SY-V6BE+ Mainboard

Quick Start Guide

SY-V6BE+ Mainboard

Pentium® II processor & Celeron™ processors
AGP/PCI Mainboard
66&100MHz Front Side Bus supported
ATX Form Factor

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".**

SY-V6BE+ Serial - Version 1.0 - Edition: November 1998
* These specifications are subject to change without notice

1 *Introduction*

Congratulations on your purchase of the **SY-V6BE+** 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-V6BE+ 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.

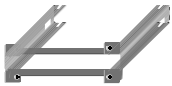
When unpacking the mainboard, check for the following items:

- The SY-V6BE+ AGP/PCI Mainboard

- This Quick Start Guide

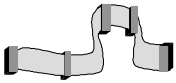
- The Installation CD-ROM

- The CPU Retention Set

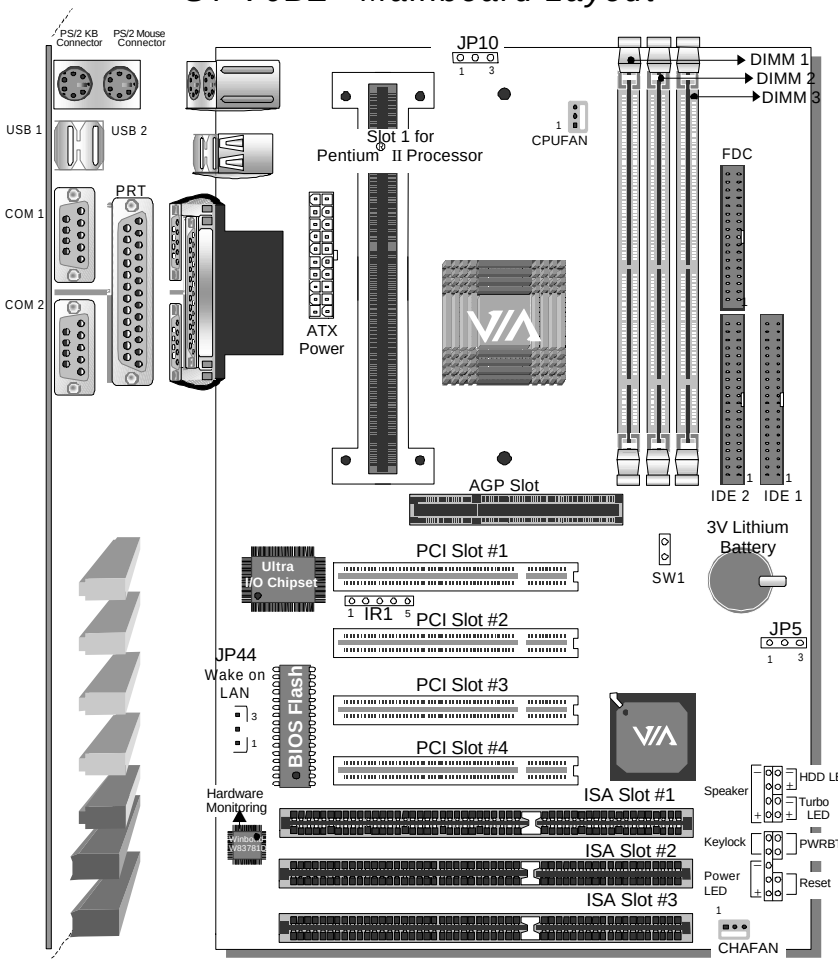


- One IDE Device Flat Cable

- One Floppy Disk Drive Flat Cable



SY-V6BE+ Mainboard Layout



Key Features

- Supports Intel Pentium® II processor (233-500MHz) & Celeron™ processors (266-400MHz)
- Auto-detect CPU voltage
- PC98, ACPI, Ultra DMA/33MHz
- Power-on by modem, alarm or keyboard
- SOYO COMBO Setup
- Supports Wake-On-LAN (WOL)
- Supports onboard hardware monitoring and includes Hardware Doctor ™ utility (optional)
- S1 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-V6BE+** Mainboard. For detailed information, please refer to *SY-V6BE+ 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)

Install the Mainboard

Follow the steps below in order to perform the installation of your new **SY-V6BE+** Mainboard.

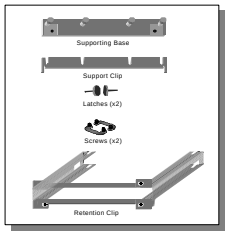
Step 1. Install the CPU

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

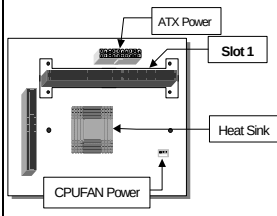
☐ 233MHz (66 x 3.5)	☐ 300MHz (66 x 4.5)	☐ 350MHz (100 x 3.5)	☐ 450MHz (100 x 4.5)
☐ 266MHz (66 x 4.0)	☐ 333MHz (66 x 5.0)	☐ 400MHz (100 x 4.0)	☐ 500MHz (100 x 5.0)

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

1 Unpack the Retention Kit

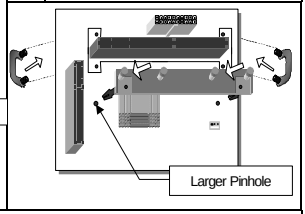


2 Position the Mainboard

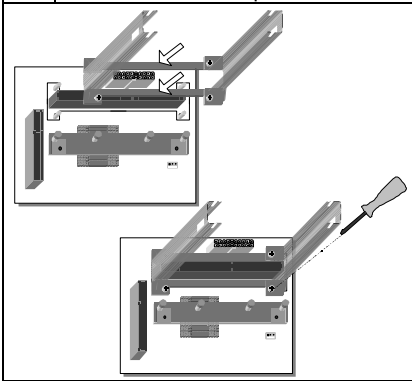


3 Insert the Screws

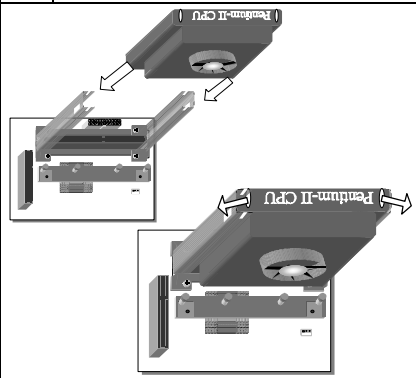
4 Install the Supporting Base



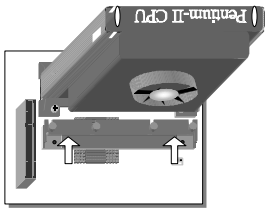
5 Install the Retention Clip



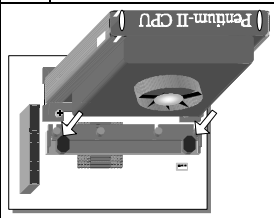
6 Install the CPU



7 Install the Support Clip



8 Insert the Latches



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Remember to connect the CPU Cooling Fan to the CPUFAN power connector on the mainboard.

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-V6BE+ Mainboard, please refer to *SY-V6BE+ Mainboard User's Guide and Technical Reference* online manual on CD-ROM.

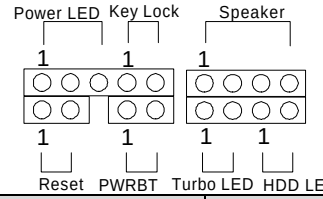
Connectors and Plug-ins

IrDA (Infrared Device Header): IR1				
Pin1	Pin2	Pin3	Pin4	Pin5
VCC	None	IRRX	GND	IRTX

Wake-On-LAN Header: JP44		
Pin1	Pin2	Pin3
5VSB	GND	MP-Wakeup

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

Chassis Fan: CHAFAN		
Pin1	Pin2	Pin3
GND	12V	SENSOR



Power LED			Keylock	
Pin1	Pin2	Pin3	Pin1	Pin2
5V	NC	GND	Control Pin	GND

Speaker			
Pin1	Pin2	Pin3	Pin4
5V	NC	NC	Speaker out

HDD LED		Turbo LED		PWRBT		RESET	
Pine1	Pin2	Pin1	Pin2	Pin1	Pin2	Pin1	Pin2
LED Anode	LED Cathode	LED Cathode	GND	Power Good	GND	Power On/Off	GND

ATX Power On/Off: PWRBT	ATX Power Supply: ATX PW
Connect your power switch to this header (momentary switch type). ***To turn off the system, please press this switch and hold down for longer than 4 seconds.***	Attach the ATX Power cable to this connector. ***When using the Power-On by PS/2 Keyboard function, please make sure the ATX power supply can take at least 720mA load on the 5V Standby lead (5VSB) to meet the standard ATX specifications.***

Step 3. Configure Memory

Your board comes with three 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			1st
2		2nd	1st
3	3rd	2nd	1st

RAM Type	SDRAM
Memory Module Size (MB)	8/16/32/64/128/256 Mbytes

Note: **(1) 256 MB memory modules only available on PC registered DIMM.**
(2) Always install memory modules in the order prescribed in this table.
(3) Do not install unbuffered and registered memory modules together.

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 power up FSB clock and AGP bus clock.

SW1 is used to adjust AGP bus clock frequency depending on the value of the front side bus (FSB) clock, also the setting of the SW1 determines the power up FSB clock which will remain effective until the BIOS set the FSB clock to the CMOS setting.

SW1 Setting	Power up FSB Clock	AGP Clock
	66MHz	AGP Clock = FSB Clock ÷ 1
	100MHz	AGP Clock = FSB Clock ÷ 1.5

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

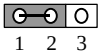
* Set SW1 to open when you use a FSB 100MHz CPU such as 350MHz, 400MHz, 450MHz , or 500MHz.
* Set SW1 to close when you use a FSB 66MHz CPU such as 233MHz, 266MHz, 300MHz, 333MHz , or 366Mhz only for Celeron.
* Set SW1 to open when you use a FSB 66MHz but want to over clock the FSB clock to 100MHz via the BIOS setting.

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 [SOYO COMBO SETUP]. Refer to Chapter 3 "Quick BIOS Setup" for details on how to set the Pentium® II processor frequency.

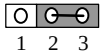
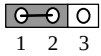
Step 6. Enable/Disable Power-On by Keyboard (JP10)

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
JP10 Setting	Short pin 1-2 to enable the Power-On by Keyboard function. 	Short pin 2-3 to disable the Power-On by Keyboard function. 
Important: When using the Power-On by Keyboard function, please make sure the ATX power supply can take at least take 720mA load on the 5V standby lead (5VSB) to meet the standard ATX specification. Apart from the jumper setting, you have to enter the CMOS setup and set the "Power-On by Keyboard" item in the SOYO COMBO Setup to "Password" or function key.		

Step 7. 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
JP5 Setting	Short pin 2-3 for ***at least 5 seconds*** to clear the CMOS. 	Short pin 1-2 to retain the new settings. 
Note: You must unplug the ATX power cable from the ATX power connector when performing the CMOS Clear operation.		

You MUST enter the CMOS SETUP and SAVE CMOS setting twice after clearing CMOS data. ***If you fail to do this your new setting would NOT be Saved.***

Note on Over-clocking Capability

The SY-V6BE+ mainboard provides over-clocking capability. Due to the over-clocking setting your system may fail to boot up or hang during run time. If this occurs, please perform the following steps to recover your system from the abnormal situation:

1. Turn off system power (If you use a ATX power supply, sometimes you have to press the power button for more then 4 seconds to shut down the system)
2. Set the SW1 to short if you use a FSB 66MHz CPU, Set the SW1 to open if you use a FSB 100MHz CPU
3. Press and hold down the <Insert> key while turning on the system power. Keep holding down the <Insert> key until you see the message of the CPU type and frequency (133MHz or 200MHz) appear on screen
4. Press the <Del> key during the system diagnostic checks to enter the Award BIOS Setup program
5. From the BIOS main menu, select [SOYO COMBO] and move the cursor to the [CPU Frequency] field to set the proper working frequency
6. Select [Save & Exit SETUP] and press <Enter> to save the configuration to the CMOS memory, and continue the boot sequence

Note: **SOYO *does not* guarantee system stability if the user over clocks the system. Any malfunctions due to over-clocking *are not* covered by the warranty.**

3 *Quick BIOS Setup*

This mainboard does not use any hardware jumpers to set the CPU frequency. Instead, CPU settings are software configurable with the BIOS **[SOYO COMBO SETUP].** The [SOYO COMBO SETUP] menu 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 display 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 [SOYO COMBO SETUP]

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

Available [CPU Frequency] settings on your SY-V6BE+ 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/PCI Clock, and (2) the CPU Ratio.

CPU Frequency		
☐ 233MHz (66 x 3.5)	☐ 400MHz (100 x 4.0)	Select the working frequency of your Pentium® II processor among these preset values. ***Note:*** ☑ Mark the checkbox that corresponds to the working frequency of your Pentium® II processor in case the CMOS configuration should be lost.
☐ 266MHz (66 x 4.0)	☐ 450MHz (100 x 4.5)	
☐ 300MHz (66 x 4.5)	☐ 500MHz (100 x 5.0)	
☐ 333MHz (66 x 5.0)	☐	
☐ 350MHz (100 x 3.5)		

Note: if you use Bus Frequencies of 75 MHz, make sure that your PCI cards can cope with the higher PCI clock.

Step 4. Select [SAVE & EXIT SETUP]

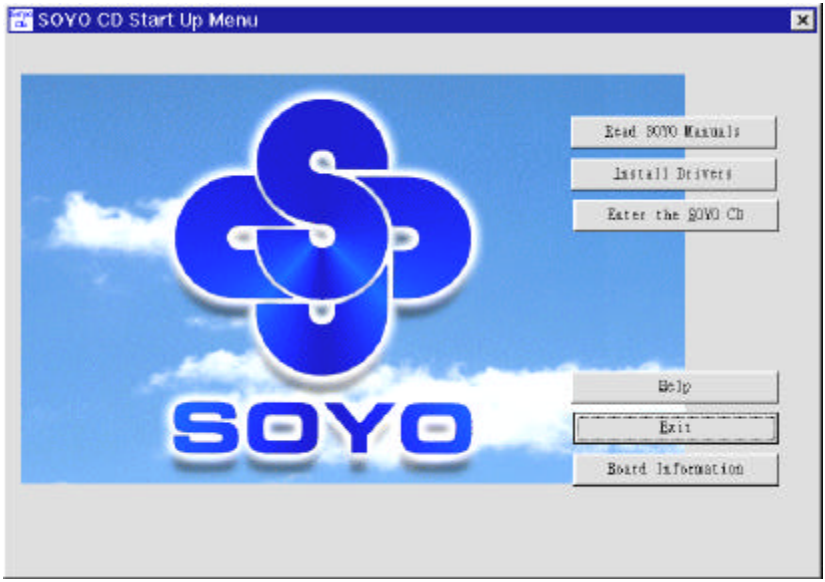
Press **<Enter>** to save the new configuration to the CMOS memory, and continue the boot sequence.

4 *The SOYO CD*

Your SY-V6BE+ 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.



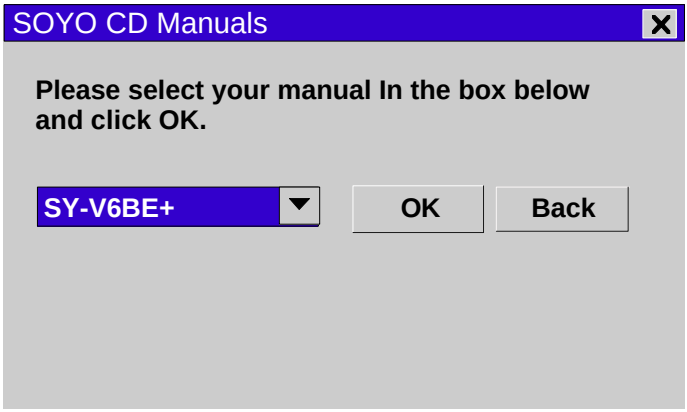
(SOYO CD Start Up Program Menu)

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.

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

The following describes the best way of installing Windows 95 or Windows 98 on your SY-V6BE+ mainboard:

➢ The following BIOS default settings should not be changed:

1. The 'OnChip USB Controller' item under 'BIOS features Setup' is set to enabled.
2. The 'USB Assigned IRQ' item under 'PnP/PCI Configuration is set to enabled.

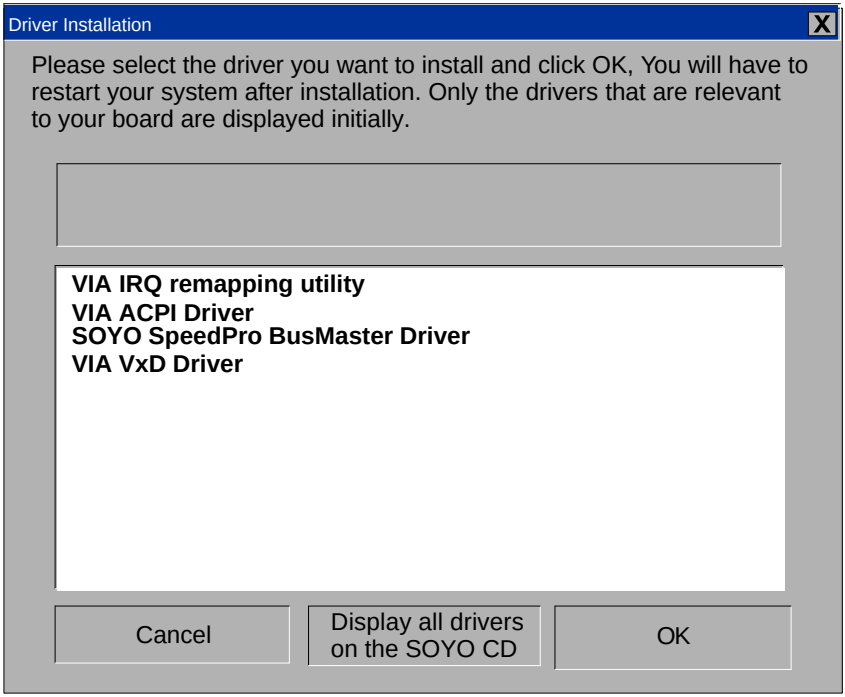
You MUST have these two items enabled for Windows 95/98 to run properly on your system.

➢ Install Windows 95/98

➢ After installation of windows, you will need to install theVIA drivers. Follow the instruction below.

Click the ***Install Drivers*** button to display the list of drivers that can be installed on your mainboard. The start-up program displays the drivers available for the SY-V6BE+ and the Windows version you use. For Windows 95 four drivers will be listed (see 'Driver Installation Menu ' below), for Windows 98 three drivers will be listed (the ACPI drivers will be left out).

If you want to see all the drivers available on the SOYO –CD, click the ***Display all drivers on the SOYO CD*** button. Do NOT install drivers that are not suitable for you board, otherwise your system may crash.



(Driver Installation Menu)

Select which driver you want to install and click ***OK,*** or click ***Cancel*** to return to the main menu. When the installation program of a driver starts running the SOYO-CD will exit. After finishing the installation, restart the SOYO-CD and install the next driver. We recommend you to install all drivers, and to do so in the right sequence (top to bottom).

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.

Install the drivers in sequence, starting with the VIA IRQ remapping utility. After installing all drivers above, if you use Windows 95, first install the USB supplement before installing the AGP driver that came with your AGP card.

The USB supplement is available on the Windows OSR 2 or above CD in the following directory:\OSR2\usbsupp.exe
It also can be downloaded from www.microsoft.com

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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Version 1.0
SY-V6BE+ SERIAL

International Headquarters
Soyo Computer Inc., (Taiwan)
Tel: 886-2-2290-3300
Fax: 886-2-2298-3322
Web Site: http://www.soyo.com.tw
E-mail: info@mail.soyo.com.tw

USA Branch Office
Soyo Tek Inc., (USA)
Tel: (408) 452-7696
Fax: (408) 573-7696
Web Site: http://www.soyousa.com
E-mail: sales@soyousa.com

SOYO Europe
Soyo Europe B.V., (Holland)
Tel: 31-79-3637500
Fax: 31-79-3637575
Web Site: http://www.soyo-europe.com
http://www.soyo.nl
E-mail: Sales@soyo.nl

Germany Branch Office
SAAT Technology GmbH, (Germany)
Tel: 49-(0)444-204044
Fax: 49-(0)444-203422
Web Sites:http://www.saat.de
http://www.soyo-saat.de
http://www.soyo-saat.com
Email: sales@saat.de

UK Branch Office
Soyo (U.K.) Ltd.
Tel: 44-(0)181-569 4111
Fax: 44-(0)181-569 4134
Web Site: http://www.soyo.nl
E-mail: sales@soyo.nl

Japan Branch Office
Soyo Computer (Japan)
Tel: 81-3-33682188
Fax: 81-3-33682199
Web Site: http://www.soyo.co.jp
E-mail: soyo@po.iijnet.or.jp

Hong Kong Branch Office
Soyo Hong Kong Ltd. (H.K.)
Tel: 852-2710-9810
Fax: 852-2710-9078
Web Site: http://www.soyo.com.hk
E-mail: rshu@hkstar.com