



## Precautions

1. Please read this Quick Start Guide before proceeding with your installations. Serious damage may occur if the installation procedures are not followed properly.
2. AGP cards running at 3.3v are not supported. Only AGP cards running at 1.5v & 0.8v (4x /8x AGP cards) are supported on this motherboard.
3. Please ensure that your memory modules are installed properly. They can fit into the memory slots only one way, and should fit completely in the socket without sticking out. Failure to do so will damage your motherboard and memory module.
4. An ATX 12V power supply (Power supply for Pentium 4 system) is required for the system to operate normally. (Preferably 350 watts for minimal loading or 400 watts for fully loaded system).
5. If you have any problem getting your system to work, please follow the troubleshooting tips on Page 32 of your user guide.
6. On some motherboards, the actual chipset cooler fan/heatsink, despite its different look from that showing on the color box, is of the same quality and will work just as well. (The chipset cooler is as sufficient as the chipset fan based on a different design.)
7. For Frequently Asked Questions and Troubleshooting Tools, please visit our online technical support center at  
SOYO USA: <http://www.soyousa.com/support>  
Knowledge Database: <http://www.soyousa.com/kb/>

### SOYO SY-P4VM800 Motherboard

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#### About This Quick Start Guide:

This Quick Start Guide is intended to help system manufacturers and end users install and set up 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 amendment without notice. For further information, please visit our website at "<http://www.soyousa.com>".

P4VM800 Series - Version V1.1 - Edition: Oct. 2004

\* The specifications of the motherboard are subject to amendment without notice

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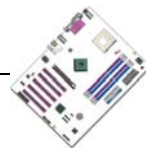
# 1 Introduction

Thank you for purchasing **SOYO SY-P4VM800 Motherboard**. This **Quick Start Guide** will guide you throughout the entire hardware/software installation of the motherboard with simplified steps.

## 1.1 Contents of the Motherboard

When unpacking the Motherboard, check the following items:

- 
- ◆ 1 \* SOYO SY-P4VM800 Motherboard



- 
- ◆ 1 \* Quick Start Guide



- 
- ◆ 1 \* Drivers/Software CD



- 
- ◆ 1 \* 80-Conductor UATA 66/100/133 IDE Cable



- 
- ◆ 1 \* Floppy Disk Drive Cable



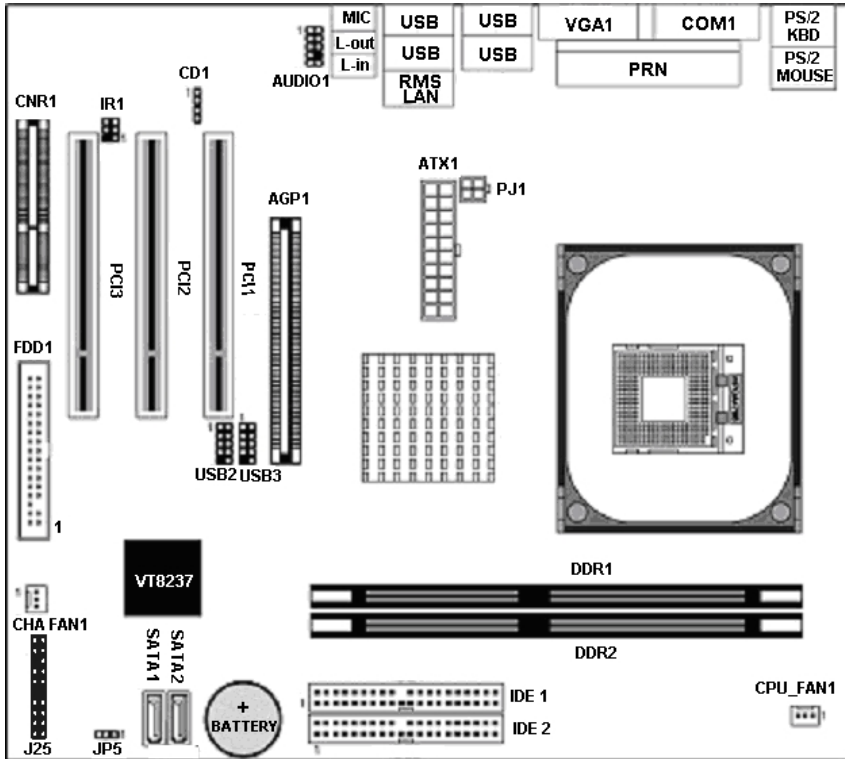
- 
- ◆ 1 \* Serial ATA Cable



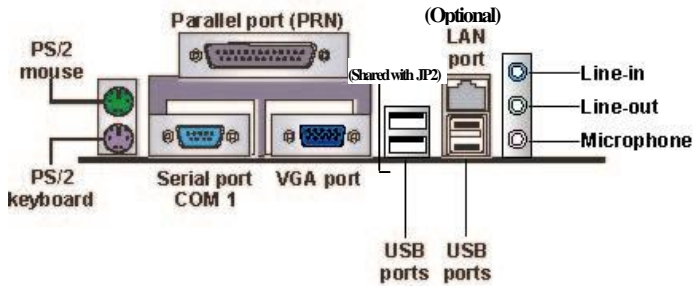
- 
- ◆ 1 \* Back panel



### 1.2 Motherboard Layout



### 1.3 I/O Ports Layout



Hardware  
Installation

## 1.4 Key Features

CHIPSETS	FEATURES
<b>PM800 (North Bridge)</b>	<ul style="list-style-type: none"> <li>✓ Intel Pentium 4 Prescott CPU with HT</li> <li>✓ 400/533/800MHz FSB</li> <li>✓ DDR 266/333/400MHz SDRAM up to 2 GB</li> <li>✓ Ultra V-Link 1066 MB/s interconnection</li> <li>✓ Integrated VIA S3 UniChrome Pro graphics controller</li> </ul>
<b>VT8237 (South Bridge)</b>	<ul style="list-style-type: none"> <li>✓ V-RAID function</li> <li>✓ UATA 66/100/133 IDE controller</li> <li>✓ VIA 10/100 Ethernet controller</li> <li>✓ AGP 4X/8X</li> <li>✓ Max. 8 USB2.0 ports</li> <li>✓ 2 Serial ATA ports</li> </ul>
I/O PORTS	FEATURES
<b>VGA Port</b>	Connects the monitor with the integrated VIA S3 UniChrome Pro Graphics controller
<b>PS/2</b>	Connects a PS/2 keyboard and a PS/2 mouse
<b>Parallel Port</b>	Connects a parallel device such as a printer
<b>COM1</b>	Connects a serial device such as mice or fax/modems.
<b>LAN Port</b>	Connects a RJ-45 jack to build intranet/internet connections.
<b>USB Ports</b>	Connects USB 1.1/2.0 devices such as printer, digital camera, scanner, external hard drive/optical device, flash drive, etc
<b>Audio Ports</b>	Connects microphone and multi-channel speakers up to 6 channels

## 2 Installing the Motherboard



To avoid damage to the motherboard, please follow the instructions below before handling this equipment:

- Before installing the motherboard, ground yourself by touching the unpainted portion of the system's metal chassis to avoid possible static damage to the item.
- Check the motherboard for obvious physical damage. If any component appears to have come off or been damaged, contact our local customer service center for an immediate replacement.

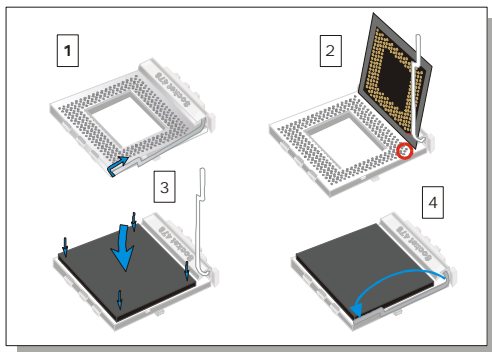
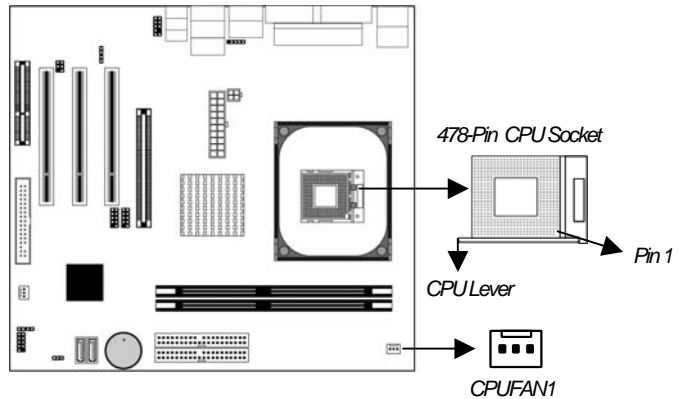
The following is a list of common components to prepare before the installation:

- ◆ A Intel Pentium 4/Prescott Socket mPGA478 CPU (CPU with Vcore higher than 1.6 volts is not supported)
- ◆ A verified cooling fan/heatsink for Intel Pentium 4 CPUs
- ◆ 1~2 verified DDR SDRAM modules
- ◆ AGP 4X/8X or PCI graphic card
- ◆ Computer case with adequate power supply (at least 350W, ATX 12V approved)
- ◆ Monitor
- ◆ Keyboard (PS/2 or USB)
- ◆ Pointing Device ( USB/PS2 Mouse/Trackball)
- ◆ Speakers (optional)
- ◆ Internal Drives: Hard Disk, CD/DVD-ROM/RW, Floppy Drive...
- ◆ External Peripherals: printer, modem, scanner (optional)



## **2.1 Installing the CPU**

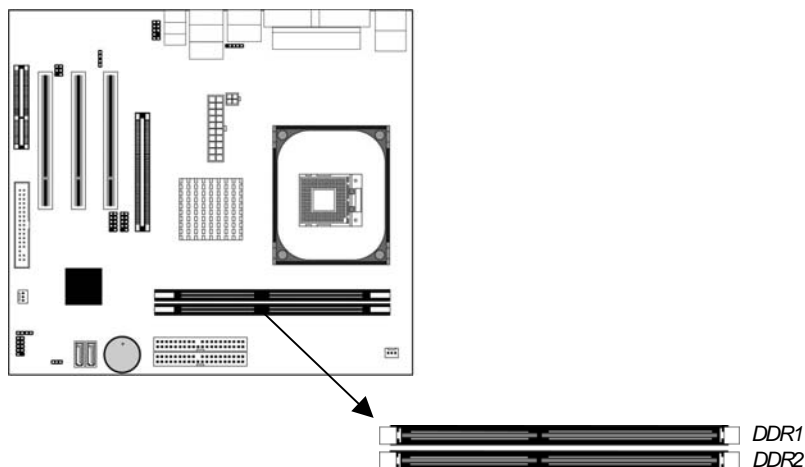
SOYO SY-P4VM800 Motherboard supports a single Intel Pentium®4/Prescott Socket mPGA478 CPU.  
Please follow the steps to install the CPU.



1. Lift the socket lever up to a vertical position.
2. Place the marked CPU corner with the base of the socket lever (Pin 1).
3. Push the CPU firmly into the socket with adequate force.
4. Hold the socket lever down to a horizontal position to secure the CPU.
5. Spread the thermal grease all over the surface of the CPU.
6. Secure the CPU cooling fan/heatsink to the CPU socket and attach its power cable to a nearby power connector. Failure to do so may cause serious damage to the CPU and motherboard and its attached components.

## 2.2 Installing the Memory Modules

This motherboard accommodates two memory module slots, supporting 184-pin dual channel DDR 266/333/400 SDRAM up to 2GB. You can add 1 or 2 memory modules to the system at your choice. In the case of adding two memory modules, please use two verified memory modules of the same manufacturer and specifications/capacity to increase their compatibility with motherboard. Please note that dual channel function is activated only when two memory modules of the specifications/capacity are present.



### 2.2.1 Memory Frequency Table

Memory frequency is subject to CPU Front Side Bus. The following is a reference table:

CPU FSB (MHz)	Memory Frequency (MHz)	DIMM DDR Code Name
400	266	PC2100
533	266/333	PC2100 / 2700
800	400/320*	PC3200 / 2700

\*Sometimes when pairing an 800 MHz FSB CPU with PC2700 DIMM DDR SDRAM, the memory frequency will read 320 MHz instead of 333 MHz due to chipset limitations.

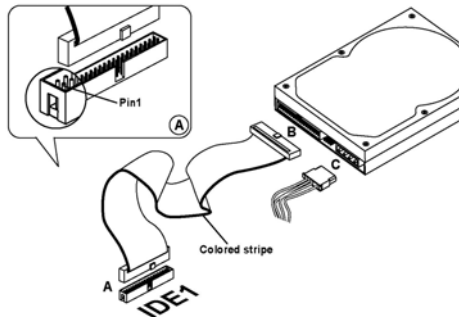
### **2.3 Installing the Hard Disk Drive/Optical Device**

#### **Before Installing the IDE Devices:**

1. For the ease of installation, we strongly recommend you install the hard drives first on IDE1, followed by the installation of the optical device on IDE2.
2. Installation of a hard disk and an optical device on one IDE slot/cable is not recommended since it will reduce system performance.
3. When installing two IDE devices on one IDE slot/cable, set one of the two IDE devices (usually the booting hard drive) to MASTER and the other SLAVE (usually a second hard drive or CD/DVD-Rom/RW). The documentations of the IDE devices usually details how to use jumpers or switches to swap the devices between MASTER and SLAVE modes.

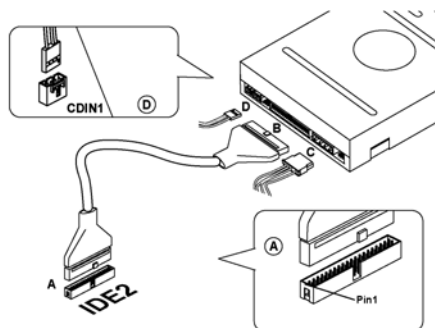
#### **Connecting IDE 1 / Primary IDE Slot**

The booting hard drive must always be attached to IDE1.



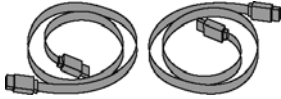
#### **Connecting IDE 2 / Secondary IDE Slot**

The second drive (usually a CD/DVD-ROM/RW) on this controller must be set to slave mode. The installation process is the same as that of IDE1.

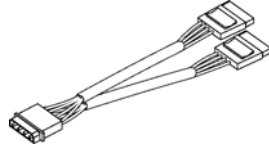


### 2.3.1 Installing the SATA Hard Disk Drive

To install a SATA hard drive, use a SATA cable that supports the SATA protocol. This SATA cable comes with an SATA power cable. You can connect either end of the SATA cable to the SATA hard drive or to the SATA slot on the motherboard.



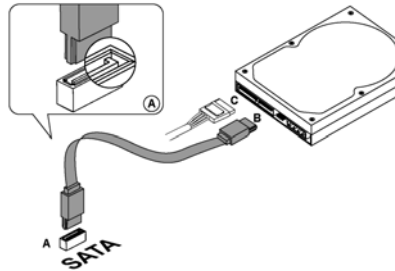
**SATA Cable (Optional)**



**SATA Power Cable (Optional)**

Follow the steps below for proper installation:

1. Attach either end of the cable to the SATA slot **(A)** on the motherboard.
2. Attach the other end of the cable **(B)** to the SATA hard drive.
3. Connect a SATA power cable to the SATA hard drive **(C)** and the other end of the to a power supply connector.



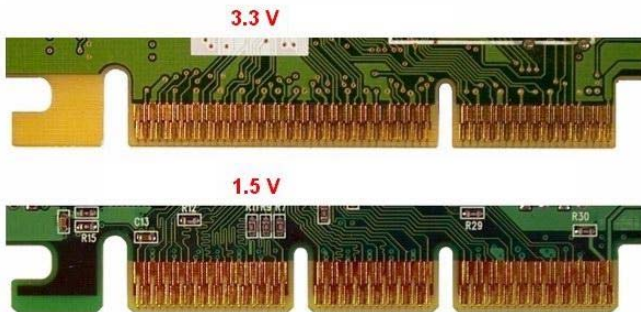
**Note:** This motherboard does not support the SATA "Hot-Plug" function.

## **2.4 Installing the Expansion Cards**

The motherboard holds 1 AGP 4X/8X slot, 3 PCI slots, and 1 CNR slot. Special attention should be paid when installing an AGP card. Ensure your AGP card is compliant with AGP 4X/8X specifications with 1.5 & 0.8v power consumption. Accidentally or intentionally installing an incompatible AGP 1X/2X card may cause serious damage to the motherboard and attached components and void the warranty. Some powerful AGP cards may require additional power supply to sustain normal operation. Ensure all installed expansion cards align with and firmly attach to their corresponding slots before powering on the system.

1. Refer to the documentation of AGP card for its compatibility with the motherboard.
2. Press the expansion card firmly into the corresponding expansion slot.
3. Be sure the gold contact fingers of the card are secured in place.
4. Replace the screw to secure the slot bracket of the expansion card.
5. Attach additional power cable to the AGP card if necessary.

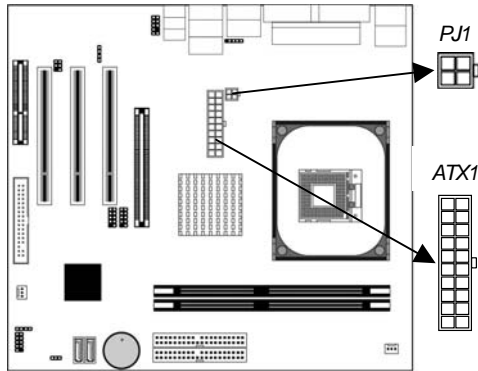
Gold Contact Fingers of an Incompatible AGP 1X/2X Card



Gold Contact Fingers of a Standard AGP 4X/8X Card

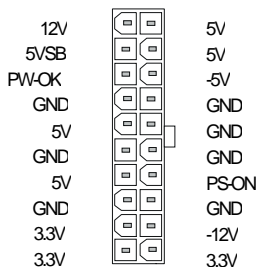
## 2.5 Connecting the Power Supply

Follow the steps below to wire the motherboard to complete the installation process. The motherboard requires an ATX 12V compliant power supply. When connecting the power connectors, follow its directionality and do not force them into the sockets. Ensure the power supply is not electrified prior to the completion of the entire hardware installation process.

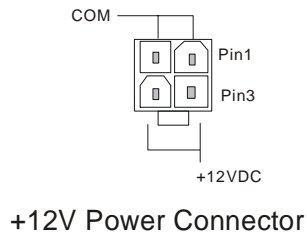


1. Connect the 20-pin connector to ATX1 power connector. (See FIG 1)
2. Connect the 4-pin connector to JP1 power connector. (See FIG 2)

**FIG 1**  
**ATX1 Power Socket**



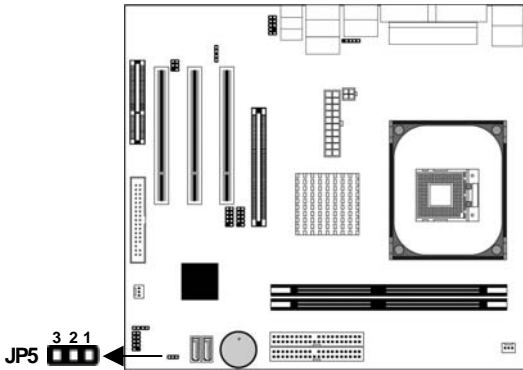
**FIG 2**  
**PJ1 Power Socket**

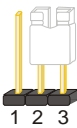
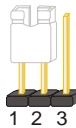


## 2.6 Clearing CMOS (JP5)

In the case of CMOS being wrongly configured that results in boot-up errors or hardware/software malfunction, follow the procedures below to clear the CMOS to restore default settings.

1. Short Pin 2-3 of JP5 jumper as indicated below.
2. Place the jumper cap back on pin 1-2 to return to default settings.



Clear CMOS	Short Circuit	Open
JP5	Short Pin 2-3 for 5 seconds to clear the CMOS 	Short Pin 1-2 to retain new settings 
<p><i>Note: The power cord must be detached from the ATX power supply or electric socket before performing the Clearing CMOS operation.</i></p>		

2.7 Connectors and Jumper Definition

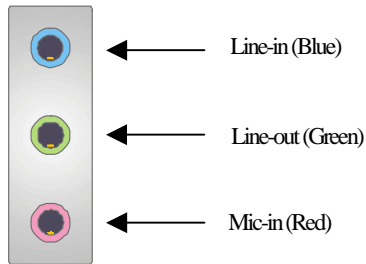
CPU Cooling FanCPU_FAN1			System Cooling Fan CHA_FAN1			CD1							
Pin1	Pin2	Pin3	Pin1	Pin2	Pin3	Pin1	Pin2	Pin3	Pin4				
GND	+12V	Sensor	GND	+12V	Sensor	CD IN L	GND	GND	CD IN R				
AUDIO1:Front Panel Audio Connector													
Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7	Pin8	Pin9	Pin10				
AUD_MIC	AUD_GND	AUD_MIC_BIAS	AUD_VCC	AUD_FPOUT_R	AUD_RET_R	HP_ON	KEY	AUD_FPOUT_L	AUD_RET_L				
USB2 / USB3: Front Panel USB Connector													
Pin1	Pin2	Pin3	Pin4	Pin5									
VERG_FP_USBPWR0	VERG_FP_USBPWR0	USB_FP_P0-	USB_FP_P1-	USB_FP_P0+									
Pin6	Pin7	Pin8	Pin9	Pin10									
USB_FP_P1+	GROUND	GROUND	KEY	USB_FP_OC0									
IR1: Infrared Port													
Pin1	Pin2	Pin3	Pin4	Pin5	Pin6								
NC	KEY	Vcc5	GND	IRTX	IRRX								
					<th colspan="3">Power LED</th>					Power LED			
					Pin11	Pin12	Pin13						
					VCC	NC	GND						
					<th colspan="4">Speaker</th>					Speaker			
					Pin17	Pin18	Pin19	Pin20					
					VCC	NC	NC	Speaker out					
HDD LED			PWRBT		RESET								
Pin9	Pin10	Pin4	Pin5	Pin1	Pin2								
LED Anode	LED Cathode	Power On/Off	GND	Control PIN	GND								
Power On/Off: PWRBT													
Connect your power switch to this header (momentary switch type).													
<b>To turn off the system, press this switch and hold down for longer than 4 seconds.</b>													
ATX 12V Power Supply: ATX PW													
Attach the ATX 12V Power cable to the connector. (This motherboard requires an ATX 12V power supply, an AT or ATX power supply can NOT be used.)													
When using the Power-On by Keyboard function, please ensure the ATX power supply is able to provide at least 720mA on the 5V Standby lead (5VSB).													



## 2.8 Connecting Multi-channel Speakers

The integrated VIA Vinyl Audio controller supports up to six-channel audio output. Install the driver before connecting the audio cables to the audio jack referring to the table below. Remember to change the number of speaks accordingly in the preinstalled audio driver utility.

Number of Speakers	Front Speaks	Rear Speakers	Subwoofer
2	Line-out		
3	Line-out		Mic-in
5	Line-out	Line-in	Mic-in



## 3 Quick BIOS Setup

### 3.1 Introduction

The BIOS Setup Utility records settings and information of your computer, such as date and time, the type of hardware installed, and various configuration settings. Your computer applies the information to initialize all the components when booting up and basic functions of coordination between system components. If the Setup Utility configuration is incorrect, it may cause the system to malfunction. It can even stop your computer booting properly. If it happens, you can use the clear CMOS jumper to clear the CMOS memory which has stored the configuration information; or you can hold down the Page Up key while rebooting your computer. Holding down the Page Up key also clears the setup information. You can run the setup utility and manually change the configuration. You might need to do this to configure some hardware installed in or connected to the motherboard, such as the CPU, system memory, disk drives, etc.

### 3.2 Running the Setup Utility

Every time you start your computer, a message appears on the screen before the operating system loading that prompts you to "Hit <DEL> if you want to run SETUP". Whenever you see this message, press the <Delete> or <Del> key, and the Main menu page of the Setup Utility appears on your monitor.

COMS Setup Utility- Copyright (C) 1985-2003, American Megatrends, Inc.

Standard CMOS Setup	CPU PnP Setup
Advanced Setup	Hardware Monitor
Features Setup	Load Optimal Defaults
Power Management Setup	Save Changes and Exit
PCI/Plug and Play Setup	Discard Changes and Exit
BIOS Security Setup	
↑ ↓ ← →: Move Enter: Select +/-: Value F10: Save ESC: Exit F1: General Help F9: Optimized Defaults	
Standards COMOS setup for changing time, date, hard disk type, etc. V02.54 (C) Copyright 1985-2003, American Megatrends, Inc.	

### 3.3 The BIOS Navigation Keys

Name of Keys	Function
Esc	Exits the current menu
←→↑↓	Scrolls through the items on a menu
+/-, Page Up/Page Down	Modifies the values of a selected item
F10	Saves the current configuration and exits setup
F1	Displays a screen that describes all key functions
F5	Loads previously saved values to CMOS
Shift + F2	Change CMOS menu colors

### 3.4 Standard CMOS Setup Menu

This page displays a table of items defining basic information about your system.

CMOS SETUP UTILITY – Copyright (C) 1985-2003, American Megatrends, Inc. Standard CMOS Setup		
System Time	23:40:15	Help Item
System Date	Sun 05/09/2004	
▶ Primary IDE Master	Hard Disk	Use [Enter], [TAB] or [SHIFT-TAB] to select a field.  Use [+] or [-] to configure system Time.
▶ Primary IDE Slave	Not Detected	
▶ Secondary IDE Master	Not Detected	
▶ Secondary IDE Slave	CD/DVD ROM	
Floppy A	1.44MB 31/2"	
Floppy B	Disabled	
↑←→: Move    Enter: Select    +/-: Value    F10: Save    Esc: Exit F1: General Help    F9: Optimized Defaults		

<b>Date &amp; Time</b>	These items set up system date and time.
<b>IDE Pri Master</b> <b>Pri Slave</b> <b>Sec Master</b> <b>Sec Slave</b>	These items configure devices connected to the Primary and Secondary IDE channels. To configure an IDE hard disk drive, choose Auto. If the Auto setting fails to find a hard disk drive, set it to User, and then fill in the hard disk characteristics (Size, Cyls, etc.) manually. If you have a CD-ROM drive, select the setting CDROM. If you have an ATAPI device with removable media (e.g. a ZIP drive or an LS-120), select

The SOYO CD

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	Floptical.
<b>Floppy A</b> <b>Floppy B</b>	These items set up size and capacity of the floppy diskette drive(s) installed in the system.

### 3.5 Advanced Setup Menu

This page sets up more advanced information about your system. Handle this page with caution. Any changes can affect the operation of your computer.

CMOS SETUP UTILITY – Copyright (C) 1985-2003, American Megatrends, Inc.		
Advanced Setup		
Quick Boot	Enabled	
1 <sup>st</sup> Boot Device	PMVMaxtor 6Y060P0	Help Item
2 <sup>nd</sup> Boot Device	SS-MATSHITA CR-58	Allows BIOS to skip certain tests while booting. This will decrease the time needed to boot the system.
3 <sup>rd</sup> Boot Device	1 <sup>st</sup> FLOPPY DRIVE	
Try Other Boot Device	Yes	
BootUp Num-Lock	On	
Boot To OS/2 > 64MB	No	
AGP Aperture Size	64MB	
DRAM Timing	Auto BY SPD	
Hyper Threading Function	Disabled	
Auto Detect DIMM/PCI Clk	Enabled	
Spread Spectrum	Disabled	
↑↓←→ : Move    Enter: Select    +/-: Value    F10: Save    Esc: Exit F1: General Help                      F9: Optimized Defaults		

<b>Quick Boot</b>	If you enable this item, the system starts up more quickly by elimination some of the power on test routines.
<b>1<sup>st</sup> Boot Device</b> <b>2<sup>nd</sup> Boot Device</b> <b>3<sup>rd</sup> Boot Device</b>	Use these items to determine the device order the computer uses to look for an operating system to load at start-up time.
<b>Try Other Boot Device</b>	If you enable this item, the system will also search for other boot devices if it fails to find an operating system from the first two locations.
<b>BootUp Num-Lock</b>	This item determines if the Num Lock key is active or inactive at system start-up time.

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<b>Boot To OS/2 &gt; 64MB</b>	Enable this item if you are booting the OS/2 operating system and you have more than 64MB of system memory installed.
<b>AGP Aperture Size</b>	This item defines an AGP for the graphics. Leave this item at the default value 64MB.
<b>DRAM Timing</b>	This item allows you to enable or disable the DRAM timing defined by the Serial Presence Detect electrical.
<b>Hyper-Threading Function</b>	If your P4 CPU is not HT CPU, this item will be hidden. If your P4 CPU is HT CPU, BIOS will show this item. You can set "Disabled" or "Enabled" to control HT CPU support in O.S. Set "Enabled" to test HT CPU function.
<b>Auto detect DIMM/PCI Clock</b>	When this item is enabled, BIOS will disable the clock signal of free DIMM/PCI slots.
<b>Spread Spectrum</b>	Use this item to set the system bus spread spectrum for the installed processor.

### 3.6 Features Setup Page

This page sets up some parameters for peripheral devices connected to the system.

CMOS SETUP UTILITY – Copyright (C) 1985-2003, American Megatrends, Inc. Features Setup		
OnBoard Floppy Controller	Enabled	Help Item Allows BIOS to Enable or Disable Floppy Controller.
Serial Port1 Address	3F8/IRQ4	
OnBoard IR Port	Disabled	
Parallel Port Address	378	
Parallel Port Mode	ECP	
ECP Mode DMA Channel	DMA3	
Parallel Port IRQ	IRQ7	
OnBoard PCI IDE Controller	Both	
OnBoard SATA-IDE	Enabled	
Audio Device	Enabled	
Modem Device	Auto	
Ethernet Device	Enabled	
OnBoard USB Function	Enabled	
USB Function for DOS	Disabled	
↑←→: Move    Enter: Select    +/: Value    F10: Save    Esc: Exit F1: General Help                      F9: Optimized Defaults		

<b>OnBoard Floppy Controller</b>	Use this item to enable or disable the onboard floppy disk drive interface.
<b>Serial Port1 Address</b>	Use this item to enable or disable the onboard COM1/2 serial port, and to assign a port address.
<b>OnBoard IR Port</b>	Use this item to enable or disable the onboard infrared port,

## SOYO SY-P4VM800 Quick Start Guide

	and to assign a port address.
<b>Parallel Port Address</b>	Use this item to enable or disable the onboard Parallel port, and to assign a port address.
<b>Parallel Port Mode</b>	Use this item to set the parallel port mode. You can select SPP (Standard Parallel Port), ECP (Extended Capabilities Port), EPP (Enhanced Parallel Port), or ECP + EPP.
<b>ECP Mode DMA Channel</b>	Use this item to assign a DMA channel to the parallel port.
<b>Parallel Port IRQ</b>	Use this item to assign IRQ to the parallel port.
<b>Onboard PC/IDE Controller</b>	Use this item to enable or disable either or both of the onboard Primary and Secondary IDE channels.
<b>Onboard SATA-IDE</b>	Use this item to enable or disable the onboard IDE channel.
<b>Audio Device</b>	This item enables or disables the AC'97 audio chip.
<b>Modem Device</b>	This item enables or disables the MC'97 modem chip.
<b>Ethernet Device</b>	This item enables or disables the onboard Ethernet LAN.
<b>Onboard USB Function</b>	Enable this item if you plan to use the USB ports on this motherboard.
<b>USB Function For DOS</b>	Enable this item if you plan to use the USB ports on this motherboard in a DOS environment.

### 3.7 Power Management Setup Page

This page sets some parameters for system power management operation.

CMOS SETUP UTILITY - Copyright (C) 1985-2003, American Megatrends, Inc.		
Power Management Setup		
ACPI Aware O/S	Yes	Help Item
Power Management	Enabled	Enable/Disable ACPI support for Operating System. Enable: If OS supports ACPI. Disable: If OS does not support ACPI.
Suspend mode	S1	
Suspend Time Out	Disabled	
Resume On RTC Alarm	Disabled	
LAN Ring Power On	Disabled	
Keyboard Power On	Disabled	
Wake-Up Key	Any Key	
↑←→: Move    Enter: Select    #: Value    F10: Save    Esc: Exit F1: General Help                      F9: Optimized Defaults		

<b>ACPI Aware O/S</b>	This item supports ACPI (Advanced Configuration and Power management Interface). Use this item to enable or disable the ACPI feature.
<b>Power Management</b>	Use this item to enable or disable a power management scheme. If you enable power management, you can use the items below to set the power management operation. Both APM and ACPI are supported.

## SOYO SY-P4VM800 Quick Start Guide

<b>Suspend mode</b>	This item selects the status S1(Stop Clock) when the system enters the power-saving Suspend mode.
<b>Suspend Time Out</b>	This item sets up the timeout for Suspend mode in minutes. If the time selected passes without any system activity, the computer will enter power-saving Suspend mode.
<b>Resume On RTC Alarm</b>	The system can be turned off with a software command. If you enable this item, the system can automatically resume at a fixed time based on the system's RTC (realtime clock). Use the items below this one to set the date and time of the wake-up alarm. You must use an ATX power supply in order to use this feature.
<b>LAN/Ring Power On</b>	The system can be turned off with a software command. If you enable this item, the system can automatically resume if there is an incoming call on the Modem/Ring, or traffic on the network adapter. You must use an ATX power supply in order to use this feature.
<b>Keyboard Power On Wake-Up Key</b>	If you enable this item, system can automatically resume by pressing any keys, hot or power key on the keyboard or typing in the password. You must enable the Keyboard Power On jumper and use an ATX power supply in order to use this feature.

### 3.8 PCI / Plug & Play Setup Page

This page sets up some parameters for devices installed on the PCI bus and devices that use the system plug and play capability.

CMOS SETUP UTILITY – Copyright (C) 1985-2003, American Megatrends, Inc. <b>PCI/Plug and Play Setup</b>													
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Primary Graphics Adapter</td> <td style="width: 30%;">PCI</td> <td style="width: 40%; text-align: right;">Help Item</td> </tr> <tr> <td>Share Memory Size</td> <td>32MB</td> <td style="text-align: right;">Options</td> </tr> <tr> <td>Allocate IRQ to PCI VGA</td> <td>Yes</td> <td style="text-align: right;">PCI</td> </tr> <tr> <td>PCI IDE BusMaster</td> <td>Disabled</td> <td style="text-align: right;">AGP</td> </tr> </table>	Primary Graphics Adapter	PCI	Help Item	Share Memory Size	32MB	Options	Allocate IRQ to PCI VGA	Yes	PCI	PCI IDE BusMaster	Disabled	AGP	
Primary Graphics Adapter	PCI	Help Item											
Share Memory Size	32MB	Options											
Allocate IRQ to PCI VGA	Yes	PCI											
PCI IDE BusMaster	Disabled	AGP											
↑←→: Move    Enter: Select    +/-: Value    F10: Save    Esc: Exit F1: General Help                      F9: Optimized Defaults													

<b>Primary Graphics Adapter</b>	This item indicates if the primary graphics adapter uses the PCI or the AGP bus. The default PCI setting still lets the onboard display work and allows the use of a second display card installed in an AGP slot.
<b>Share Memory Size</b>	This item lets you allocate a portion of the main memory for the onboard VGA display application with three options of 32/16/8MB.
<b>Allocate IRQ to PCI VGA</b>	If this item is enabled, an IRQ will be assigned to the PCI VGA graphics system. You set this value to No to free up an IRQ.
<b>PCI IDE Bus Master</b>	This item enables or disables the DMA under DOS mode. We recommend you to leave this item at the default value.







### 3.12 Load Optimal Defaults

This option opens a dialog box to ask if you are sure to install optimized defaults or not. You press <Y>, and then <Enter>, the Setup Utility loads all default values; or press <N>, and then <Enter>, the Setup Utility does not load default values.

---

**Note:** *It is highly recommend that users enter this option to load optimal default values for accessing the best performance.*

---

### 3.13 Save Changes and Exit

Highlight this item and press <Enter> to save the changes that you have made in the Setup Utility configuration. When the Save Changes and Exit dialog box appears, press Y to save and exit, or press N to return to the main menu.

### 3.14 Discard Changes and Exit

Highlight this item and press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility. When the Discard Changes and Exit dialog box appears, press <Y> to discard changes and exit, or press <N> to return to the main menu.

---

**Note:** *If you have made settings that you do not want to save, use the "Discard Changes and Exit" item and press <Y> to discard any changes you have made.*

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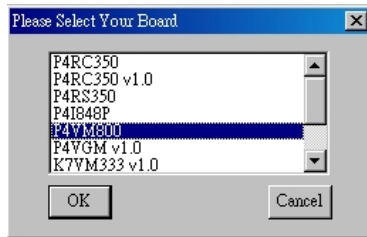
## 4 The SOYO CD

### 4.1 The Contents of SOYO CD

SOYO CD provides a comprehensive set of drivers/tools that may come in handy during installation or when system problems occur.

<b>User's Manual</b>	Detailed and informative electronic installation guide in PDF format			
<b>Hardware Drivers</b>	<b>Drivers</b>	<b>Version</b>	<b>Operating System</b>	<b>Description</b>
	VIA 4 in 1 Driver	4.51	98SE/ME/2000/XP	Accelerate and stabilize your system
	VIA PM 800 Display Driver	16-94-39.01	2000/XP	VIA S3 UniChrome Pro graphics driver
		16-01-21.02	98SE/ME	
	VIA USB 2.0 Driver	2.58L	98SE/ME/2000/XP	Activate USB2.0 function
	Realtek Audio Driver	3.61	98SE/ME/2000/XP	Onboard AC 97' audio driver
	Realtek Media Player	3.61	98SE/ME/2000/XP	Onboard AC 97'audio driver
	VIA10/100 LAN Driver	3.7	98SE/ME/2000/XP	10/100 LAN driver
VIA SATA RAID Driver	2.2	98SE/ME/2000/XP	VIA SATA RAID Driver	
<b>Bundled Software</b>	<b>Software</b>	<b>Version</b>	<b>Operating System</b>	<b>Description</b>
	Wasay Pro Magic Plus	Lite	Windows/Dos	System restoration software
	Wasay Image It	3.0	Windows	Hard disk backup & recovery software
	Wasay Data Processing Utility	1.0	Windows	Data protection and management utility
	Panda Antivirus Titanium	2.05.05	98SE/ME/2000/XP	Antivirus software

## 4.2 How to Use SOYO CD?



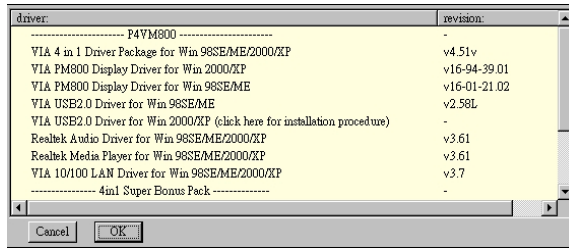
### Motherboard Selection Menu

**Inserting SOYO CD** Upon inserting SOYO CD, the menu above will automatically pop up for the selection of your motherboard model number, in this case, please select P4VM800 and then click on <OK>.



### SOYO CD Start-Up Menu

**Read the Manual** Upon clicking on <Read the Manual> button, an electronic User's Manual in PDF (Portable Data Format) format will be opened. To browse the PDF file, please download and install Adobe Reader 5.0 or above via Adobe website at: <http://www.adobe.com/products/acrobat/readmain.html>



## Driver Installation Menu

**Install Drivers** This CD contains and lists all the necessary drivers upon clicking on the **Install Drivers** button. Please install the drivers according to your operating system. Some drivers may require a reboot after installation for new settings to take effect.



**Check the Latest Release** Upon clicking this button, the default internet browser will open and link to SoyoUSA download website. The internet connection must be established before the connection. Otherwise you can manually link to: <http://www.soyousa.com/downloads/> for the latest BIOS/driver updates.

**Microsoft DirectX 9.0b** The latest Microsoft DirectX 9.0b will be installed upon clicking on this button. DirectX 9.0b is a program developed by Microsoft that intended for the enhancement of multimedia performance and security, but limited to Windows users. PC games and graphic card utilizing this new technology usually deliver more realistic and animated visual and audio experience.




**Board Information** An auto detection of the motherboard and chipset models will be performed on clicking the button, a useful function to determine your motherboard/chipset models before a BIOS/chipset driver update.

## 5 Installing the USB2.0 Driver

### Windows XP/Windows 2000

USB 2.0 drivers are available for download by Windows Update for both Windows XP and Windows 2000. Windows XP Service Pack 1/Windows 2000 Service Pack 4 have included USB2.0 driver

1. Install Windows XP Service Pack 1/Windows 2000 Service Pack 4 via Windows Update
2. Go to the Device Manager.
3. Remove "  Universal Serial Bus (USB) Controller "
4. Restart your system.
5. The operating system should automatically detect and install the USB 2.0 controller after restart.

For more information on USB 2.0 support by Windows XP, please visit:

<http://www.microsoft.com/windowsxp/pro/downloads/servicepacks/sp1/default.asp>

For more information on USB2.0 support by Windows 2000, please visit:

<http://www.microsoft.com/windows2000/downloads/servicepacks/sp4/default.asp>

*Note: Windows 95/98/ME don't support USB 2.0 function.*

## 6 Troubleshooting

### Boot-up Issues

#### **1. The system does not power up. No beeping sound is heard and the CPU fan is not spinning.**

1. Ensure that there are brass standoffs or plastic insulators between the motherboard and the case under every screw hole.
2. Ensure that JP5 is on pins 1-2 NOT 2-3.
3. Ensure the 20-pin and 4-pin power connector is connected to the motherboard.
4. Ensure the power cord is connected and the power supply is turned on.
5. Ensure the power button is correctly connected to the motherboard.
6. Ensure the power supply is functioning and powerful enough to sustain the normal operation and stability of the system. The minimum requirement for a qualified power supply is 350 watts.
7. Remove the motherboard from the case to rule out the possibility of short-circuit and reinstall all components outside the case and then start the system again.

#### **2. The system powers up without any display and beeping sound, but the CPU fan is turning.**

1. Ensure the case or internal speaker is connected correctly.
2. Short JP5 to clear the CMOS and check all jumper settings on the motherboard.
3. Remove ALL SDRAM from DIMM slots. Power on the system, and check for beeps.
4. If system beeps, reseat SDRAM and then check for beeps again. If no beeps with SDRAM installed, the SDRAM may be defective. Please replace SDRAM.
5. Replace the CPU and then restart the system.
6. Check if the power supply is ok. The minimum should be 350 watts.
7. Ensure the CPU fan is connected to CPUFAN1 connector.
8. Remove the motherboard from the case to rule out the possibility of short-circuit and reinstall all components outside the case and then start the system again.
9. Replace the graphic card with usable one. Ensure the graphic card is compliant with AGP 4X/8X with 1.5v & 0.8v power consumption.

#### **3. The system powers up without monitor display, but beeping sound is heard.**

1. Ensure the monitor cable is secured to the graphic card.
2. Short JP5 to clear the CMOS and check all jumper settings on the motherboard.
3. Ensure memory modules and graphic card are properly inserted in respective slots.

4. Replace the memory modules with usable ones and restart the system.
5. Replace the graphic card with a usable AGP 4X/8X and restart the system.

#### ***4. The system turns on for a few seconds and then shuts down by itself.***

1. Ensure the CPU fan is connected to the CPUFAN1 connector and turning during the operation.
2. Ensure that the 20 pin and 4 pin power connectors are connected.
3. The CPU might be overheating. Check the CPU FAN if it is defective or see if the CPU fan is in contact with the CPU.
4. Clear the CMOS by shorting Pin 2-3 of JP5.
5. Make sure your power supply is capable of handling the system loads.
6. Sometimes replacing the power supply in use with a more powerful and verified one will be helpful. The minimum requirement for a qualified power supply is 350 watts, which is subject to the amount of hardware installed.

#### ***5. During Power Up Self Test routines, the system halts and displays "Verify DMI pool data... " What should I do?***

1. Clear the CMOS by shorting Pin 2-3 of JP5 and reboot.
2. Disconnect ALL IDE cables (HDD,CDROM)
3. If problem goes away please check IDE configuration, and plug one device in at a time to determine which device or cable is corrupted.
4. If the problem still exists, remove all the add-on cards except the graphic card and reboot. If it goes well, insert the removed add-on cards one by one to find out which one of them goes wrong.
5. If there are more than one memory modules, please insert only one memory module at a time to identify the defective one(s).
6. If the above procedures prove fruitless, change the CPU.

#### ***6. During boot-up, the CMOS halts on Memory Checksum Error.***

1. Clear the CMOS by shorting Pin 2-3 of JP5 and reboot.
2. If the problem still exists, re-flash the BIOS.
3. If the situation does not improve, replace the CMOS battery. Remember to reconfigure the BIOS after the battery replacement.
4. If the problem does not result from the dead battery, it is possible that the BIOS chip is corrupted. Contact your local SOYO branch for repair.



### Stability Issue

#### *7. My system intermittently halts on errors and becomes very unstable*

1. Clear the CMOS by shorting Pin 2-3 of JP5 and reconfigure the BIOS.
2. Restore any overclock BIOS/jumper settings to default settings.
3. Check the CPU temperature in BIOS menu to see if the CPU has been overheating. If the result is positive, change to a more power CPU cooling fan/heatsink.
4. Check the compatibility of the memory modules with the motherboard. If possible, replace the current memory modules with verified ones and reboot.
5. Update the BIOS to the latest version.
6. The power supply might not have enough wattage to support all the peripherals. If your system has other peripherals connected, like CD-RW, extra HDD, etc. disconnect them. And see if the problem is gone then.
7. Install Intel Inf driver.
8. Check if your motherboard is shorting out against the case.
9. Check if your memory module timings set in CMOS setup are supported by your memory module.

#### *8. My system intermittently hangs during Windows installation.*

1. If there are more than one memory modules, please insert only one memory module at a time to identify the defective one(s).
2. Go to BIOS and load the optimized defaults.
3. Download the latest BIOS updates and flash utility from our website, and re-flash the BIOS.
4. If it still has the problem, remove all other add-on cards except CPU (and CPU Fan)/ Memory/ Video card/Hard disk. See if you can finish Windows installation. Then put peripherals in one by one to identify which one causes the lockup.

### BIOS Issue

#### *9. How do I know the BIOS version of my motherboard?*

It will be displayed on the upper-left corner of the screen during boot-up. It will show as your board type followed by the revision number, such as kvxa\_2BA1 (meaning BIOS revision 2BA1 for the SY-K7V Dragon plus! board) or 6BA+ IV\_2AA2 which means SY-6BA+ IV motherboard with the 2AA2 BIOS.

### 10. Where can I find the latest BIOS for my motherboard?

Please visit our websites for the latest BIOS and other relevant software/specification update:

USA: <http://www.soyousa.com/downloads/>

Taiwan: <http://www.soyo.com.tw/downloads/>

### 11. How do I re-flash the BIOS?

1. Refer to the motherboard documentation/color box or use "Board Information" function on SOYO CD to determine the motherboard/chipset model.
2. Download the corresponding BIOS update and the latest BIOS flash utility from our download website.
3. Copy the BIOS update and the BIOS flash utility to a DOS-bootable diskette and reboot.
4. Set the first boot device to Floppy in BIOS Setup Utility.
5. Disable any BIOS protection mechanism in BISO Setup Utility or jumper settings.
6. Type "afudos /i\*.rom" under the A: in DOS mode. (Note: Assume your floppy is at "A". "\*" means your BIOS file name.).
7. Then reboot.

### 12. After re-flashing the BIOS, my system will not boot-up.

1. Clear the CMOS by shorting Pin2-3 of JP5 for 5 seconds.
2. The BIOS update may not be successful. Contact your local SOYO branch for repair.

### 13. Is it possible to reprogram my BIOS after an unsuccessful re-flashing?

Reprogramming the BIOS requires sophisticated equipment and cannot be done unprofessionally. Please contact your local SOYO branch for repair.

### 14. I'm using a 400 or 533 MHz FSB CPU, but I cannot find the 400MHz DDR option in the BIOS. Why?

To enable 400MHz DDR SDRAM function, please use a CPU with 800 MHz FSB.

## Graphic Card Issues

### 15. I cannot set my monitor to higher than 16 colors /640x 480 resolution.

1. Ensure that you have installed the correct graphic driver for your operating system.

2. Install the latest VGA driver from your graphic card manufacturer.

**16. After waking up from Suspend to RAM or Standby mode, the screen has no display, but I can hear the hard disk operating.**

1. Ensure your VGA card support Suspend to RAM function.
2. Visit the website of your VGA card manufacturer for a driver update or troubleshooting.

### **Audio Issues**

**17. How can I disable the onboard Audio?**

The onboard audio can be disabled in BIOS.

**18. The onboard audio doesn't work at all on my system.**

1. Ensure the speaker are connected to the Line-out audio jack and powered on.
2. Ensure the "Onboard Audio" item is set to "Enabled" in the BIOS menu.
3. Install the audio driver from SOYO CD again or get the latest one from our website.

**19. The sound system works fine in my system except for playing CD music in the CD-ROM, when there is no sound at all.**

This may result from the loose or even no connection between the CD-ROM and the onboard CD1 connector. Ensure a 4-wire audio cable firmly connects the CD-ROM and onboard CD1 connector and try again.

**20. The sound and everything else works fine except that the device connected to Line-in and/or Microphone doesn't work. What is wrong?**

1. Please go to sound driver utility and check if the line-in and/or microphone are enabled.
2. Check if the device connected to Microphone/Line-in is ok.

**21. The added PCI sound Card does not work properly.**

1. Enter SOYO COMBO Setup menu in BIOS and disable "Onboard Audio" item.
2. Go to "Integrated Peripherals" in BIOS and disable "Game port address" and "Midi port address" items.

## **Hard Disk Drive/Floppy Drive/CD-ROM Issues**

### ***22. My hard disk drive is not detected during Power Up Self Test routine.***

Change the jumper settings of the hard drive to cable select or single.

### ***23. Sometimes the system finds my CD-ROM, and sometimes not***

1. Ensure the CD-ROM is working properly.
2. The power supply may not provide enough power for all installed devices. Remove all redundant devices, such as a second hard drive/CD/DVD-ROM/RW, and reboot. If the system functions normally after the removal of some power-consuming devices, there may be a need for a reduction in installed devices or for a more powerful power supply.

### ***24. When I boot up my newly installed system, the monitor reads "Floppy Boot Failure" and the LED of the floppy disk does not go out.***

1. Ensure the red wire of floppy ribbon cable goes to Pin1 on the floppy drive side (don't trust the "key lock" or "notch") and use the end-connector of the cable (don't use middle one).
2. Some floppy drivers have their own jumper to make the same twist as the twist on the cable. Ensure this jumper is set correctly.

## 7 How to Contact Us?

- If you are interested in our products or in need of technical assistance, please contact the regional SOYO sales department as follows.
- SOYO prefers E-mail as an effective and economical way of communication. To receive our prompt reply, *please mention your country in the E-mail and entitle your letter with whatever problem/question you may have.*

### TAIWAN

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