



# **SY-6BE Mainboard**

## **Quick Start Guide**

**For Assembly Version 1.0**

Introduction

Hardware  
Installation

Quick BIOS  
Setup

The SOYO CD

# SY-6BE Mainboard

Pentium® II processor  
82440 BX AGP/PCI Mainboard  
66&100MHz Front Side Bus supported  
ATX Form Factor

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## About This Guide:

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

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

## 6BE Serial - Version 1.0 - Edition: August 1998

\* These specifications are subject to change without notice

# 1 Introduction

Congratulations on your purchase of the **SY-6BE** Mainboard. This *Quick Start Guide* describes the steps for installing and setting up your new mainboard.

This guide is designed for all users to provide the basic steps of mainboard setting and operation. For further information, please refer to *SY-6BE Mainboard User's Guide and Technical Reference* online manual included on the CD-ROM packed with your mainboard.

## Unpacking

\* If your board comes with a driver disc and a paper manual, the Quick Start Guide and the CD-ROM are not included in the package.

When unpacking the mainboard, check for the following items:

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◆ The SY-6BE 82440 BX AGP/PCI Mainboard



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◆ This Quick Start Guide



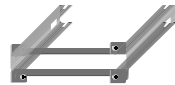
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◆ The Installation CD-ROM



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◆ The CPU Retention Set



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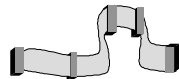
◆ One IDE Device Flat Cable



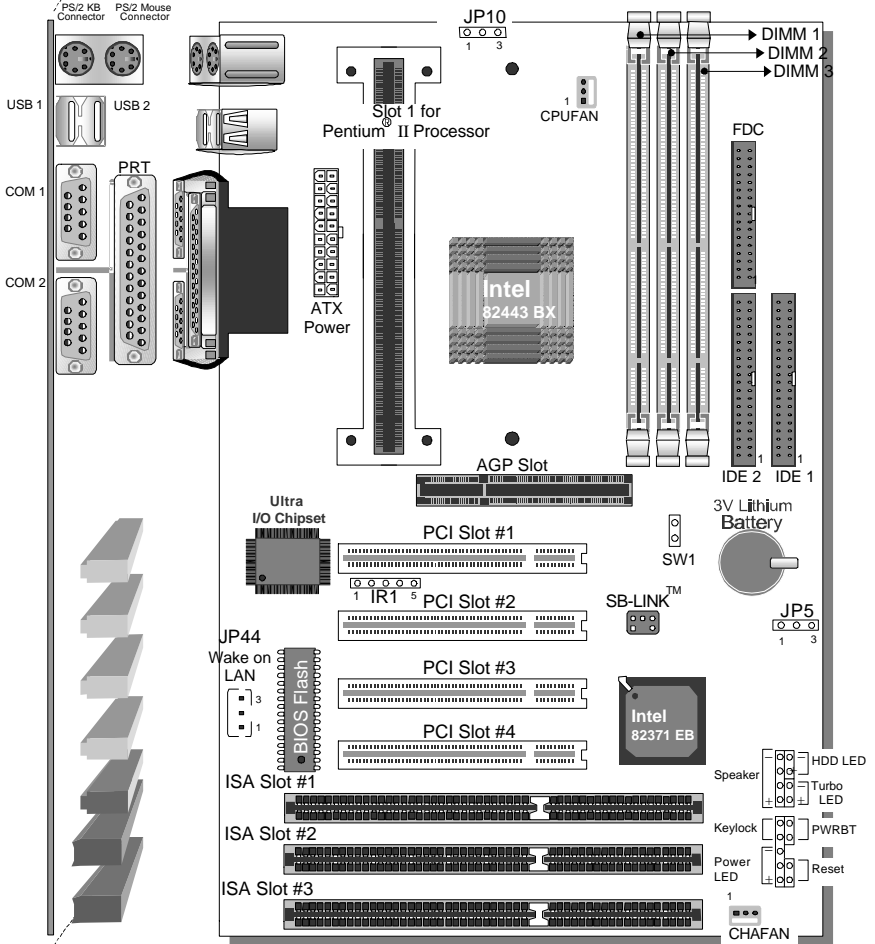
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◆ One Floppy Disk Drive Flat Cable

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**SY-6BE Mainboard Layout**



**Key Features**

- Supports Intel Pentium® II processor (233-550MHz)
- Auto-detect CPU voltage
- PC97, ACPI, Ultra DMA/33MHz
- Power-on by modem or alarm
- Supports Wake-On-LAN (WOL)
- Supports onboard hardware monitoring and includes Hardware Doctor™ utility
- Supports Creative SB-LINK™ for PCI audio card
- 1 x 32-bit AGP slot
- 4 x 32-bit bus mastering PCI slots
- 2 x USB ports onboard
- 1 x IrDA port
- Supports multiple-boot function
- DMI utility

## 2 Installation



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

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

Follow the directions in this section designed to guide you through a quick and correct installation of your new **SY-6BE** Mainboard. For detailed information, please refer to *SY-6BE Mainboard User's guide and Technical Reference* online manual included on the CD-ROM packed with your mainboard.

### PREPARATIONS

Gather and prepare all the necessary hardware equipment to complete the installation successfully:

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

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## Install the Mainboard

Follow the steps below in order to perform the installation of your new **SY-6BE** Mainboard.

### Step 1. Install the CPU

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

<input type="checkbox"/> 233MHz (66 x 3.5)	<input type="checkbox"/> 300MHz (66 x 4.5)	<input type="checkbox"/> 350MHz (100 x 3.5)	<input type="checkbox"/> 450MHz (100 x 4.5)
<input type="checkbox"/> 266MHz (66 x 4.0)	<input type="checkbox"/> 333MHz (66 x 5.0)	<input type="checkbox"/> 400MHz (100 x 4.0)	<input type="checkbox"/> 500MHz (100 x 5.0)
<input type="checkbox"/> 550MHz (100 x 5.5)	<input type="checkbox"/>		

**CPU Mount Procedure:** To mount the Pentium® II processor that you have purchased separately, follow these instructions.

Hardware Installation

<p><b>1</b> <b>Unpack the Retention Kit</b></p>	<p><b>2</b> <b>Position the Mainboard</b></p>	<p><b>3</b> <b>Insert the Screws</b></p> <p><b>4</b> <b>Install the Supporting Base</b></p>	
<p><b>5</b> <b>Install the Retention Clip</b></p>		<p><b>6</b> <b>Install the CPU</b></p>	
<p><b>7</b> <b>Install the Support Clip</b></p>	<p><b>8</b> <b>Insert the Latches</b></p>	<p><b>9</b></p> <p><b>Remember to connect the CPU Cooling Fan to the CPUFAN power connector on the mainboard.</b></p>	

### Step 2. Make Connections to the Mainboard

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

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

For more details on how to connect internal and external peripherals to your new SY-6BE Mainboard, please refer to *SY-6BE Mainboard User's Guide and Technical Reference* online manual on CD-ROM.

### Connectors and Plug-ins

<b>PCI Audio Card Header: SB-Link™</b>		<b>Wake-On-LAN Header: JP44</b>	
Connect the SB-Link™ cable from your creative sound blaster PCI audio card to this header.		Connect the WOL cable from your LAN card to JP44.	
<b>CPU Cooling Fan: CPUFAN</b>		<b>Chassis Fan: CHAFAN</b>	
Connect the CPU cooling fan cable to the CPUFAN power connector.		Connect the case cooling fan cable to the CHAFAN power connector.	
<b>USB</b>	<b>TB LED</b>	<b>SPK</b>	
Plug your USB devices to this connector.	Connect your Turbo LED cable to this header.	Connect the speaker cable to this header.	
<b>RESET</b>	<b>IDE LED</b>	<b>KB-LOCK</b>	
Connect the reset button to this heder.	Connect the IDE device LED to this header.	Connect the Power LED and the KB Lock switch to this header.	
<b>IrDA (Infrared Device Header): IR1</b>	<b>ATX Power On/Off: PWRBT</b>	<b>ATX Power Supply: ATX PW</b>	
Connect the cable from your IrDA device to this header.	Connect your power switch to this header (momentary switch type). <b><i>To turn off the system, please press this switch and hold down for longer than 4 seconds.</i></b>	Attach the ATX Power cable to this connector.	

## SY-6BE Quick Start Guide

### Step 3. Configure Memory

Your board comes with four DIMM sockets, providing support for up to 768MB of main memory using DIMM modules from 8MB to 256MB. For 66MHz front side bus CPUs use 12ns or faster memory; for 100MHz front side bus CPUs use 8ns (100MHz, PC100 compliant) memory.

### Memory Configuration Table



Number of Memory Modules	DIMM 1	DIMM 2	DIMM 3
1			1 <sup>st</sup>
2		2 <sup>nd</sup>	1 <sup>st</sup>
3	3 <sup>rd</sup>	2 <sup>nd</sup>	1 <sup>st</sup>
<b>RAM Type</b>	SDRAM		
<b>Memory Module Size (MB)</b>	8/16/32/64/128/256 Mbytes		
<b>Note:(1) 256 MB memory modules only available on PC registered DIMM.</b>			
<b>(2) Always install memory modules in the order prescribed in this table.</b>			
<b>(3) Do not install unbuffered and registered memory modules together.</b>			

**Important:** It is of prime importance that you install DIMM modules as outlined in the table above in order to preserve signal integrity on 100MHz front side bus systems.

### Step 4. Set SW1 for AGP bus clock

SW1 is used to set the AGP bus clock frequency. The default setting for SW1 is open.

SW1 has to be closed by a jumper cap when you set the CPU Host (FSB) clock to 66, 68 or 75 MHz.

SW1	CPU FSB Clock	AGP Clock
 <b>AGP Clock =</b> <b>CPU FSB CLK , 1</b>	66	66
	68	68
	75	75
 <b>AGP Clock =</b> <b>CPU FSB CLK , 1.5</b>	83	55.3
	100	66.6
	103	68.6
	112	74.6
	133	88.6



*Note: The specification of maximum AGP bus clock frequency is 66.6MHz.*

**Step 5.** Set the CPU Frequency

This mainboard does not use any jumpers to set the CPU frequency, CPU setting are changed through the BIOS [Chipset Features Setup]. Refer to Chapter 3 “Quick BIOS Setup” for details on how to set the Pentium® II processor frequency.

**Enable/Disable Power-On by Keyboard (JP10)**



You can choose to enable the Power-On by Keyboard function by shorting pin 1-2 on jumper JP10, otherwise, short pin 2-3 to disable this function.

Power-On by Keyboard	Enable	Disable* (*Default)
<b>JP10 Setting</b>	Short pin 1-2 to enable the Power-On by Keyboard function.  1 2 3	Short pin 2-3 to disable the Power-On by Keyboard function.  1 2 3

**Important:** When using the Power-On by Keyboard function, please make sure the ATX power supply can take at least 700mA load on the 5V Standby lead (5VSB) to meet the standard ATX specification.

**Clear CMOS Data (JP5)**

Clear the CMOS memory by momentarily shorting pin 2-3 on jumper JP5 for at least 5 seconds, and then by shorting pin 1-2 to retain new settings. This jumper can be easily identified by its white colored cap.

CMOS Clearing	Clear CMOS Data	Retain CMOS Data (Default)
<b>JP5 Setting</b>	Short pin 2-3 for <b>at least 5 seconds</b> to clear the CMOS.  1 2 3	Short pin 1-2 to retain the new settings.  1 2 3

**Note:** You must unplug the ATX power cable from the ATX power connector when performing the CMOS Clear operation.

# 3 Quick BIOS Setup

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 display on screen. OK, follow these steps to complete the quick BIOS setup.

**Step 1.** Select [LOAD SETUP DEFAULT]

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

**Step 2.** Select [STANDARD CMOS SETUP]

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

**Step 3.** Select [CHIPSET FEATURES SETUP]

Move the cursor to the **[CPU Frequency]** field to set the CPU frequency.

Available [CPU Frequency] settings on your SY-6BE Mainboard are detailed in the following table. If you set this field to [Manual], you are then required to fill in the next two consecutive fields: (1) the CPU Host Clock Select, and (2) the CPU Ratio.

<input checked="" type="checkbox"/> CPU Frequency		Select the working frequency of your Pentium® II processor among these preset values. <b>Note:</b> <input checked="" type="checkbox"/> Mark the checkbox that corresponds to the working frequency of your Pentium® II processor in case the CMOS configuration should be lost.
<input type="checkbox"/> 233MHz (66 x 3.5)	<input type="checkbox"/> 400MHz (100 x 4.0)	
<input type="checkbox"/> 266MHz (66 x 4.0)	<input type="checkbox"/> 450MHz (100 x 4.5)	
<input type="checkbox"/> 300MHz (66 x 4.5)	<input type="checkbox"/> 500MHz (100 x 5.0)	
<input type="checkbox"/> 333MHz (66 x 5.0)	<input type="checkbox"/> 550MHz (100 x 5.0)	
<input type="checkbox"/> 350MHz (100 x 3.5)	<input type="checkbox"/>	

**Step 1.** Select [SAVE & EXIT SETUP]

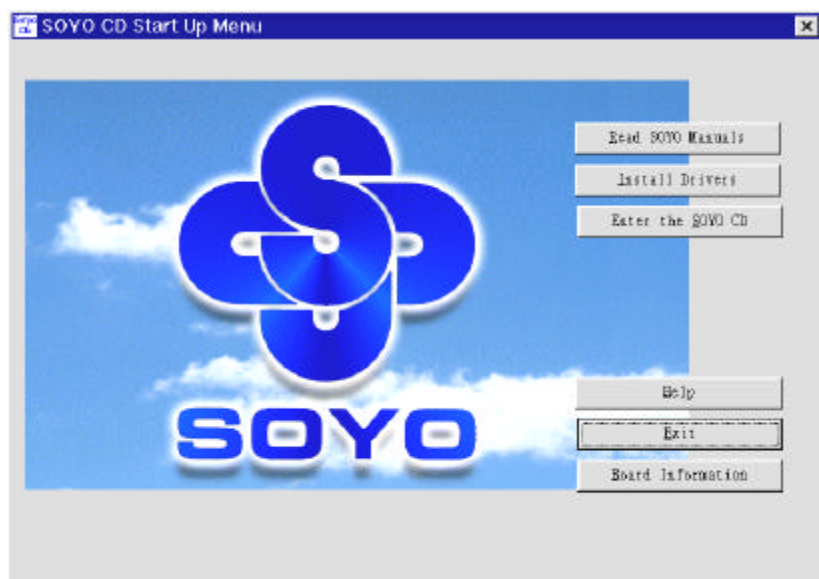
Press **<Enter>** to save the new configuration to the CMOS memory, and continue the boot sequence.

## 4 The SOYO CD

Your SY-6BE Mainboard comes with a CD-ROM labeled "SOYO CD." The SOYO CD contains the user's manual file for your new mainboard, the drivers software available for installation, and a database in HTML format with information on SOYO mainboards 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 display as shown below.



(SOYO CD Start Up Program Menu)

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

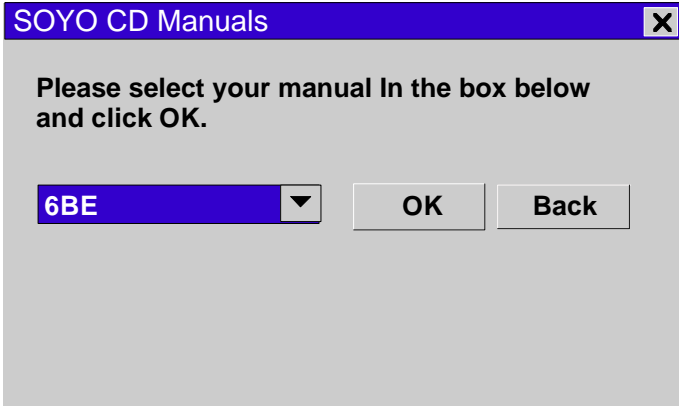
**Step 2.** Read SOYO [model name] Manual

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

## SY-6BE Quick Start Guide

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



(Manual Selection Menu)

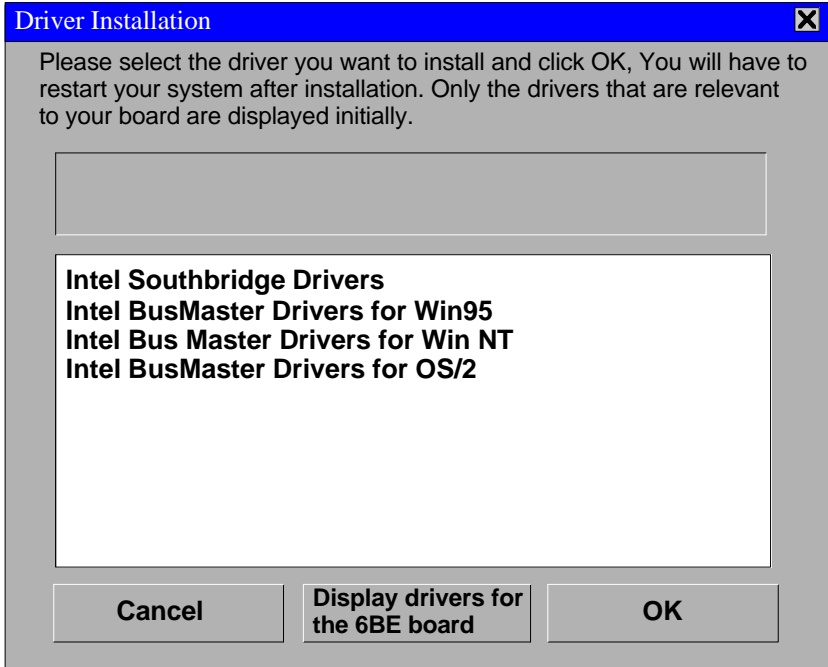
The user's manual files included on the SOYO CD can be read in PDF (Postscript Document) format. In order to read a PDF file, the appropriate Acrobat Reader software must be installed in your system.

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

### Step 3. Install Drivers

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

However, to display the list of all drivers software available with SOYO mainboards, click the **Display all drivers on the SOYO CD** button. Please make sure to install only the drivers adapted to your system, or otherwise this cause system malfunctions.



(Driver Installation Menu)

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 4.** Enter the SOYO CD

Click the **Enter SOYO CD** button to enter the SOYO HTML database. The Start Up program will activate the default HTML browser installed on your system (for example, Internet Explorer or Netscape) to visualize the contents of the SOYO CD.

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



**(SOYO CD HTML Database in English\*)**

(\* The list of menu options may vary between languages)

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

(\* Internet Explorer is a Microsoft Trademark)



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**6BE SERIAL**

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