

SY-7VEM Motherboard

Quick Start Guide

Introduction

Hardware
Installation

Quick BIOS
Setup

The SOYO CI

SY-7VEM Motherboard

Socket 370 for VIA Cyrix, Intel PIII & Celeron processors
VIA PLE133 AGP/PCI Motherboard
66/100/133 MHz Front Side Bus supported
Micro-ATX Form Factor

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About This Guide:

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

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

7VEM Serial - Version 1.2 - Edition: May 2001

* These specifications are subject to amend without notice

1 Introduction

Congratulations on your purchase of the **SY-7VEM** 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-7VEM Motherboard Users' Guide* that came with your Motherboard.

Unpacking

When unpacking the Motherboard, check for the following items:

◆ The SY-7VEM PLE133 AMR/PCI/ISA Motherboard



◆ The Quick Start Guide



◆ The Installation CD-ROM



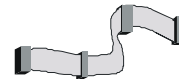
◆ SOYO Bonus Pack CD-ROM



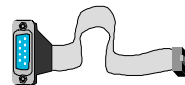
◆ One IDE Device ATA 66 Flat Cable



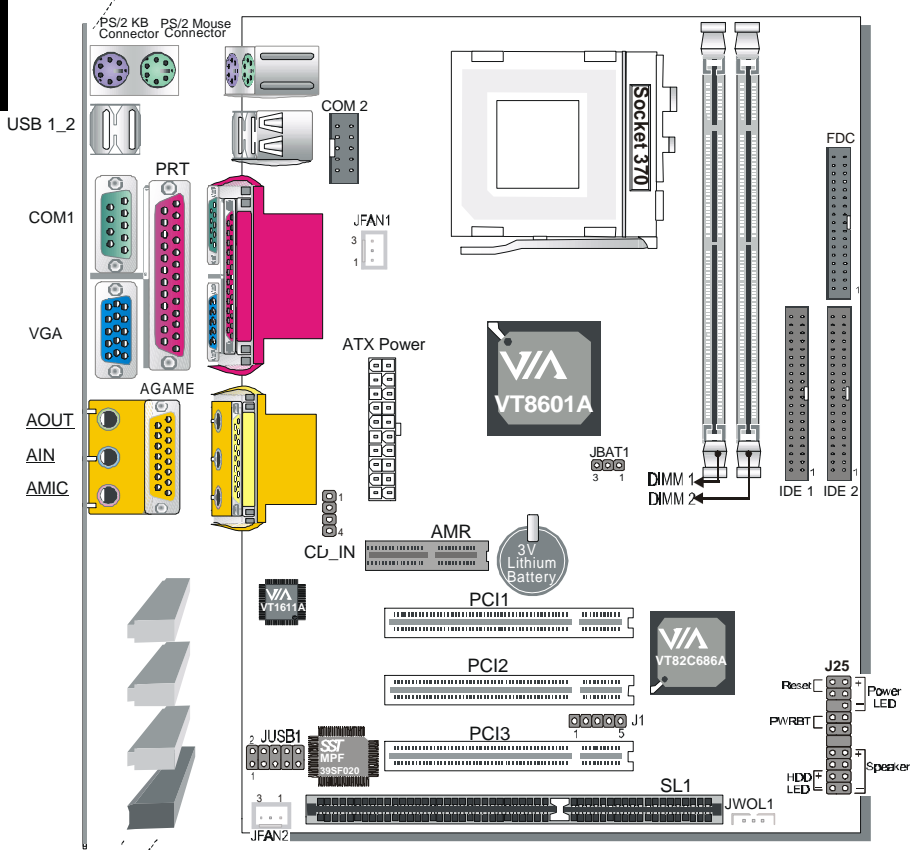
◆ One Floppy Disk Drive Flat Cable



◆ One serial port flat cable with a 9-pin connector



SY-7VEM Motherboard Layout



Key Features

- Supports Intel® processors
 - FSB 66MHz: Celeron™ (400-700MHz)
 - FSB 100MHz: Pentium® III (500-850MHz)
 - FSB 133MHz: Pentium® III (533MHz-933MHz)
- Supports Via Cyrix processors
 - FSB 100MHz: Cyrix III (500MHz-600MHz)
 - FSB 133MHz: Cyrix III (533MHz-600MHz)
- Supports 66/100/133 MHz Front Side Bus Frequency
- Auto-detect CPU voltage
- PC99, ACPI
- Ultra DMA33/66 (ATA 33/66)
- Supports Wake-On-LAN (WOL)
- Power-on by modem and alarm
- Support onboard VGA
- Supports onboard hardware monitoring
- Supports 5 sets of voltage monitoring
- Supports multiple-boot function
- Supports Audio Modem Riser slot (AMR 1.0 compliant) *
- 3 x 32-bit bus master PCI slots
- 1 x 16-bit ISA slot.
- 4 x USB ports onboard
- ATX power connector



Because this board comes with software Audio (AC97) on board, the Audio function in AMR is not relevant. If the user wants to use a Modem Riser card (MR) make sure to use a **Secondary mode MR, **PRIMARY** mode MRs are **NOT** Supported.*



The CPU Fan will not turn off during standby mode.

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-7VEM** Motherboard. For detailed information, please refer to the *SY-7VEM Motherboard User's guide and Technical Reference* online manual on in the CD-ROM package that came with your Motherboard.

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

- ◆ 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-7VEM** Motherboard, follow the steps below:

Step 1. CPU Installation

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

FSB 66MHz

<input type="checkbox"/> 400MHz (66x6.0)	<input type="checkbox"/> 466MHz (66x7.0)	<input type="checkbox"/> 533MHz (66x8.0)	<input type="checkbox"/> 600MHz (66x9.0)	<input type="checkbox"/> 667MHz (66x10.0)
<input type="checkbox"/> 433MHz (66x6.5)	<input type="checkbox"/> 500MHz (66x7.5)	<input type="checkbox"/> 566MHz (66x8.5)	<input type="checkbox"/> 633MHz (66x9.5)	<input type="checkbox"/> 700MHz (66x10.5)

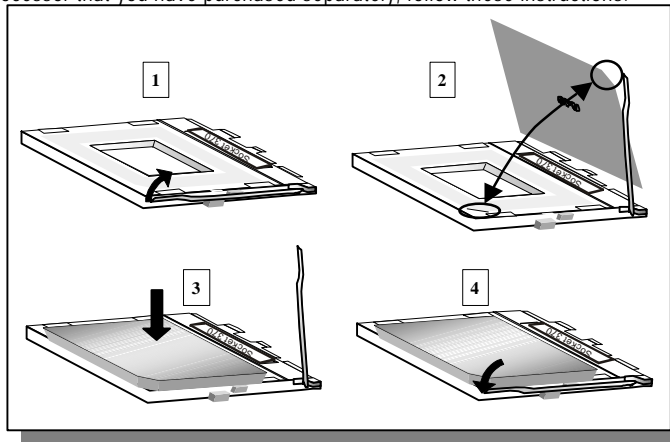
FSB 100MHz

<input type="checkbox"/> 500MHz (100x5.0)	<input type="checkbox"/> 600MHz (100x6.0)	<input type="checkbox"/> 700MHz (100x7.0)	<input type="checkbox"/> 800MHz (100x8.0)
<input type="checkbox"/> 550MHz (100x5.5)	<input type="checkbox"/> 650MHz (100x6.5)	<input type="checkbox"/> 750MHz (100x7.5)	<input type="checkbox"/> 850MHz (100x8.5)

FSB 133MHz

<input type="checkbox"/> 533MHz (133x4.0)	<input type="checkbox"/> 667MHz (133x5.0)	<input type="checkbox"/> 800MHz (133x6.0)	<input type="checkbox"/> 933MHz (133x7.0)
<input type="checkbox"/> 600MHz (133x4.5)	<input type="checkbox"/> 733MHz (133x5.5)	<input type="checkbox"/> 866MHz (133x6.5)	<input type="checkbox"/>

CPU Mount Procedure: To mount the Pentium® & Celeron™ processor & VIA Cyrix 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.*

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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-7VEM Motherboard, please refer to *SY-7VEM Motherboard User's Guide and Technical Reference* online manual on the CD-ROM.

Connectors and Plug-ins

Wake-On-LAN Header: JWOL1				Standard IrDA (Infrared Device Header): J1					
Pin1	Pin2	Pin3		Pin1	Pin2	Pin3	Pin4	Pin5	
5V-SB	GND	Ring		VCC	NC	IRRX	GND	IRTX	
JUSB1_#1					JUSB1_#2				
Pin1	Pin3	Pin5	Pin7	Pin9	Pin2	Pin4	Pin6	Pin8	Pin10
+5V	Data(-)	Data(+)	GND	GND	+5V	Data(-)	Data(+)	GND	GND
CPU Cooling Fan: JFAN1				Chassis Fan: JFAN2					
Pin1	Pin2	Pin3		Pin1	Pin2	Pin3			
SENSOR	12V	GND		SENSOR	12V	GND			
CD-IN: CD_IN						Pin1	Pin2	Pin3	Pin4
Connect the CD Line-in cord from the CR-ROM device to the matching connector CD_IN						L	G	G	R
				Power LED					
				Pin1	Pin2	Pin3			
				5V	NC	GND			
				Speaker					
				Pin1	Pin2	Pin3	Pin4		
				5V	NC	NC	Speaker out		
HDD LED		PWRBT		RESET					
Pin1	Pin2	Pin1	Pin2	Pin1	Pin2				
LED Anode	LED Cathode	Power On/Off	GND	Control PIN	GND				
ATX Power On/Off: PWRBT									
Connect your power switch to this header (momentary switch type). <i>To turn off the system, press this switch and hold down for longer than 4 seconds.</i>									
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.) <i>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.</i>									

Step 3. Configure Memory

Your board comes with two DIMM sockets, providing support for up to 512MB of main memory using unbuffered and registered DIMM modules from 8MB to 256MB. 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 66MHz DRAM speed, use PC66 memory; for 100MHz DRAM speed, use PC100 memory; for 133MHz DRAM speed, use PC133 memory.



Memory Configuration Table

Number of Memory Modules	DIMM 1	DIMM 2
RAM Type	SDRAM	
Memory Module Size (MB)	8/16/32/64/128/256 MB	
Note: Always install memory modules in the order prescribed in this table.		

CMOS Clear (JBAT1)

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

1. Clear the CMOS memory by momentarily shorting pin 2-3 on jumper JBAT1. This jumper can be easily identified by its white colored cap.
2. Then put the jumper back to 1-2 to allow writing of new data into the CMOS memory.

CMOS Clearing	Clear CMOS Data	Retain CMOS Data
JBAT1 Setting	Short pin 2-3 for at least 5 seconds to clear the CMOS 	Short pin 1-2 to retain new settings 
<i>Note: You must unplug the ATX power cable from the ATX power connector when performing the CMOS Clear operation.</i>		

3 Quick BIOS Setup

This Motherboard does not require any hardware jumpers to set the CPU operating frequency.

After completion of hardware installation, turn the power switch on, then press the **** key while the system diagnostic is checking to enter the Award BIOS Setup program. The CMOS SETUP UTILITY will be displayed on 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 SETUP DEFAULT]

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

Step 3. Select [SAVE & EXIT SETUP]

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

4 The SOYO CD



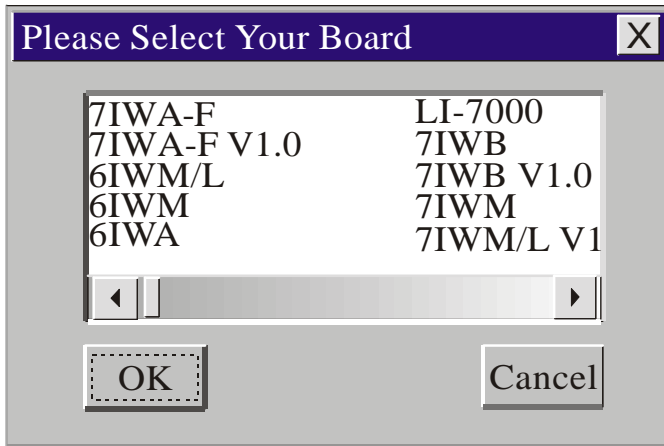
The SOYO-CD will NOT autorun if you use it on an Operating System other than Windows 9x or NT.

Your SY-7VEM Motherboard comes with a CD-ROM labeled "SOYO CD." The SOYO CD contains (1) the user's manual file for your new Motherboard, (2) the drivers software available for installation, and (3) a database in HTML format with information on SOYO Motherboards and other products.

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

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

If you use Windows NT, the SOYO-CD will not detect your motherboard type. In that case the following dialog will pop up, please choose your motherboard and press OK. Now the SOYO-CD Start Up Menu will be shown.



(SOYO CD Start Up Program Menu)

If you use Windows 95 or 98, the SOYO CD Start Up Program automatically detects which SOYO Motherboard you own and displays the corresponding model name.

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The SOYO CD

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 4in1 Driver Package for Win 9x/NT/2000**

The 4 in 1 Driver Package includes all drivers your motherboard needs. After selecting this Driver Package, one driver will be installed automatically (the IRQ remapping utility), the other three are installed if selected. By default all three drivers are selected. A description of the 4 drivers follows:

— **Bus Master PCI IDE Driver**

This driver will speed up the data-transfer rate to and from the harddisk.

— **AGP VxD Driver**

This driver must be installed in order to be able to make use of the on-board AGP Video functionality.

— **VIA Chipset Functions Registry**

This driver will make the necessary changes to the Windows registry, in order to make sure that Windows has no problems recognizing your VIA chipset.

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

This utility will remap the IRQ lines to make sure that everything functions properly under Windows.

➤ **VIA 8601 ProSavage Display Driver for Win 98**

In order to be able to make use of the integrated VGA function in your VIA 8601 chipset, you will need to install this driver first. For Win 98 only.

➤ **VIA 8601 ProSavage Display Driver for Win ME**

In order to be able to make use of the integrated VGA function in your VIA 8601 chipset, you will need to install this driver first. For Win ME only.

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➤ **VIA 8601 ProSavage Display Driver for Win 2000**

In order to be able to make use of the integrated VGA function in your VIA 8601 chipset, you will need to install this driver first. For Win 2000 only.

➤ **VIA 8601 ProSavage Display Driver for Win NT4.0**

In order to be able to make use of the integrated VGA function in your VIA 8601 chipset, you will need to install this driver first. For Win NT4.0 only.

➤ **VIA Onboard Audio Driver for Win 9x/ME/NT/2000**

You have to install the drivers before installing any application for the Onboard Audio.

➤ **VIA hardware(R) monitor for (Win 95/98)**

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.

(* *Internet Explorer is a Microsoft Trademark*)

Quick Trouble shoot tips

Video (no display) related issues

I built a new computer system using a Soyo board and nothing happens when turning it on, no video and no beeps from the PC speaker. What is happening and how can it be fixed?

No screen and no beeps mean that your CPU and motherboard do not work at all. It could be that the CPU is not seated correctly or that a component on the M/B is grounded (shorted) with the case. Also make sure to check the voltage setting switch (110V/220V) on the back of the power supply. To isolate the problem do the following:

1. Press and hold down on the “Ins” (insert) key while turning on the computer until you get video. If you do not get video then,
2. Double-check jumpers setting on you motherboard and remove all add-on cards, unplug all hard-disk and floppy-disk drive cables and see if you can hear some beeps. If you still do not get any beeps, then try putting the motherboard on the table (to isolate it from the case) with the CPU and speaker only, and give it one more try.

I get distorted video right after I save my bios. Why is that?

To fix this, please clear the CMOS via JBAT1 and if it still does not work, please upgrade your motherboard bios to the latest version.

BIOS Issues

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 5EH_2CA1 (meaning revision 2CA1 for the SY-5EH 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.

Hard disk, floppy drive, CD-ROM etc

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).

Modem issues

I get an "I/O Conflict" message when I turn on my system and I can not get my modem to work

What you need to do is to disable 'COM2' (or UART2 or serial port 2) in the bios under integrated peripheral setup.

I have installed my modem drivers several times and I still cannot get my modem to work. Why?

If you are sure that the modem driver has been installed correctly, then you need to install the via 4 in 1 driver from the SOYO CD, this is because Windows does not properly recognize relatively new chipsets.

Audio Issues

I do not get any sound from my sound card. What could be wrong?

Please make sure the speaker is connected to the speaker out port on your sound card.

In Device Manager, I keep getting yellow exclamation signs on my sound port even though I have installed my sound driver several times and I could not get my sound card to work. What is wrong?

It is likely that you did not have the correct driver installed. If you are sure that the correct sound driver has been installed, then please install the 'via 4 in 1' driver for the motherboard.

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 sound card is not connected or it is loose.

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

First, 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 words, if your ISA sound card takes IRQ5, then set IRQ5 to 'Legacy ISA'. Next, install the 'via 4 in 1' driver for the motherboard.

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

This is because the recorder and microphone in the Windows are not enabled. Please go to sound properties and enable them.

Lock up (freeze)

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... ", and it won't go any further. What should I do?

Please clear the CMOS via JBAT1 then choose 'load optimized default' in the bios and save the bios and exit. Next, unplug all other add-on cards except the video card and floppy drive controller, and see if it can boot from floppy. Then put back the peripherals one by one to identify which one causes the lockup.

I can not get my board to run properly.

Please make sure you have the latest bios and driver from the SOYO web site at: <http://www.soyo.com>

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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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