



Precautions

1. Please read this Quick Start Guide before installation. Serious damage may occur if the installation procedures are not followed accordingly.
2. AGP 8X cards running at 1.5v/0.8v are not supported by this motherboard. Only AGP 2X/4X cards with 3.3v/1.5v power consumption are supported. Serious damage to the motherboard and connected devices may occur if an incompatible AGP card is wrongly placed into the AGP slot, and void the warranty.
3. Please ensure that your memory modules are installed properly. They can fit into the memory slots only in one orientation, and their gold edge should immerse completely into the slot. Failure to do so may damage your motherboard and memory modules.
4. An ATX 12V power connector should be connected to the motherboard before powering up the system to ensure system stability. A powerful and verified power supply is strongly recommended to sustain stable system operation, preferably 350 watts for minimal loading. The requirement of power supply is subject to the number of components you attach to your system.
5. On some motherboards, the actual chipset cooler fan/heatsink may look different from the photo on the color box of the motherboard, but will remain effective and capable of preventing the system from excessive heat.
6. If you have any problem getting your system to start, please first refer to the Troubleshooting section on this Quick Start Guide, or turn to the last page for our technical support information.
7. For Frequently Asked Questions and Troubleshooting Tools, please visit our Online Technical Support Center at <http://www.soyogroup.com/support/>

Preface

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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 and product specifications described herein is subject to amendment without notice. For further information, please visit our website at "<http://www.soyogroup.com>".

SY-P4I845GV/PEISA Plus Series - Version 1.0, Aug. 2005

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* The specifications of the motherboard are subject to change without notice.

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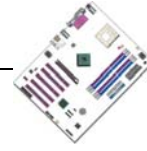
1 Introduction

Thank you for purchasing *SOYO SY-P4I845GV/PEISA Plus Motherboard*. This *Quick Start Guide* will guide you through the entire hardware/software installation of the motherboard with simplified steps.

1.1 Contents of the Motherboard

When unpacking the Motherboard, please check the following items:

◆ 1 * SOYO SY-P4I845GV/PEISA Plus Motherboard



◆ 1 * Quick Start Guide



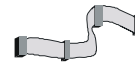
◆ 1 * Drivers & Software CD



◆ 1 * IDE Cable



◆ 1 * Floppy Disk Drive Cable

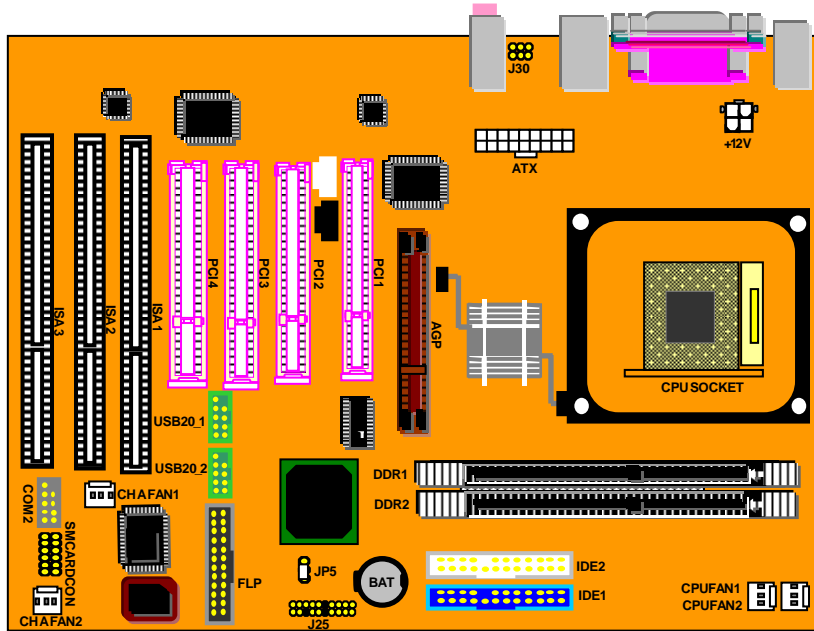


◆ 1 * Back panel

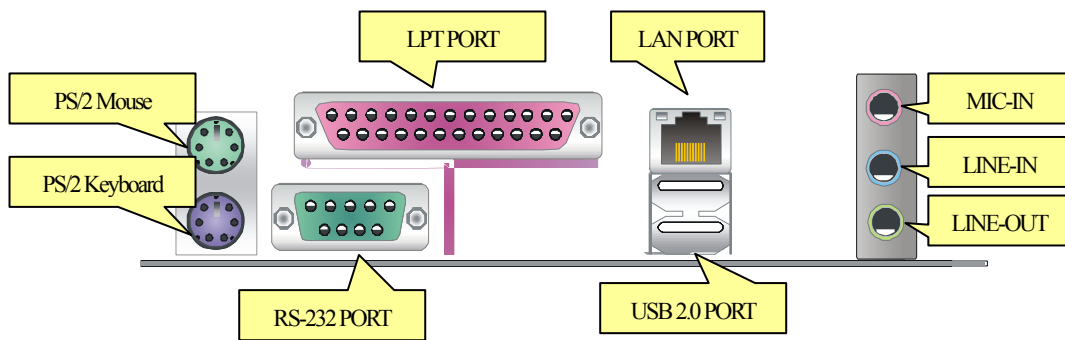


1.2 Motherboard Layout

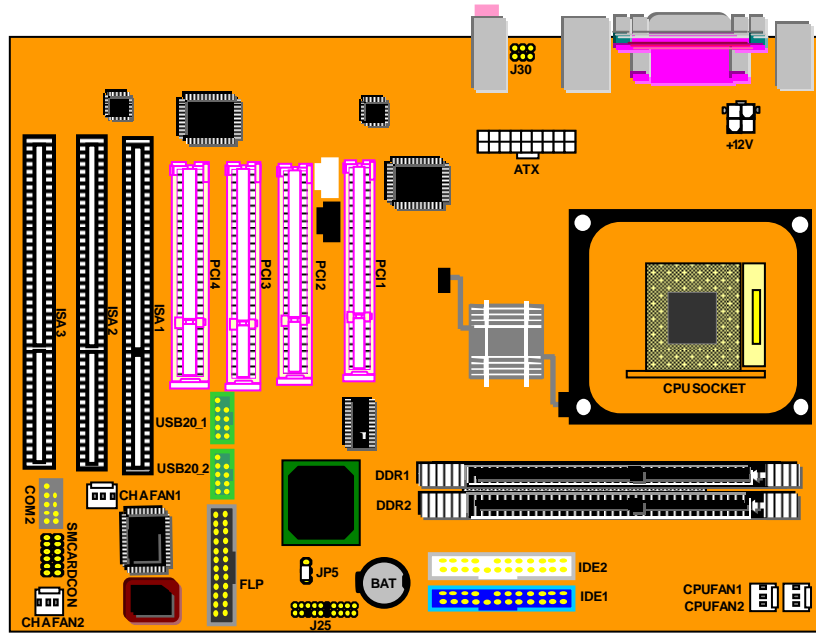
SY-P4I845PEISA Plus Motherboard Layout



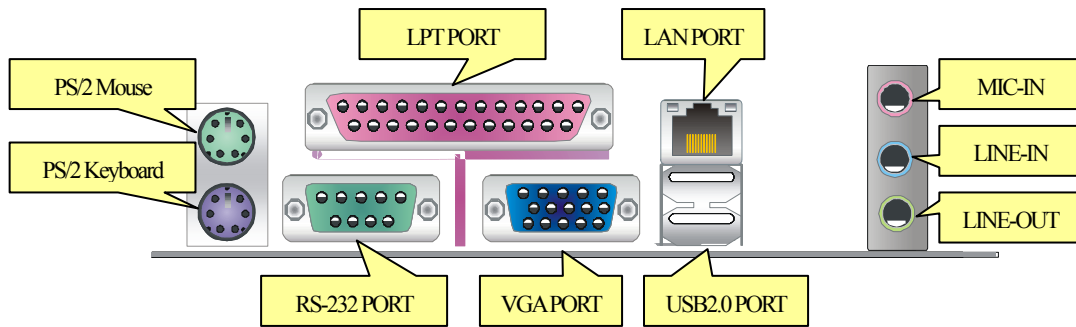
SY-P4I845PEISA Plus Back Panel Layout



SY-P4I845GVISA Plus Motherboard Layout



SY-P4I845GVISA Plus Back Panel Layout



1.3 Key Features

MOTHERBOARD FEATURES	
INTEL 845PE Chipset	<ul style="list-style-type: none"> ✓ Intel Pentium 4 Prescott CPU with Hyper-Threading Technology ✓ FSB 400/533MHz ✓ 266/333MHz DDR SDRAM ✓ AGP 2X/4X
ICH4 Southbridge	<ul style="list-style-type: none"> ✓ UATA 66/100 IDE ports ✓ Max. 6 USB2.0 ports
ISA	Onboard Legacy ISA Slots
LAN	Realtek RTL8100C 10/100Mbps Ethernet Controller
AC'97	Realtek ALC655 6-channel AC'97 CODEC
USB 2.0	High Speed USB 2.0 with up to 480Mbps transfer rate
ONBOARD I/O PORTS	
<ul style="list-style-type: none"> 1 * AGP 2X/4X slot (for SY-P4I845PEISA Plus only) 2 * 184-pin DDR memory slots 2 * ATA66/100 IDE ports 4 * PCI slots 3 * ISA slots 1 * D-sub VGA port (for SY-P4I845GVISA Plus only) 6 * USB2.0 (2 on rear panel & 4 onboard pin header) 1 * LAN ports (10/100Mbps) 2 * PS/2 ports 1 * LPT port 1 * RS-232 port 1 * Audio Jack (Line-In, Line-Out, Mic-In) 	

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 static damage to system components.
- Check the motherboard for observable damage. If any component appears to have come off or been damaged, please contact our local SOYO customer service center for an immediate replacement.

Below is a list of integral components needed to install the system:

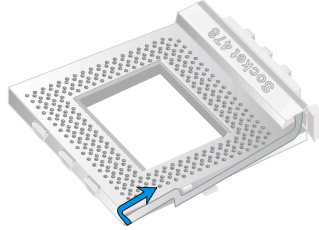
- ◆ A Intel Socket 478 CPU* (Pentium 4 Prescott / Pentium 4 / Celeron with 533/400MHz FSB)
- ◆ A verified CPU cooling fan/heatsink
- ◆ 1~2 266/333MHz DDR SDRAM modules
- ◆ 2X/4X AGP or PCI graphic card
- ◆ Well-ventilated computer case
- ◆ Power supply (at least 350W, ATX 12V approved)
- ◆ Monitor
- ◆ Keyboard (PS/2 or USB)
- ◆ Pointing Device (USB/PS2 Mouse/Trackball)
- ◆ Speakers (optional)
- ◆ Storage Devices: Hard Disk, CD/DVD-ROM/RW, Floppy Drive...
- ◆ Other Peripherals: printer, modem, scanner (optional)

* CPUs with Vcore higher than 1.6 volts are not supported.

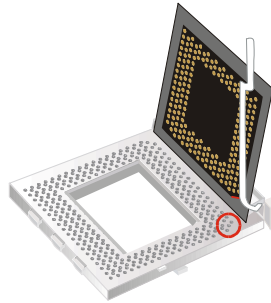
2.1 Installing the CPU

SOYO SY-P4I845GV/PEISA Plus Motherboard supports a single Intel Socket 478 CPU. Please follow the instructions below to install your CPU.

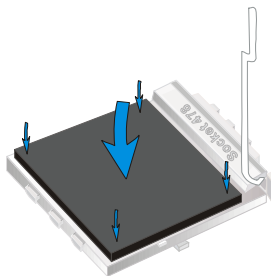
1. Lift the socket lever up to a vertical position.



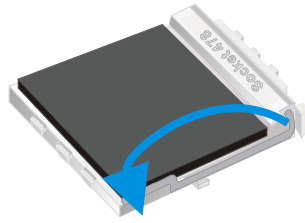
2. Place the marked CPU corner with the base of the socket lever (Pin 1)



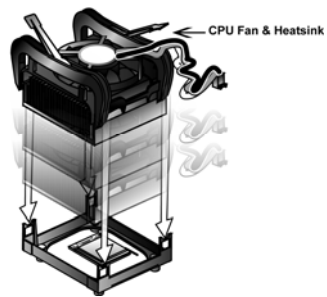
3. Push the CPU firmly into the socket with adequate force.



4. Hold the socket lever down to a horizontal position to secure the CPU.

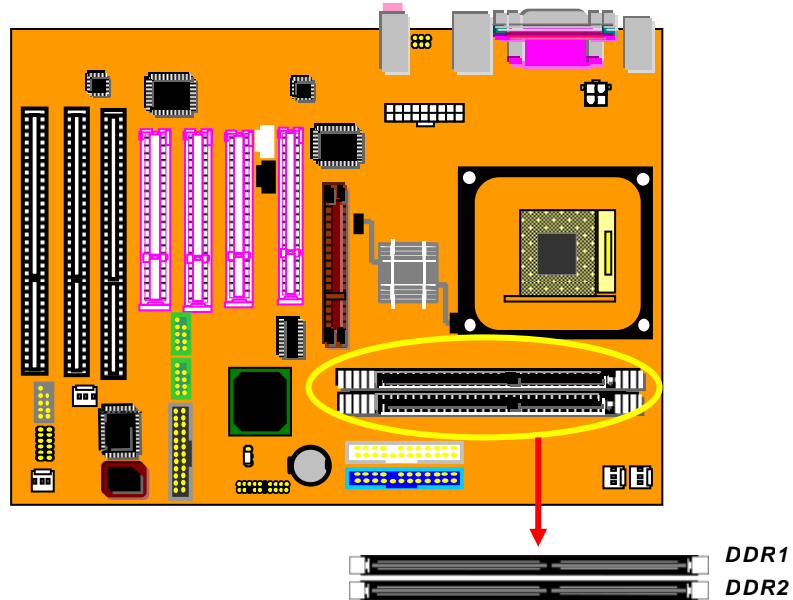


5. Spread the thermal grease evenly on the surface of the CPU.
6. Secure the CPU cooling fan/heatsink to the CPU socket and attach its power cable to the nearby CPUFAN1 connector. Failure to do so may cause serious damage to the CPU and motherboard and its attached components.



2.2 Installing the Memory Modules

SY-P4I845PE ISA PLUS accommodates two memory slots, supports 184-pin 266/333MHz DDR SDRAM. You can add 1~2 memory modules to the motherboard at your choice. In the case of adding two memory modules, please use a pair of verified memory modules, preferably of the same manufacturer, specifications, and capacity, to increase their compatibility with motherboard.



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

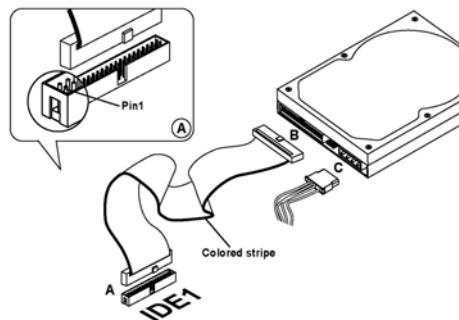
2.3 Installing the IDE Devices

Before Installing the IDE Devices:

1. Installing a hard disk and an optical device on the same IDE slot/cable is not recommended since such combination will reduce system performance.
2. 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 an optical device). The documentations of the IDE devices usually illustrate how to use jumpers or switches to switch the devices between MASTER and SLAVE modes.

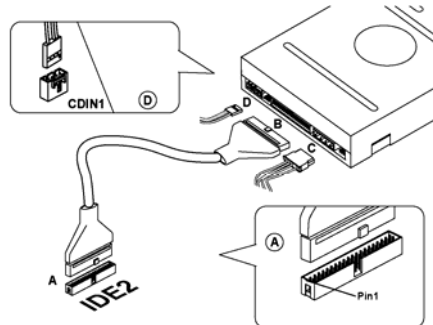
Installing IDE Devices on IDE1 Slot

The booting hard drive must always be attached to IDE1 slot and set to **Master Mode**.



Installing IDE Devices on IDE2 Slot

The second IDE drive on this controller must be set to **Slave Mode**. In the case of installing an optical device, you can plug an audio cable into onboard CDIN1 socket (indicated as Ⓓ) to enable front panel audio output from the ear phone jack of the device. The installation process is the same as that of IDE1.



2.4 Installing the Expansion Cards

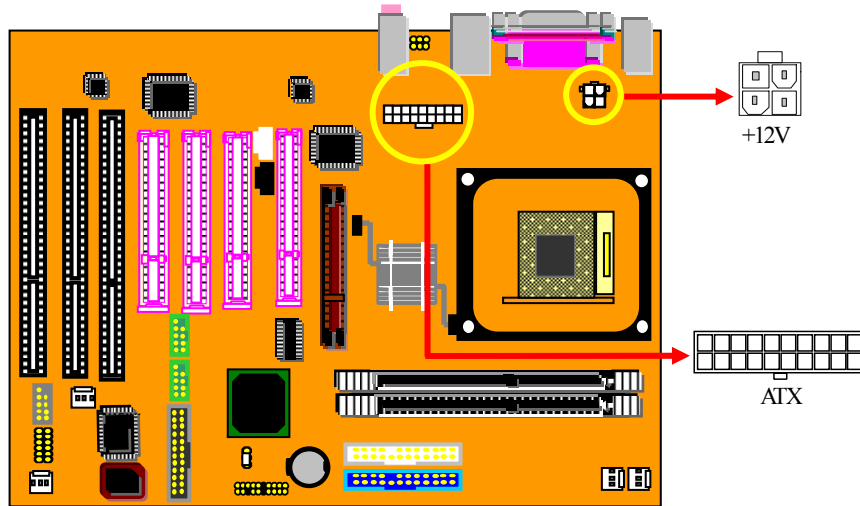
The motherboard accommodates 1 AGP 2X/4X slot (for SY-845PEISA Plus only), 4 PCI slots, and 3 ISA slots. Please be careful when installing an AGP graphic card. **Be sure your AGP graphic card is compliant with AGP 2X/4X specifications. Accidentally or intentionally inserting an incompatible AGP 8X card into a 2X/4X AGP slot may cause serious damage to the graphic card, the motherboard, and other attached components, and void the warranty.** Some powerful AGP cards may require additional power supply to sustain normal operation. Ensure all installed expansion cards have aligned with and firmly attached to their respective slots before powering up the system.

Installation Procedures

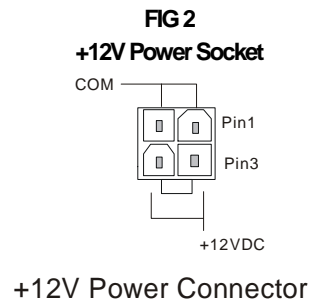
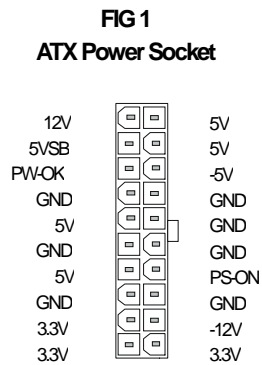
1. Refer to the documentations of each expansion card for its compatibility with the motherboard.
2. Press the expansion card firmly into its corresponding expansion slot.
3. Make sure the gold edge of the card is secured in place.
4. Attach additional power cable to the AGP card if necessary.

2.5 Connecting the Power Supply

The motherboard requires an ATX 12V compliant power supply. When connecting the power connectors, please follow its orientation and do not force them into power sockets. Please make sure that the power supply is not electrified before completing the entire hardware installation process.

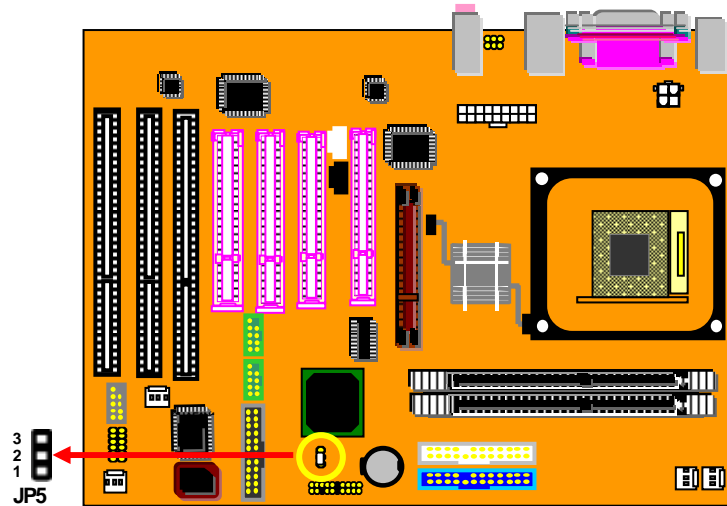


1. Connect the 20-pin connector to **ATX** power connector. (See FIG 1)
2. Connect the 4-pin connector to **+12V** power connector. (See FIG 2)

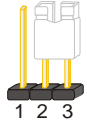
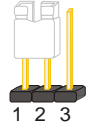


2.6 Clearing CMOS

Wrongly configured CMOS settings may cause boot-up errors or hardware and software malfunction. In this case, please follow the procedures below to clear the CMOS to restore default settings.



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

JUMPER	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 CPUFAN1 / 2			System Cooling Fan CHAFAN1 / 2			CDIN1					
Pin1	Pin2	Pin3	Pin1	Pin2	Pin3	Pin1	Pin2	Pin3	Pin4		
GND	+12V	Sensor	GND	+12V	Sensor	CD IN L	GND	GND	CD IN R		
USB20_1 / 2: Front Panel USB Connector											
Pin1		Pin2		Pin3		Pin4		Pin5			
VERG_FP_USBP WR0		VERG_FP_USBPW R0		USB_FP_P0-		USB_FP_P1-		USB_FP_P0+			
Pin6		Pin7		Pin8		Pin9		Pin10			
USB_FP_P1+		GROUND		GROUND		KEY		USB_FP_OC0			
SIR1: Infrared Port											
Pin1		Pin2		Pin3		Pin4		Pin5			
VCC		NC		IRRX		GND		IRTX			
					PWRLED = Power LED						
Pin11		Pin12		Pin13		Pin14		Pin15			
VCC		NC		GND		GND		GND			
SPKR = Speaker											
Pin17		Pin18		Pin19		Pin20		Pin21			
VCC		NC		NC		Speaker out		Speaker out			
RST = Reset			PWR = Power On / Off			HDDLED					
Pin1		Pin2		Pin4		Pin5		Pin9		Pin10	
Control PIN		GND		Power On/Off		GND		LED Anode		LED Cathode	

2.8 Connecting Multi-channel Speakers

The integrated AC97' audio chip supports up to 6-channel of audio output. Install the audio driver before connecting the audio cables to the audio jack referring to the table below. Please change the number of speaks in the audio driver utility to match the number of speakers installed.



Number of Speakers	Front Speaks	Rear Speakers	Subwoofer / Center
2	Line-out		
3	Line-out		Mic-in
6	Line-out	Line-in	Mic-in

3.3 The BIOS Navigation Keys

FUNCTION KEY	USAGE
Enter	Enters the submenu of a selected item
Esc	Exits the current menu
↑ ↓ ← →	Scroll through the items on the menu
+/- & Page Up/Page Down	Change the values of a selected item
F1	Displays a screen that describes all key functions
F5	Loads previous values for currently viewing page
F6	Loads Fail-Safe Defaults for currently viewing page
F7	Loads Optimized Defaults for currently viewing page
F10	Saves the current configuration and exits setup

3.4 Frequency / Voltage Control

This category allows you to configure frequency and voltage of onboard components.

Phoenix – AwardBIOS CMOS Setup Utility Frequency/Voltage Control		
C.I.H. 4-WAY Protection	Enabled	Item Help Menu Level This item allows you to write-protect your BIOS chip from virus. If you want to flash your BIOS, set this option to disable.
Onboard LAN	Enabled	
Auto Detect PCI Clk	Enabled	
Spread Spectrum	Disabled	
CPU Host/3V66/PCI Clock	Default	
↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

ITEM	FUNCTION
■ C.I.H. 4-WAY Protection	Write-protect your BIOS from virus. It must be disabled when flashing BIOS.
■ Onboard LAN	Activate/Deactivate onboard LAN chip.
■ Auto Detect PCI Clk	For EMI test purpose. Default is recommended.
■ Spread Spectrum	For EMI test purpose. Default is recommended.
■ CPU Host/3V66/PCI	Default is recommended.

3.5 Standard CMOS Features

This category allows you to change date and time of your system, and type of your floppy disk drive. It also detects and displays all installed IDE devices.

Phoenix – AwardBIOS CMOS Setup Utility Standard CMOS Features		
Date (mm:dd:yy)	Thu, Aug 4 2005	Item Help
Time (hh:mm:ss)	12 : 00 : 00	Menu Level
➤ IDE Primary Master	None	Change the day, month, year, and century
➤ IDE Primary Slave	None	
➤ IDE Secondary Master	None	
➤ IDE Secondary Slave	None	
Drive A Floppy 3 Mode Support	1.44M, 3.5 in. Disabled	
Video	EGA/VGA	
Halt On	All Errors	
Base Memory	640K	
Extended Memory	515072K	
Total Memory	516096K	
↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

ITEM	FUNCTION
■ Date/Time	Adjust date and time of system.
■ IDE Primary Master ■ IDE Primary Slave ■ IDE Secondary Master ■ IDE Secondary Slave	Display information of detected onboard IDE devices. Press [Enter] to launch IDE Auto-Detection.
■ Drive A ■ Floppy 3 Mode Support	Adjust the Drive A settings to match the floppy drive installed.
■ Video	Change the settings to match the display mode of your monitor.
■ Halt On	Will halt the system when specified errors are detected.

3.6 Advanced BIOS Features

The items on this menu allow you to change a wide selection of settings ranging from boot device sequence, CPU cache, logo display, and other settings.

Phoenix – AwardBIOS CMOS Setup Utility Advanced BIOS Features		
Item	Press Enter	Item Help
➤ CPU Feature		
Virus Warning	Disabled	Menu Level
CPU L1& L2 Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	
Quick Power On Self Test	Enabled	
First Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	LS120	
Boot Other Device	Enabled	
Boot Up Floppy Seek	Enabled	
Boot Up NumLock Status	On	
Gate A20 Option	Fast	
Typematic Rate Setting	Disabled	
xTypematic Rate (Chars/Sec)	6	
xTypematic Delay (Msec)	250	
Security Option	Setup	
APIC Mode	Enabled	
MPS Version Control For OS	1.4	
OS Select For DRAM > 64MB	Non-OS2	
HDD S.M.A.R.T. Capability	Disabled	
Report No FDD For WIN 95	No	
EPA LOGO SELECT	LOGO-0	
Small logo (EPA) Show	Enabled	
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

ITEM	FUNCTION
■ CPU Feature	Adjust CPU settings to meet some old system requirement such as NT4.0.
■ Virus Warning	If enabled, a warning will pop up when hard drive boot sector is being written, a virus protection mechanism to avoid boot sector infection.
■ CPU L1 & L2 Cache	If enabled, CPU L1 & L2 cache will be utilized to boost system performance.
■ CPU L2 Cache ECC Checking	If enabled, CPU L2 cache will be checked for errors to ensure data integrity.
■ Quick Power On Self Test	If enabled, the system will skip some POST tests to reduce time needed to boot up.
■ First / Second / Third Boot Device	Press [Enter], [Page Up]/[Page Down], or [+]/[-] to arrange the boot sequence of certain device among multiple boot device options.
■ Boot Other Device	In the case of no boot device is specified or failure to detect any boot device, system will try to boot from other available devices if this function is enabled.
■ Boot Up Floppy Seek	If enabled, the floppy drive will be sought and NumLock activated when booting up.
■ Boot Up NumLock Status	
■ Gate A20 Option	
■ Typematic Rate Setting	When enabled, the speed of keystroke can be adjusted.
■ Security Option	Select the timing when the password is required to enter the CMOS Setup Utility or to boot the system.
■ APIC Mode	Default is recommended.
■ MPS Version Control For OS	Default is recommended.
■ OS Select For DRAM > 64MB	Select OS2 only when you are running OS/2 OS. The default setting is Non-OS2
■ HDD S.M.A.R.T. Capability	Allow hard drive to perform self test as a precaution to avoid sudden crash. This function must be supported by hard drive and will reduce hard drive performance if enabled.
■ Report No FDD For WIN 95	Default is recommended.
■ EPA LOGO SELECT	Enable/disable the display of SOYO logo during POST.
■ Small Logo (EPA) Show	

3.7 Advanced Chipset Features

This category is intended to change settings of various devices ranging from memory, graphic card, and display devices to optimize system performance.

Phoenix – AwardBIOS CMOS Setup Utility Advanced Chipset Features			
	By SPD	Item Help	
DRAM Timing Selectable	2.5	Menu Level	
xCAS Latency Time	6		
xActive to Precharge Delay	2		
xDRAM RAS# to CAS# Delay	2		
xDRAM RAS# Precharge	Auto		
Refresh Mode Select	DDR266		
Memory Frequency For	Enabled		
System BIOS Cacheable	Disabled		
Video BIOS Cacheable	Disabled		
Memory Hole At 15M-16M	Enabled		
Delayed Transaction	16 Min		
Delay Prior to Thermal	64		
AGP Aperture Size (MB)			
** On-Chip VGA Setting **			
On-Chip VGA	Enabled		
On-Chip Frame Buffer Size	8MB		
Boot Display	Auto		
↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help			
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults			

ITEM	FUNCTION
■ DRAM Timing Selectable	Allows you to manually adjust your DRAM configurations to hardware specification. Default setting is recommended.
■ Refresh Mode Select	
■ Memory Frequency For	Allows you to adjust your memory operating frequency.
■ System BIOS Cacheable	Allows the system to load System BIOS to memory to boost system performance.
■ Video BIOS Cacheable	Allows the system to load Video BIOS to memory to boost system performance.
■ Memory Hole At 15M-16M	Default is recommended.
■ Delayed Transaction	Default is recommended.
■ Delayed Prior to Thermal	Default is recommended.
■ AGP Aperture Size	This item is to be configured to match the memory size of your AGP graphic card.
■ On-chip VGA	Allows you to enable/disable onboard display function, available to SY-P4I845GVISA Plus only.

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■ On-Chip Frame Buffer Size	Allows you to set aside up to 8MB of the main memory at the disposal of onboard graphic chip.
■ Boot Display	Allows you to choose your display devices for optimal viewing pleasure.

3.8 Integrated Peripherals

This category is intended to change the settings of various onboard devices to enhance system performance and avoid hardware conflicts.

Phoenix – AwardBIOS CMOS Setup Utility Integrated Peripherals		
		Item Help
On-Chip Primary PCI IDE	Enabled	Menu Level
IDE Primary Master PIO	Auto	
IDE Primary Slave PIO	Auto	
IDE Primary Master UDMA	Auto	
IDE Primary Slave UDMA	Auto	
On-Chip Secondary PCI IDE	Enabled	
IDE Secondary Master PIO	Auto	
IDE Secondary Slave PIO	Auto	
IDE Secondary Master UDMA	Auto	
IDE Secondary Slave UDMA	Auto	
USB Controller	Enabled	
USB 2.0 Controller	Enabled	
USB Keyboard Support	Disabled	
AC97 Audio	Auto	
Init Display First	PCI Slot	
IDE HDD Block Mode	Enabled	
POWER ON Function	BUTTON ONLY	
x KB Power ON Password	Enter	
x Hot Key Power ON	Ctrl-F1	
Onboard FDC Controller	Enabled	
Onboard Serial Port 1	3F8/IRQ4	
Onboard Serial Port 2	2F8/IRQ3	
UART Mode Select	Normal	
x UR2 Duplex Mode	Half	
Onboard Parallel Port	378/IRQ7	
Parallel Port Mode	SPP	
x ECP Mode Use DMA	3	
PWRON After PWR-Fail	Off	
Game Port Address	201	
Midi Port Address	330	
Midi Port IRQ	10	
↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

ITEM	FUNCTION
<ul style="list-style-type: none"> ■ On-Chip Primary PCI IDE ■ On-Chip Secondary PCI IDE 	Allow you to enable/disable onboard IDE 1/IDE 2 slots.
<ul style="list-style-type: none"> ■ IDE Primary Master/Slave PIO/UDMA ■ IDE Secondary Master/Slave PIO/UDMA 	Allow you to decide the transfer modes of multiple IDE devices. Default settings are recommended.
<ul style="list-style-type: none"> ■ USB Controller ■ USB 2.0 Controller ■ USB Keyboard Support 	Allow you to enable/disable USB support for USB 2.0 and legacy devices such as keyboards & mouse.
<ul style="list-style-type: none"> ■ AC97 Audio 	Allows you to enable/disable onboard audio chip.
<ul style="list-style-type: none"> ■ Init Display First 	Allows you to choose the interface graphic card in use for fast hardware detection and response.
<ul style="list-style-type: none"> ■ IDE HDD Block Mode 	Allows your IDE hard drive to decide the optimal number of block read/writes per sector for maximum hard disk performance.
<ul style="list-style-type: none"> ■ POWER ON Function 	Allows you to power on the system via hot keys or mouse movements.
<ul style="list-style-type: none"> ■ On board FDC Controller 	Default is recommended.
<ul style="list-style-type: none"> ■ Onboard Serial Port 1 ■ Onboard Serial Port 2 	Allow you to change hardware addresses of onboard serial ports to avoid IRQ conflicts.
<ul style="list-style-type: none"> ■ UART Mode Select 	Default is recommended.
<ul style="list-style-type: none"> ■ Onboard Parallel Port ■ Parallel Port Mode 	Allow you to change the hardware addresses and transfer modes of onboard parallel port to avoid IRQ conflicts.
<ul style="list-style-type: none"> ■ PWRON After PWR-Fail 	Allow the system to automatically power up after power failure.
<ul style="list-style-type: none"> ■ Game Port Address ■ Midi Port Address ■ Midi Port IRQ 	Reserved to allow you to change the hardware addresses of onboard Game\Midi ports to avoid IRQ conflicts. These ports are currently unavailable on SY-845GV/PEISA Plus.

3.9 Power Management Setup

This category is intended to enable you to manage your system power and choose various booting methods.

Phoenix – AwardBIOS CMOS Setup Utility Power Management Setup		
ACPI Function	Enabled	Item Help
ACPI Suspend Type	S1(POS)	Menu Level
x Run VGABIOS if S3 Resume	Auto	
Power Management	User Define	
Video Off Method	DPMS	
Video Off In Suspend	Yes	
Suspend Type	Stop Grant	
MODEM Use IRQ	3	
Suspend Mode	Disabled	
HDD Power Down	Disabled	
Soft-Off by PWR –BTN	Instant-Off	
Wake-Up by PCI card	Enabled	
Power On by Ring	Enabled	
Wake Up On LAN	Enabled	
x USB KB Wake-Up From S3	Disabled	
Resume by Alarm	Disabled	
x Date(of Month) Alarm	0	
x Time(hh:mm:ss)Alarm	0 : 0 : 0	
** Reload Global Timer Events **		
Primary IDE 0	Disabled	
Primary IDE 1	Disabled	
Secondary IDE 0	Disabled	
Secondary IDE 1	Disabled	
FDD, COM, LPT Port	Disabled	
PCI PIRQ [A-D]#	Disabled	
↑ ↓ → ←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

ITEM	FUNCTION
■ ACPI Function	ACPI (Advanced Configuration Power Interface) enables the operating system to control the amount of power given to each device attached to the computer. When enabled, the OS will take control of power management.
■ ACPI Suspend Type	Allows the OS to activated Suspend-to-RAM (S3, saving all unsaved data to main memory) and Suspend-to-Disk (S1, saving all unsaved data to hard drive) when entering hibernation

SOYO SY-P41845GV/PEISA Plus Quick Start Guide

	mode.
■ Power Management <ul style="list-style-type: none">• Suspend Mode• HDD Power Down	Allows you to achieve minimum/maximum power saving by enabling the system and hard drive to shut down after being left idle for the preset time.
■ Video Off Method	Allows you to decide what to display on the screen in suspend modes.
■ Video Off In Suspend	Allows you to turn off your display device in suspend modes.
■ Suspend Type	Default is recommended
■ MODEM Use IRQ	Allows you to designate a specific IRQ address to a modem.
■ Soft-Off by PWR-BTTN	Allows you to turn off your system by one-touch or four-second-touch on the power button.
■ Wake-Up by PCI Card	Allows your system to be wakened by PCI cards, such as a PCI LAN card.
■ Power On by Ring	Allows your system to be powered on by an inbound call through a modem.
■ Wake Up On LAN	Allows your system to be powered up by onboard LAN chip.
■ Resuem by Alarm	Allows the system to automatically power up at the preset date and time.
■ Reload Global Timer Events	Default is recommended.

3.10 PnP/PCI Configurations

This category allows you to control attached PCI devices to avoid hardware resource conflicts.

Phoenix – AwardBIOS CMOS Setup Utility PnP/PCI Configurations		
PNP OS Installed	No	Item Help
Reset Configuration Data	Disabled	Menu Level
Resources Controlled By	Auto (ESCD)	
x IRQ Resources	Press Enter	
x DMA Resources	Press Enter	
PCI/VGA Palette Snoop	Disabled	
Assign IRQ For VGA	Enabled	
Assign IRQ For USB	Enabled	
PCI Latency Timer(CLK)	32	
INT Pin 1 Assignment	Auto	
INT Pin 2 Assignment	Auto	
INT Pin 3 Assignment	Auto	
INT Pin 4 Assignment	Auto	
INT Pin 5 Assignment	Auto	
INT Pin 6 Assignment	Auto	
INT Pin 7 Assignment	Auto	
INT Pin 8 Assignment	Auto	
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

ITEM	FUNCTION
■ PNP OS Installed	If you are using a Plug & Play capable OS, choose “Yes” to enable PNP support. Choose “No” for non-PNP OS and manual configuration of PNP devices.
■ Reset Configuration	When you encounter hardware conflicts after installing a new device to the system, set this item to “Enabled” to reset Extended System Configuration Data (ESCD) when you exit CMOS Setup Utility.
■ Resources Controlled by	Allows you to manually allocate IRQ/DMA resource when encountering hardware errors unsolvable by automatic configuration.
• IRQ Resources	
• DMA Resources	
■ PCI/VGA Palette Snoop	Default is recommended.
■ Assign IRQ For VGA	Allows you to assign a specific IRQ address for VGA devices.
■ Assign IRQ For USB	Allows you to assign a specific IRQ address for onboard USB.

■ PCI Latency Timer(CLK)	Default is recommended.
■ INT Pin 1~8 Assignment	Default is recommended.

3.11 PC Health Status

The category is intended to monitor the temperature of the system, and the speed of fans.

Phoenix – AwardBIOS CMOS Setup Utility PC Health Status		
Shutdown Temperature	Disabled	Item Help
CPU Vcore	?? V	Menu Level
+3.3 V	?? V	
+ 5 V	?? V	
+ 12 V	?? V	
DRAM Voltage	?? V	
AGP Voltage	?? V	
CHA Temperature	?? °C / ?? °F	
CPU Temperature	?? °C / ?? °F	
CHAFAN1 Speed	???? RPM	
CPUFAN1 Speed	???? RPM	
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

ITEM	FUNCTION
■ Shutdown Temperature	Allows you to set the maximum CPU temperature, at or over which the system will automatically shut down to prevent CPU overheat.
■ CPU Vcore	Displays CPU core voltage.
■ DRAM Voltage	Displays DRAM voltage.
■ CHA/CPU Temperature	Displays chassis and CPU temperatures.
■ CHAFAN1/CPUFAN1 Speed	Displays the speed of chassis and CPU fans.

3.12 Load Fail-Safe Defaults

This option, mainly used for ferreting out system problems and hardware conflicts, allows you to automatically disable unnecessary, overclocking, and performance-enhancing capabilities of BIOS without the need to go through every category to make changes.

3.13 Load Optimized Defaults

This option allows you to load optimal BIOS settings without the need to go through every category to make changes. This option is recommended only when you have successfully installed your system and run it without any problem for a period of time. If the system proves unstable after activating this function, please restore to the default factory settings using “Load Fail-Safe Defaults”.

3.14 Set Supervisor Password

This option allows you to set Supervisor Password, which will be prompted when entering CMOS Setup Utility or during POST to prevent unauthorized changes to BIOS settings or unsolicited use of the system. You can choose the timing when the password will be required by changing “Security Option” under “Advanced BIOS Features” to “Setup” (BIOS prompt) or “System” (POST prompt).

3.15 Set User Password

This option allows you to set User Password, which will be prompted when entering CMOS Setup Utility or during POST to prevent unauthorized changes to BIOS settings or unsolicited use of the system. You can choose the timing when the password will be required by changing “Security Option” under “Advanced BIOS Features” to “Setup” (BIOS prompt) or “System” (POST prompt).

3.16 Save & Exit Setup

This option allows you to save current changes and exit CMOS Setup Utility. The system will reboot automatically for the changes to take effect.

3.17 Exit Without Saving

This option allows you to exit CMOS Setup Utility without saving any changes. The system will reboot automatically.

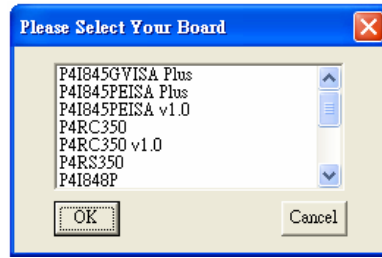
4 Drivers & Software CD

4.1 The Contents of Drivers & Software CD

Drivers & Software CD provides a comprehensive selection of drivers and tools that may come in handy during installation or when system problems occur.

QSG	A detailed and informative electronic installation guide of the motherboard in PDF format.		
Hardware Drivers	Drivers	Description	Supported OS
	Intel Chipset Software Installation Utility	Accelerates and stabilizes your system.	98SE/ME/2000/XP
	Intel Application Accelerator	Accelerates the applications you install.	98SE/ME/2000/XP
	Intel i845GV Graphic Driver	Installs graphic driver for SY-845GVISA Plus	98SE/ME/2000/XP
	Intel USB2.0 Driver	Installs USB2.0 driver for old OS.	98SE/ME
	Realtek Audio Driver	Installs onboard AC 97' audio driver.	98SE/ME/2000/XP
	Realtek Lan Driver	Installs onboard 10/100Mbps LAN driver	98SE/ME/2000/XP
	SY-P4I845GV/PEISA Plus Hardware Monitor	A utility that monitors your hardware status.	98SE/ME/2000/XP
Bundled Software	Software	Description	Operating System
	Wasay Pro Magic Plus	System restoration software	Windows/Dos
	Wasay Image It	Hard disk backup & recovery software	Windows
	Wasay Data Processing Utility	Data protection and management utility	Windows
	Panda Antivirus Titanium	Antivirus software	98SE/ME/2000/XP

4.2 How to Use the CD?



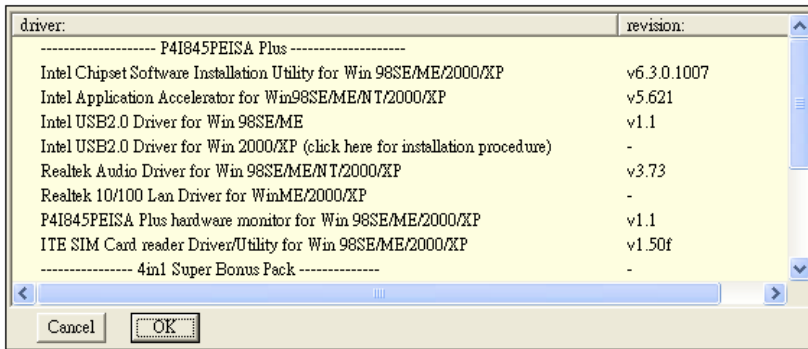
Motherboard Selection Menu

Inserting SOYO CD Upon inserting SOYO CD, the menu above will automatically pop up for you to select your motherboard model number. Select your motherboard type and then click on <OK>.



SOYO CD Start-Up Menu

Read the Manual Upon clicking on <Read the Manual> button, an electronic Quick Start Guide in PDF (Portable Data Format) format will be opened. To browse the PDF file, please download and install Adobe Reader 7.0 or above available at Adobe website: <http://www.adobe.com>



Driver Installation Menu

Install Drivers This CD contains all drivers of listed motherboards. Upon clicking on the <Install Drivers> button, all drivers necessary to install the selected motherboard will be enumerated. 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 Releases Upon clicking this button, the default internet browser will be opened and link to SOYO Group download website. The internet connection must be established before the connection. Otherwise you can manually link to: <http://www.soyogroup.com/downloads/> for the latest BIOS, driver, & manual/QSG 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 to enhance multimedia performance and security for Windows users. PC games and graphic card utilizing this new technology usually deliver more realistic and animated visual and audio experience.



Board Information Upon clicking on this button, a pop-up will appear and display the currently chosen motherboard type with chipset information. It is a useful tool which reassures you that you have chosen the right driver category to install.

5 *Activating USB2.0*

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 and Windows 2000 Service Pack 4 have already included USB2.0 driver

1. Install Windows XP Service Pack 1/Windows 2000 Service Pack 4 via Windows Update
2. Go to “Device Manager” in “System” under “Control Panel”.
3. Remove any USB controller marked by yellow exclamation mark.
4. Restart your system.
5. The operating system should automatically detect and install the USB 2.0 controller after a reboot.

For more information on USB 2.0 support by Windows OS, please visit Microsoft website at <http://www.microsoft.com>

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 under every screw hole between the motherboard and the case.
2. Ensure that JP5 is on pins 1-2 instead of 2-3.
3. Ensure the 20-pin and 4-pin power connector is connected to the motherboard. Check if the onboard power LED is on.
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 power supply is 350W.
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 screen 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 memory modules from memory slots. Power on the system, and check for beeps.
4. If the system beeps, reinstall memory modules and then check for beeps again. If no beeps are heard with memory modules installed, the memory modules may be defective. Please replace them.
5. Replace the CPU and then restart the system.
6. Check if the power supply is ok. The minimum requirement should be 350W.
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. Check the specs of the graphic card to see if it is compatible with the motherboard.

3. The system powers up without screen display, but beeping sound is heard.

1. Ensure the monitor cable is secured to the graphic card or onboard VGA port.
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 and restart the system again.
5. Replace the graphic card and restart the system again.

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 is 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 to see if it is defective or if the CPU heatsink has 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 system workloads.
6. Sometimes adding a more powerful power supply to the system will be helpful. The minimum requirement for a qualified power supply is 350W. The actual power requirement is subject to the total power consumption of all components installed.

5. During Power Up Self Test (POST) 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 attach just one IDE device at a time to determine which IDE device or IDE cable is corrupted.
4. If the problem still exists, remove all the add-on cards except the graphic card and reboot. If everything goes well, insert the removed add-on cards one by one to find out which one of them goes wrong.

5. If you have 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 replacing the battery.
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.

System Instability Issues

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. Discard any overclock BIOS/jumper settings and restore to default settings.
3. Check the CPU temperature in BIOS menu to see if the CPU has been overheating. If the result is positive, replace the current CPU cooling fan/heatsink with a more powerful one.
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 available at SOYO website.
6. The power supply might not have enough wattage to support all attached components. If your system has any dispensable components connected, like CD-RW, or extra HDD, etc. disconnect them to see if the problem is gone then.
7. Install chipset driver available on bundled driver CD.
8. Check if your motherboard is shorting out against the case.
9. Check if your memory module timings set in CMOS Setup Utility 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 dispensable add-on cards except CPU (and CPU Fan) / Memory / Video card / Hard disk. See if you can complete Windows installation. Then put add-on cards back in one by one to identify which one has caused the system crash.

BIOS Issues

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. There will be your motherboard type followed by the BIOS version. It is extremely important to know exactly your motherboard model number before performing a BIOS update.

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

Please visit our websites for the latest software, BIOS, and documentation updates at:

USA: <http://www.soyogroup.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 for model number.
2. Download the corresponding BIOS update and the BIOS flash utility from our download website.
3. Read carefully about BIOS update procedures on our website. The procedures could be quite different depending on your BIOS and motherboard type.
4. Copy the BIOS update and the BIOS flash utility to a bootable DOS diskette and reboot.
5. Set the first boot device to Floppy in CMOS Setup Utility.
6. Disable any BIOS protection mechanism in CMOS Setup Utility or jumper settings.

7. After the BIOS update, please reboot your system and check top-left corner of POST screen to see the update is successful.

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 BIOS reprogramming service.

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

Reprogramming the BIOS requires sophisticated equipment and cannot be performed unprofessionally. Please contact your local SOYO branch for BIOS reprogramming service.

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 CMOS Setup Utility. Please refer to Quick BIOS Setup in this QSG for know-how.

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

1. Ensure the speakers are connected to the Line-out audio jack and powered on.
2. Ensure the "Onboard Audio" item is set to "Enabled" in CMOS Setup Utility.
3. Install the audio driver from bundled driver CD again or get the latest audio from audio chip manufacturer's 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 SOYO?

- If you are interested in our products or in need of technical assistance, please contact the regional SOYO sales division 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.**

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