SY-7VBA133U
Motherboard

Quick Start Guide

SY-7VBA133U Motherboard

Socket 370 for Intel Pentium® & Celeron™ processors
VIA VT82C694T AGP/PCI/ISA Motherboard
66/100/133 MHz Front Side Bus supported
ATX Form Factor

About This Guide:
This Quick Start Guide can help system manufacturers and end users in setting up and installing the motherboard. Information in this guide has been carefully checked for reliability; however, to the correctness of the contents there is no guarantee given. The information in this document is subject to amend without notice.
For further information, please visit our **Web Site** on the Internet. The address is **"http://www.soyo.com.tw".**

7VBA133U Serial - Version 1.4 - Edition: September 2003

* These specifications are subject to amend without notice

1 Introduction

Congratulations on your purchase of the **SY-7VBA133U** Motherboard. This *Quick Start Guide* illustrates the steps for installing and setting up your new Motherboard.

This guide provides all users with the basic steps of Motherboard setting and operation. For further information, please refer to the *SY-7VBA133U Motherboard User's Manual* that came with your Motherboard.

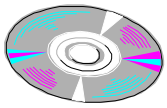
Unpacking

When unpacking the Motherboard, check for the following items:

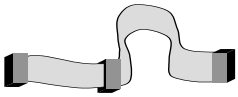
- The SY-7VBA133U VIA VT82C694T AGP/PCI/ISA Motherboard

- The Quick Start Guide

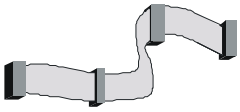
- The Installation CD-ROM



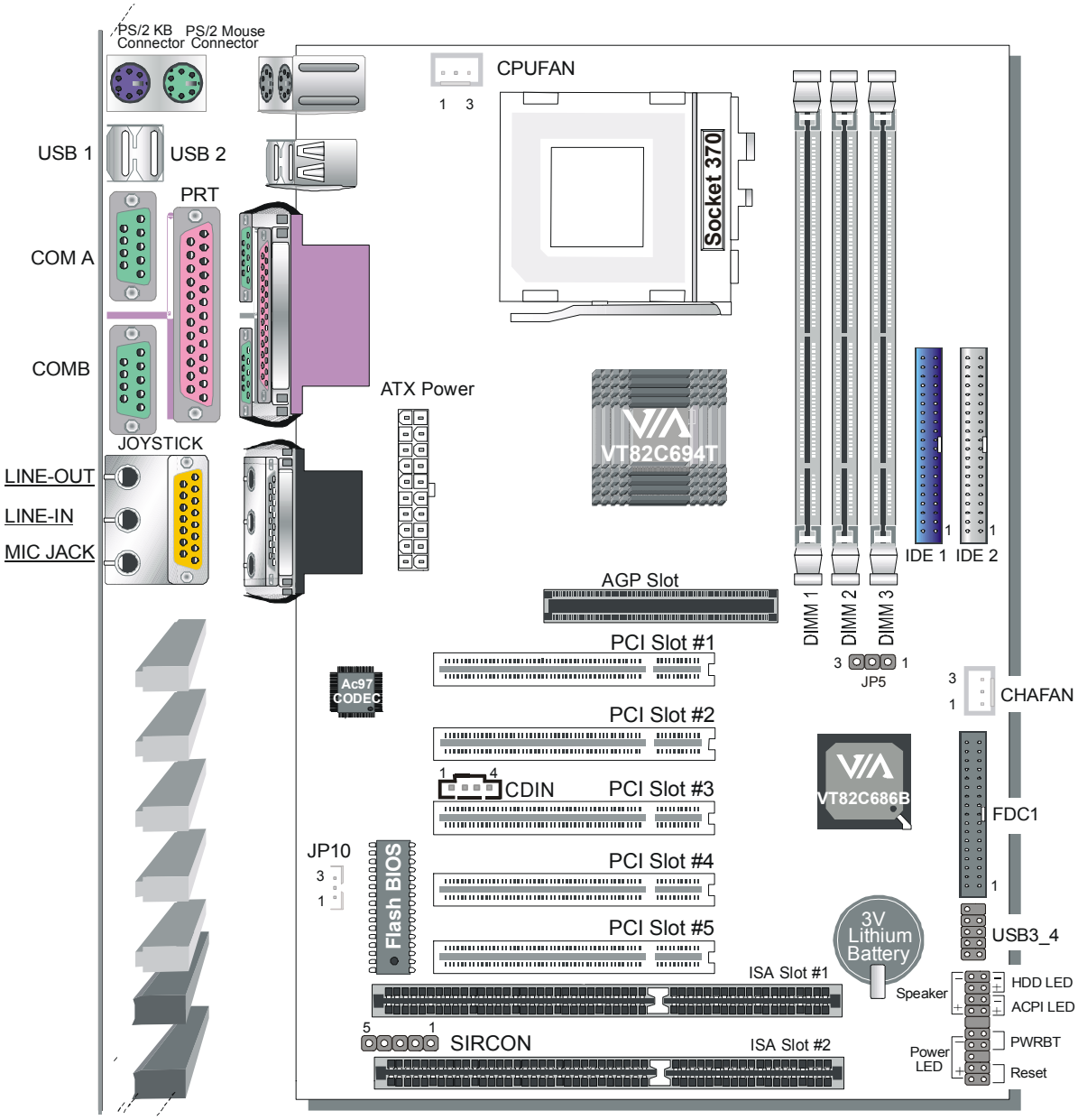
- One IDE Device ATA 100 Flat Cable



- One Floppy Disk Drive Flat Cable



SY-7VBA133U Motherboard Layout



Key Features

- Supports Intel® processors
  - Celeron™
  - Pentium® III Coppermine/Tualatin
- Supports 66/100/133 MHz Front Side Bus Frequency
- Chipset consists of the VT82C694T system controller and VT82C686B PCI to ISA bridge
- Supports SDRAM and VC SDRAM
- Power failure resume
- Supports Suspend to RAM
- Auto-detect CPU voltage
- Easy CPU settings in BIOS with the "SOYO COMBO Setup"
- PC99, ACPI
- Ultra DMA33/66/100 (ATA 33/66/100)
- Supports Wake-On-LAN (WOL)
- Power-on by modem and alarm
- Supports onboard hardware monitoring
- Support AC97 Audio
- Supports multiple-boot function
- AGP 2.0 Compliant;
  AGP Universal Connector supports:
  - 1.5V and 3.3V AGP cards
  - 1X/2X/4X data transfer
- 3 x DIMM slots
- 2 x 16-bit ISA slots
- 5 x 32-bit bus mastering PCI slots
- 1 x 32-bit AGP slot
- 4 x USB ports onboard
- 1 x IrDA port
- ATX power connector
- Supports VRM 8.5 S.P.E.C

2 Installation

To avoid damage to your Motherboard, please follow these simple rules while handling this equipment:

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

Follow the directions in this section which is designed to guide you through a quick and correct method to install your new **SY-7VBA133U** Motherboard. For detailed information, please refer to the *SY-7VBA133U Motherboard User's Manual and Technical Reference* online manual on the CD-ROM package that came with your Motherboard.

Gather and prepare all necessary components to complete the installation successfully:

- Pentium® Socket370 processor with built-in CPU cooling fan (boxed type)
- SDRAM module(s)
- Computer case with adequate power supply unit
- Monitor
- PS/2 Keyboard
- Pointing Device (PS/2 Mouse)
- Speaker(s) (optional)
- Disk Drives: HDD, CD-ROM, Floppy drive…
- External Peripherals: Printer, Plotter, and Modem (optional)
- Internal Peripherals: Modem and LAN cards (optional)

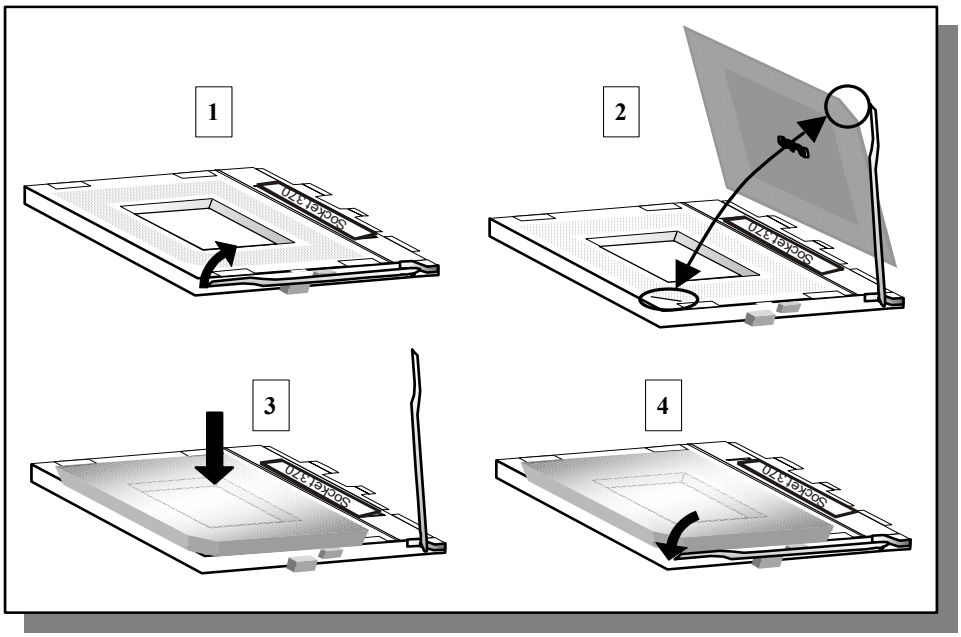
Note: 1. If you want to use an external speaker connected to "Line-out" port, please make sure to use an "amplified speaker" that can generate proper output sound volume.

Install the Motherboard

To perform the installation of your new **SY-7VBA133U** Motherboard, follow the steps below:

Step 1. **CPU Installation**

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



1. Lift the socket handle up to a vertical position.
2. Align the blunt edge of the CPU with the matching pinhole edge on the socket.
3. Seat the processor in the socket completely and without forcing.
4. Then close the socket handle to secure the CPU in place.

Remember to connect the CPU Cooling Fan to the appropriate power connector on the Motherboard. *The fan is a key component that stabilizes the system. It prevents the equipment from overheating and prolongs the life of your CPU.*

Step 2. Connections to the Motherboard

This section tells how to connect internal peripherals and the power supply to the Motherboard.

The internal peripherals consist of IDE devices (HDD, CD-ROM), Floppy Disk Drive, Chassis Fan, Front Panel Devices (Internal Speaker, Reset Button and IDE LED Switch.), Wake-On-LAN card, VGA card, Sound Card, and other devices.

For more details on connecting internal and external peripherals to your new SY-7VBA133U Motherboard, please refer to *SY-7VBA133U Motherboard User's Manual and Technical Reference* online manual on the CD-ROM.

Connectors and Plug-ins

Wake-On-LAN Header: JP10		
Pin1	Pin2	Pin3
5VSB	GND	MP-Wakeup

Standard IrDA (Infrared Device Header): SIRCON				
Pin1	Pin2	Pin3	Pin4	Pin5
VCC	NC	IRRX	GND	IRTX

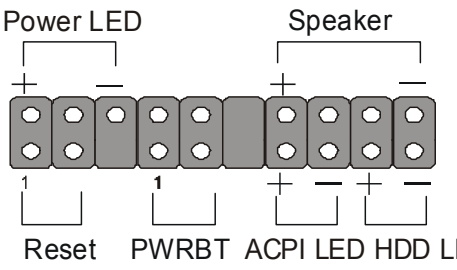
CPU Cooling Fan: CPUFAN		
Pin1	Pin2	Pin3
GND	12V	SENSOR

Chassis Fan: CHAFAN		
Pin1	Pin2	Pin3
GND	12V	SENSOR

USB3			
Pin1	Pin2	Pin3	Pin4
VCC	Data(-)	Data(+)	GND

USB4				
Pin6	Pin7	Pin8	Pin9	Pin10
VCC	Data(-)	Data(+)	GND	GND

CD Line-in: CDIN1, CDIN2		Pin 1	Pin 2	Pin 3	Pin 4
Connect the CD Line-in cord from the CD-ROM device to the matching header CDIN1	CDIN	L	G	G	R



Power LED		
Pin1	Pin2	Pin3
Anode	NC	Cathode

Speaker			
Pin1	Pin2	Pin3	Pin4
5V	NC	NC	Speaker out

HDD LED		**ACPI LED**		**PWRBT**		**RESET**	
Pin1	Pin2	Pin1	Pin2	Pin1	Pin2	Pin1	Pin2
LED Anode	LED Cathode	VCC	Control Pin	Power On/Off	GND	Power Good	GND

ATX Power On/Off: PWRBT

Connect your power switch to this header (momentary switch type).
To turn off the system, press this switch and hold down for longer than 4 seconds.

ATX Power Supply: ATX PW

Attach the ATX Power cable to this connector. (This motherboard requires an ATX power supply, an AT power supply can NOT be used.)
When using the Power-On by PS/2 Keyboard function, please make sure the ATX power supply is able to provide at least 720mA on the 5V Standby lead (5VSB) in order to meet the standard ATX specifications.

Step 3. Configure Memory

Your board recommend a limit of 3 DIMMs or 6 banks at 133 MHz for 1.5GB max memory using unbuffered and Non-ECC DIMM modules. On this motherboard, DRAM speed can be set independent from the CPU front side bus speed. Depending on the DRAM clock speed setting in the BIOS setup, appropriate memory modules must be used. For FSB 66MHz speed, use PC66 or PC100 memory; for FSB 100MHz speed, use PC66/PC100/PC133 memory; for FSB 133MHz speed, use PC100 or PC133 memory.

Memory Configuration Table

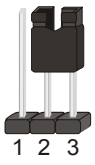
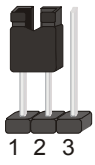
Number of Memory Modules	DIMM 1	DIMM 2	DIMM 3
RAM Type	SDRAM		
Memory Module Size (MB)	128/256/512 MB		

CMOS Clear (JP5)

In some cases the CMOS memory may contain wrong data, follow the steps below to clear the CMOS memory.

1. Clear the CMOS memory by momentarily shorting pin 2-3 on jumper JP5. This jumper can be easily identified by its white colored cap.

2. Then put the jumper back to 1-2 to allow writing new of data into the CMOS memory.

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

3 *Quick BIOS Setup*

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

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

Step 1. Select [STANDARD CMOS SETUP]

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

Step 2. Select [LOAD OPTIMIZED DEFAULTS]

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

Step 3. Select [SOYO COMBO FEATURE]

Set the **[CPU Frequency Select]** field to "Manual", to be able to change the CPU frequency 1 MHz stepping.

Step 4. Select [SAVE & EXIT SETUP]

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

4 The SOYO CD

The SOYO-CD will Auto Run only in Windows Base Operating System.

Your SY-7VBA133U motherboard comes with a CD-ROM labeled "SOYO CD." The SOYO CD contains

a. The user's manual for your new motherboard -in PDF format,

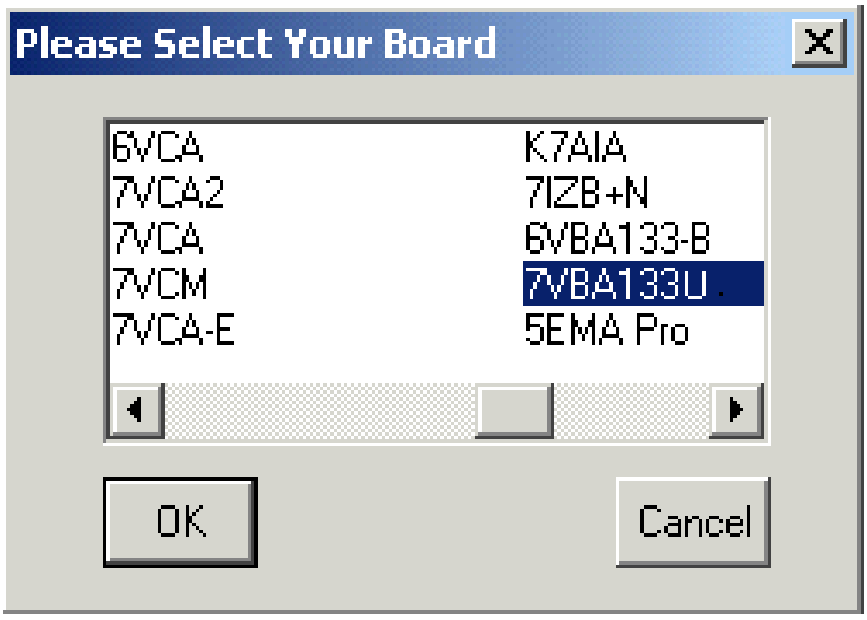
b. The drivers software available for installation, and

c. A database in HTML format with information on SOYO motherboards and other products.

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

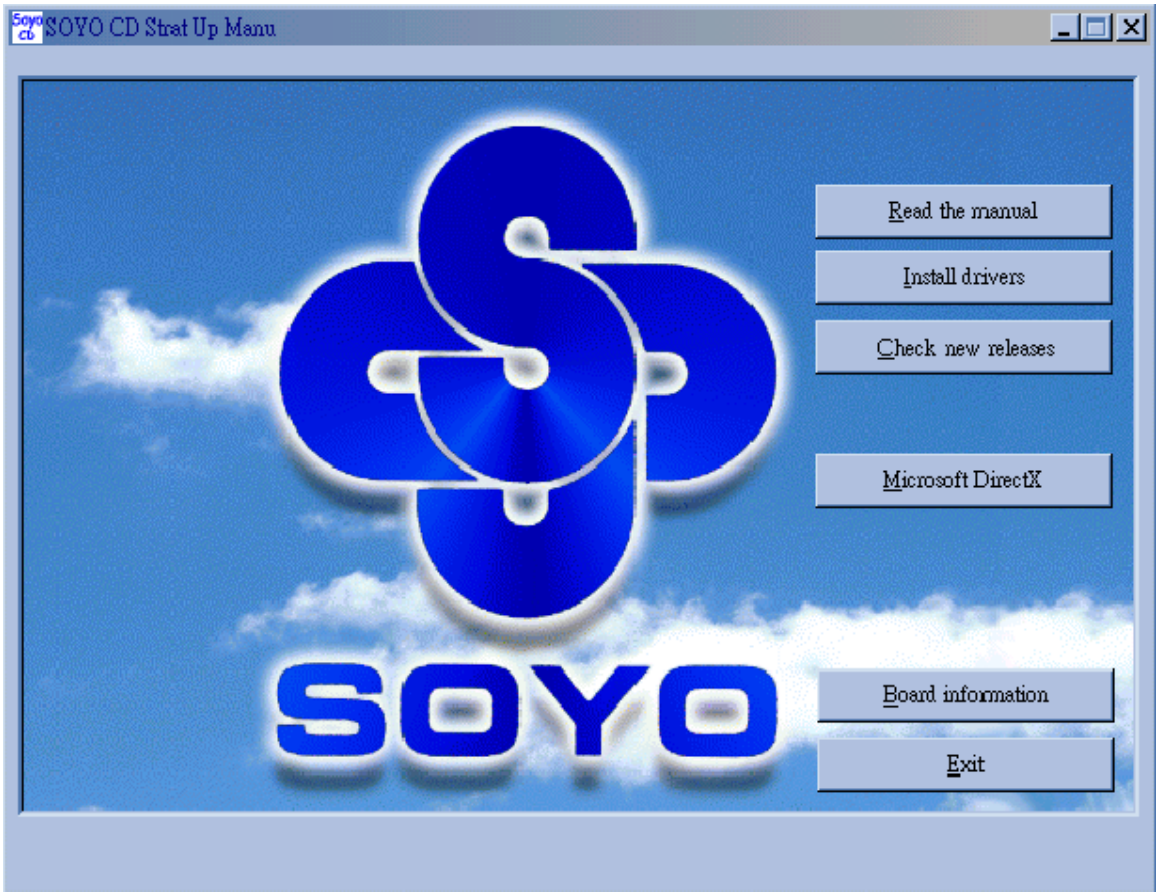
If you are running Windows NT/2K/XP, the SOYO-CD will not detect your motherboard type. In that case the following dialog will pop up. Please choose your motherboard model number and press OK.

Now the SOYO-CD Start Up Menu will come up as shown on the following page



(SOYO CD Start Up Program Menu)

Under Windows 95/98/ME, the SOYO CD Start Up Program automatically detects the SOYO motherboard the system uses and displays the corresponding model name.

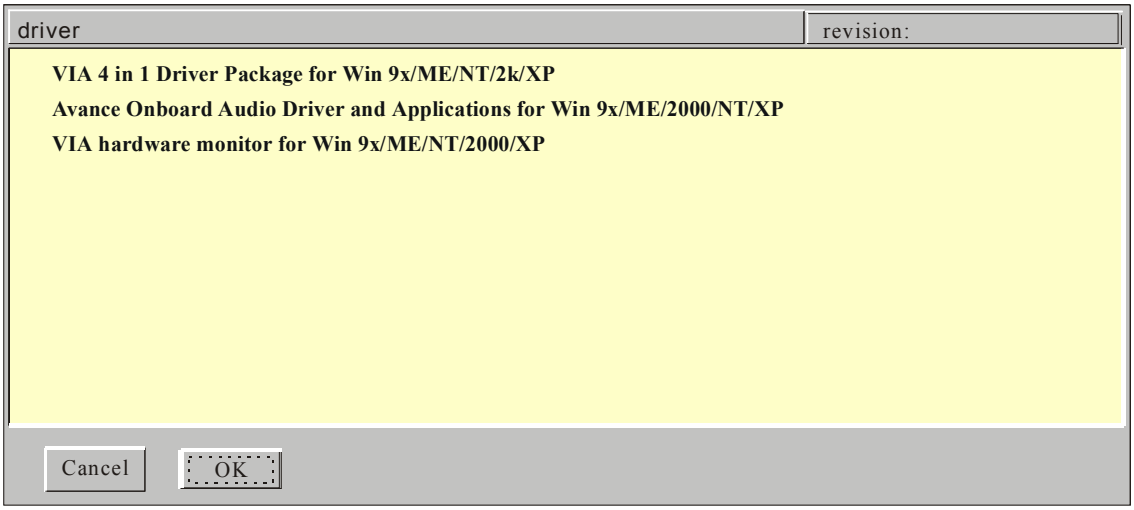


The user's manual files included on the SOYO CD are in PDF (Postscript Document) format. In order to read a PDF file, the appropriate Acrobat Reader software must be installed in your system.

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

Step 2. Install Drivers and Utilities

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



(Driver Installation Menu)

A short description of all available drivers follows:

- **VIA 4 in 1 Driver Package for Win 9x/ME/NT/2k/XP**

VIA 4 In 1 driver includes four system drivers to improve the performance and maintain the stability of systems using VIA chipsets. These four drivers are:
VIA Registry (INF) Driver, VIA AGP VxD driver, VIA ATAPI Vendor Support Driver and VIA PCI IRQ Miniport Driver. For Windows NT users, the VIA IDE Bus Mastering driver is the only driver to be installed in your system.
A description of 4 drivers followa:

—**Bus Master PCI IDE Driver**

The ATAPI IDE driver enables the performance enhancing bus mastering functions on ATA-capable Hard Disk Drives and ensures IDE device compatibility.

—**AGP VxD Driver**

VIA AGP VxD Driver is to be installed if you are using an AGP VGA device. VIAGART.VXD will provide service routines to your VGA driver and interface directly to hardware, providing fast graphical access.

—**VIA Chipset Functions Registry**

VIA Registry (INF) Driver is to be installed under Windows. The driver will enable the VIA Power Management function.

—**IRQ remapping utility (This driver is installed automatically)**

VIA PCI IRQ Miniport Driver is to be installed under Windows 98 only, it sets the system's PCI IRQ routing sequence.

- **Avance Onboard Audio Driver and Applications for Win 9x/ME/2000/NT/XP**

This sound driver with applications is for windows 98, 98SE, ME, NT4.0, 2000 and XP. The application support file formats including .MP3, .CDA, .MIDI, .WAV & .WMA.

- **VIA hardware monitor for Win 9x/ME/NT/2000/XP**

Your motherboard comes with a hardware monitoring IC. By installing this utility Temperature, Fan speed and Voltages can be monitored. It is also possible to set alarms when current system values exceed or fall below pre-set values.

Select which driver you want to install and click ***OK,*** or click ***Cancel*** to abort the driver installation and return to the main menu.

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

Step 3. Check the Latest Releases

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

Quick Trouble shoot tips

Boot-up Issues

The system do not power-up, no beeping sound heard and the CPU fan does not turn on.

1. Check if the power cord is plug to the power source.
2. Check if the power is connected to the M/B.
3. Check if the cable of the case power button is connected to the M/B power button connector (see connectors and plug-ins in the manual for more info).
4. Make sure the power supply is not defective. Change the power supply. The minimum should be 250 watts.
5. Remove the M/B from the case and test the system. The M/B might be shorted to the case.

The system power-up, no video, no beeping sound heard, but the CPU fan is turning.

1. Clear CMOS battery. (JP5 connector, see Quick start guide for more info on how to clear the CMOS).
2. Check all the jumper settings on the M/B. (if the M/B have any).
3. Check if the CPU is ok by using another CPU (check the Quick start guide for CPU supported on this M/B).
4. Check if the power supply is ok. The minimum should be 250 watts.
5. Make sure the CPU fan is connected to CPUFAN1 connector.
6. Remove the M/B from the case and test the system. The M/B might be shorted to the case.

The system power-up, no video, beeping heard.

1. Clear CMOS battery. (JP5 connector, see Quick start guide for more info on how to clear the CMOS).
2. Check all the jumper settings on the M/B. (if the M/B have any).
3. Check the memory module and the VGA card if inserted properly on the M/B.
4. If yes, change the memory module, it might be defective. Make sure the

memory specification is supported by the M/B. (for more info on this, check our FAQ website).

5. Change the VGA card.

The system turns on for some seconds then shutdown by itself.

1. Check if the CPU fan is connected to the CPUFAN1 connector.
2. 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.
3. Clear CMOS battery. (JP5 connector, see Quick start guide for more info on how to clear the CMOS).
4. Make sure the power supply you have on your system support the M/B specification. Example. If you have a P4 M/B, you need to use a P4 power supply.
5. If you already checked the power supply specification, change the power supply it might be defective. The minimum is 250 watts.
6. Remove the M/B from the case and test the system. The M/B might be shorted to the case.

When I boot up my system, everything works fine, it sees my CPU and memory, detects my hard drive, floppy drive and CD-ROM but locks up at "Verify DMI pool data... ". Don't go any further. What should I do?

1. Clear CMOS battery. (JP5 connector, see Quick start guide for more info on how to clear the CMOS).
2. If still has the problem, remove all other add-on cards except video card and floppy drive see if it can boot from floppy. Then put peripherals in one by one to identify which one cause the lockup.
3. Change the CPU.

During Boot-up, my computer says CMOS memory Checksum error. What is the problem?

1. Clear CMOS memory.
2. Re-flash BIOS. Check on how to flash bios on the later part of this book.
3. Change the CMOS battery, the battery might be drained.
4. The BIOS chip might be failing.

5. This message will come up if the CMOS has been reset, try go to BIOS setup and load setup defaults, save and exit.

Stability Issue

My system intermittently locks up, very unstable

1. Check the CPU Temp, it might be overheating. Change the CPU FAN.
2. Do not over clock your CPU.
3. Check the specification of the memory module, maybe the M/B do not support it.
4. Go to BIOS setup and load fail safe settings. Please check if the system performance in the BIOS setup is set to Turbo/Maximum
5. Check website for latest bios update.
6. Check website for FAQ's regarding instability issue.
7. Change the memory module or CPU.
8. 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.
9. Install VIA AGP driver

My system intermittently locks up, during Windows installation

1. Go to BIOS and load "load optimized default".
2. Check website for any BIOS update.
3. If still has the problem, remove all other add-on cards except CPU/Memory/Video card/Hard disk. See if you can finish Windows installation. Then put peripherals in one by one to identify which one cause the lockup.

BIOS Issue

Where can I find the BIOS revision of my mainboard?

It will be displayed on the up-left corner on 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 2AA2 bios.

Where can I find the latest BIOS of my motherboard?
Please go to the technical support page of one of the SOYO websites (Taiwan: www.soyo.com.tw), and look up your motherboard to find the latest BIOS revision.

How can I flash the BIOS?

1. Download the BIOS on our support website.
2. Make a bootable floppy disk with out any memory manager loaded. (i.e. himem, emm386, etc..).
3. Copy the BIOS file and awdflash utility to the diskette.
4. Type "awdflash biosname.bin /sn /py".
5. Then reboot.

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

1. Try clearing the CMOS.
2. The BIOS chip is defected due to unsuccessful flash, contact your nearest SOYO branch for re-flashing.

Is there a way to reprogram my BIOS after an unsuccessful flash?

No other way, you need to send back the BIOS ROM to your nearest SOYO branch for re-flashing.

VGA Issue

I cannot set my VGA to go higher than 16 color (640x 480).

1. Make sure that you have installed the VIA 4 in 1 driver.
2. Install/ re-install the VGA driver.

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

1. Install VIA 4 in 1 driver.
2. Check the VGA card manufacturer for driver update. Or make sure the VGA card support Suspend to Ram function.

When using Geforce 3 Ti500, my system will hang up while running 3D Mark2001.

Please update the nVIDIA driver to version 2311 or newer, to solve the problem.

Audio Issue

How can I disable the on-board Audio?

Go to the SOYO COMBO Feature in the BIOS setup, then set the "onboard audio" to disable. Please also make sure 'Legacy Audio' in the BIOS setup is disable if there is one.

I cannot get the sound working on my system.

1. Check if the speaker wire is connected to the line out connector in the M/B.
2. Check if the speaker power is powered on.
3. Install the audio driver supplied on our driver disc.
4. Check BIOS setup if "onboard audio" is enabled.
5. If sound already installed, check our website for audio driver update.

The sound is working in my system, but when I play CD music from the CD-ROM, I do not get any sound. What is wrong?

This is because the 3-wire audio cable from the CD-ROM to the on-board CDIN1 connector in the M/B is not connected. See manual for location of CDIN1.

The sound from my sound card is distorted when Windows start. What is wrong?

If you are using an ISA sound card, please make sure the IRQ needed for the sound card is set to 'Legacy ISA' in the bios. In other word, if your ISA sound card takes IRQ5, then set IRQ5 to 'Legacy ISA'.

The sound and everything else works fine except that the recorder and microphone do not work. What is wrong?

1. Please go to sound properties and check if the recorder and microphone in the are enabled.
2. Check if Microphone is ok.

Hard disk/FDD/ CD-ROM issue

My Western digital HDD is not detected during boot-up or No fix disk present.

Change the jumper settings to cable select or single or remove the jumpers.

Sometimes the system finds my CD-ROM, sometimes not

1. Check CD-ROM if it is working properly
2. 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.

When I boot up my new computer I got "floppy boot failure" and the LED on the floppy stays on.
Make sure 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).

USB Issues

Can I use USB port 3_4 for keyboard resume function?
This M/B has 4 USB ports, but only the 2 at the back panel can be used for USB keyboard resume function.

I cannot get my USB working, help!
Please check if the system performance setting in the BIOS is set to maxium/Turbo, if yes, then enable the USB by setting the system performance to normal or manually enable the USB port (on-chip USB controller under Integrated Peripherals).

For updated FAQs, please check http://www.soyo.com.tw/faq.htm **or** http://www.soyousa.com/faqs.html

How to contact us:

- If you are interested in our products, please contact the SOYO sales department in the region you live.
- If you require Technical Assistance, please contact our Technical Support in the region you live.

SOYO prefers Email as communication medium, remember to *always add to the email the country that you live in*.

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