned to	: PCI/ISA PnP			
IRQ - 15	Assigned to	: PCI/ISA PnP			
DMA - 0	Assigned to	: PCI/ISA PnP			
DMA - 1	Assigned to	: PCI/ISA PnP			
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			
			ESC	:	Quit
				:	~ ® ~ : Select Item
			F1	:	Help PU/PD/+/- : Modify
			F5	:	Old Values (Shift) F2 : Color
			F7	:	Load Setup Defaults

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
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

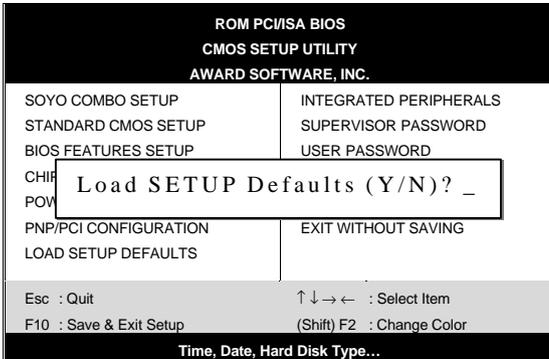
PNP/PCI Setup	Setting	Description	Note
If [Resources Controlled By] is set to [Manual]			
IRQ-# and DMA-# assigned to:	PCI/ISA PnP	Choose IRQ-# and DMA-# assigned to PCI/ISA PnP card.	IRQ-3,4,5,7,9,10,11,12,14,15 DMA-0,1,3,5,6,7
	Legacy ISA	Choose IRQ-# and DMA-# assigned to Legacy ISA card.	IRQ-3,4,5,7,9,10,11,12,14,15 DMA-0,1,3,5,6,7
Under this item the user can assign an IRQ to a PCI slot. However, under some conditions the IRQ will not be assigned:			
<ol style="list-style-type: none"> 1. IRQs 0, 1, 2, 6, 8, 13 can NOT be assigned, because they are fixed. 2. IRQs 5, 9, 10, 11 are available 3. IRQs 3,4,7,12,14 and 15 will only be assigned if they are free. See the table below on how to free them: 			

PNP/PCI Configuration Setup (Continued)

PNP/PCI Setup	Setting	Description	Note
Interrupt Line	How to set the BIOS to release the IRQ to the PnP Interrupt pool:		
	PnP / PCI configuration	Integrated Peripherals	
IRQ 15	IRQ 15: PCI / ISA PnP	On-Chip Secondary PCI IDE:	disabled
IRQ 14	IRQ 14: PCI / ISA PnP	On-Chip Primary PCI IDE:	disabled
IRQ 12	IRQ 12: PCI / ISA PnP	<i>Interrupt 12 will be released by the PnP BIOS automatically if the PS/2 Mouse Port is not used.</i>	
IRQ 7	IRQ 7: PCI / ISA PnP	Onboard parallel port:	disabled
IRQ 4	IRQ 4: PCI / ISA PnP	Onboard Serial port 1:	disabled
IRQ 3	IRQ 3: PCI / ISA PnP	Onboard Serial port 2:	disabled
4. Your OS may reassign another interrupt to a PCI slot after BIOS passes control to the OS, especially if you use Windows 95, 98 or NT.			
PCI IRQ Activated By	Level	This sets the method by which the PCI bus recognizes that an IRQ service is being requested by a device. Under all circumstances, you should retain the default configuration unless advised otherwise by your system's manufacturer.	Default
	Edge		
PCI IDE IRQ Map To	PCI-AUTO	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.	Default
	ISA, Optional		
Primary /Secondary IDE INT#	A	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	Default
	B, C, D		
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 default system values. This option is recommended if you need to reset the system setup and to retrieve the old save 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 PWEIPHERALS			
AWARD SOFTWARE, INC.			
Internal PCI/IDE	: Disabled	Onboard Parallel Part 1	: 378H/IRQ7
IDE Primary Master PIO	: Auto	Parallel Port Mode	: SPP
IDE Primary Slave PIO	: Auto	ECP Mode use DMA	: 3
IDE Secondary Master PIO	: Auto	EPP Mode Select	: EPP 1.7
IDE Secondary Slave PIO	: Auto		
Primary Master UDMA	: Auto	PS/2 mouse function	: Enabled
Primary Slave UDMA	: Auto	USB Controller	: Enabled
Secondary Master UDMA	: Auto	USB Keyboard Support	: Disabled
Secondary Slave UDMA	: Auto		
IDE Burst Mode	: Enabled	Init Display First	: PCI Slot
IDE Data Port Post Write	: Disabled		
IDE HDD Block Mode	: Enabled		
Onboard FDC Controller	: Enabled		
Onboard Serial Port 1	: 3F8/IRQ4		
Onboard Serial Port 2	: 2F8/IRQ3		
IR Address Select	: Disabled		
		ESC : Quit	- - ® - : Select Item
		F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values	(Shift) F2 : Color
		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	
Internal PCI/IDE	Both		Default	
	Primary Secondary	This chipset contains a internal PCI IDE interface with support for two IDE channels.		
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	
	>Primary Master UDMA >Primary Slave UDMA >Secondary Master UDMA >Secondary Slave UDMA	Disabled		
	Auto	Select Auto to enable Ultra DMA Mode support.	Default	
IDE Burst Mode	Disabled			
	Enabled	Selecting <i>Enabled</i> reduces latency between each drive read/write cycle, but may cause instability in IDE subsystems that cannot support such fast performance.	Default	
IDE HDD Block Mode	Disabled	Disable this item if your		
	Enabled	HDD does not support block mode.	Default	

3-8.2 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

3-8.3 Onboard Serial Ports

Onboard Serial Ports	Setting	Description	Note
Onboard Serial Port 1 / Serial Port 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.	Default (port 2)
	3E8/IRQ4		
	2E8/IRQ3		
	Auto		

3-8.4 IR Controls

IR Control	Setting	Description	Note
IR Address Select	Disabled		Default
	3F8H, 2F8H, 3E8H, 2E8H	Select IR address.	
IR Mode	HP SIR		Default
	ASKIR	Select IR Mode.	
IR IRQ Select	IRQ10		Default
	IRQ3, IRQ4, IRQ11	Please select the IRQ for the IR.	

3-8.5 Onboard Parallel Port

Onboard Parallel Port	Setting	Description	Note
Onboard Parallel Port 1	378H/IRQ7	Choose the printer I/O address.	Default
	3BCH/IRQ7		
	278H/IRQ5		
Parallel Port Mode	SPP	The mode depends on the external device that you connect to this port.	Default
	ECP/EPP		
	ECP		
	EPP/SPP		

Onboard Parallel Ports (Continued)

Onboard Parallel Ports	Setting	Description	Note
If [Parallel Port Mode] is set to [ECP] mode			
ECP Mode use DMA	3	Choose DMA3	Default
	1	Choose DMA1	
If [Parallel Port Mode] is set to [EPP] mode			
EPP Mode Select	EPP 1.9	Select EPP port type 1.9	
	EPP 1.7	Select EPP port type 1.7	Default

3-8.6 PS/2 mouse function

PS/2 mouse function	Setting	Description	Note
PS/2 mouse function	Disabled	If your system has a PS/2 mouse port and you install a serial pointing device, select <i>Disabled</i> .	
	Enabled		Default

3-8.7 USB Controls

USB Controls	Setting	Description	Note
USB Controller	Disabled		
	Enabled	Select <i>Enabled</i> you have USB peripherals. Note: You will need to install the optional USB port bracket. (See Page 21)	Default
USB Keyboard Support	Disabled	Use normal keyboard.	Default
	Enabled	Use a USB keyboard.	
	AGP		

3-8.8 Init Display Controls

Init Display Controls	Setting	Description	Note
Init Display First	PCI Slot	Choose which card – AGP Display card or PCI VGA card – to initialize first.	Default

3-8.9 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 will 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:

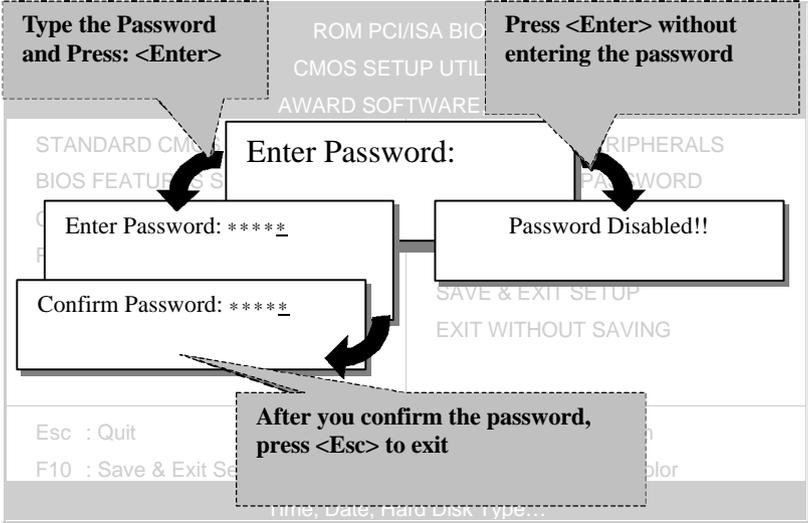
Password Disabled!!

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 :								
Select Primary Master Option (N=Skip) : N								
OPTIONS	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE	
2(Y)	1707	827	64	0	3308	63	LBA	
1	1707	3309	16	65535	3308	63	NORMAL	
3	1707	827	64	65535	3308	63	LARGE	

Note: Some Oses(SCO-UNIX Before v5.0) must use "NORMAL" for installation

ESC : Skip



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

Chapter 4

THE SOYO CD

Your SY-7SBB Motherboard comes with a CD-ROM labeled "SOYO CD." The SOYO CD contains the user's manual file for your new Motherboard, the drivers software available for installation, and a database in HTML format with information on SOYO Motherboards and other products.

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 be displayed as shown below.



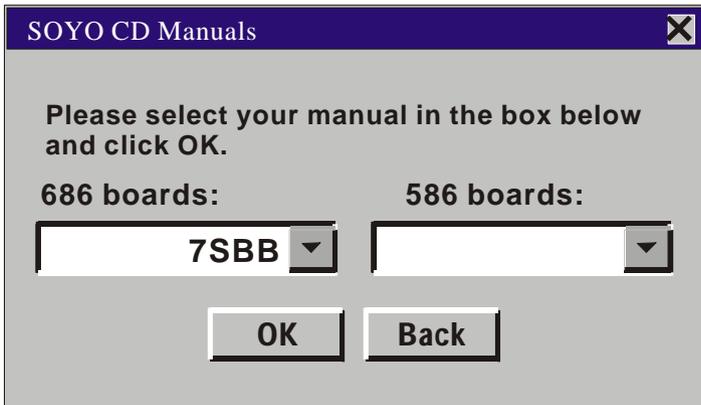
(SOYO CD Start Up Program Menu)

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

Step 2. Read SOYO [7SBB] Manual

Click the **Read Manual** button to open the user's manual file of your Motherboard.

Please note that if the Start Up program was unable to determine which SOYO Motherboard you own, the manual selection menu will pop up, as shown below. Then select the user's manual file that corresponds to your Motherboard model name and click **OK**.



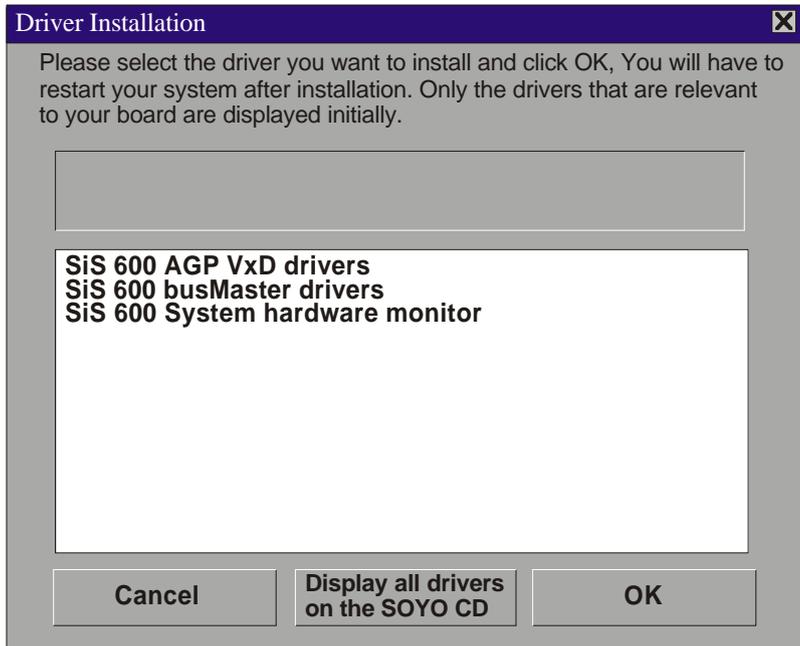
(Manual Selection Menu)

The user's manual files included on the SOYO CD can be read in PDF (Postscript Document) format. In order to read a PDF file, the appropriate Acrobat Reader software must be installed in your system.

Note: The Start Up program automatically detects if the Acrobat Reader utility is already present in your system, and otherwise prompts you on whether or not you want to install it. You must install the Acrobat Reader utility to be able to read the user's manual file. Follow the instructions on your screen during installation, then once the installation is completed, restart your system and re-run the SOYO CD.

Step 3. Install Drivers and Utilities

Click the *Display all drivers on the SOYO CD* button to display the list of drivers that can be installed on your Motherboard. The start-up program displays the drivers available for the SY-7SBB and the Windows version you use.

**(Driver Installation Menu)**

A short description of all available drivers follows:

➤ **SiS 600 AGP VxD drivers**

The SIS VGA driver for windows 95/98 must be installed to make use of your on board VGA function. (For WinNT read the instruction in the Manual).

➤ **SiS 600 busMaster Driver**

The SiS Busmaster drivers for windows 95/98 will speed up your harddisk. (For WinNT read the instructions in the Manual)

➤ **SiS 600 System hardware monitor**

Use this utility to deep track of the system hardware parameters. (For Windows 95/98)

Select which driver you want to install and click **OK**, or click **Cancel** to return to the main menu. When the installation program of a driver starts running the SOYO-CD will exit. After finishing the installation, restart the SOYO-CD and install the next driver. We recommend you to install all drivers, and to do so in the right sequence (top to bottom).

Step 5. Check the Latest Releases

Click the 'Check the latest Releases' button to go the SOYO Website to automatically find the latest BIOS, manual and driver releases for your motherboard. This button will only work if your computer is connected to the internet through a network or modem connection. Make sure to get your modem connection up before clicking this button.

Step 6. Enter the SOYO CD

Click the **Enter SOYO CD** button to enter the SOYO HTML database.

The Start Up program will activate the default HTML browser installed on your system (for example, Internet Explorer or Netscape) to display the contents of the SOYO CD.

The SOYO CD contains useful information about your Motherboard and other SOYO products. For your convenience, this information is available in HTML format, similar to the format widely used on the Internet.



Note: If no HTML browser is installed on your system, the Start Up program will prompt you on whether or not you would like to install the Internet Explorer* browser. Click YES to install the HTML browser. After the installation is complete, please restart your system. Then re-run the SOYO CD and you will be able to browse the SOYO HTML database.

(* Internet Explorer is a Microsoft Trademark)

