



SY-6VBA133-B

Motherboard

Pentium® III, Pentium® II & Celeron™

Processor supported

Apollo Pro133 AGP/PCI Motherboard

66/100/133 MHz Front Side Bus supported

ATX Form Factor

User's Manual

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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>".

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6VBA133-B SERIAL

FC Tested To Comply
With FCC Standards
FOR HOME OR OFFICE USE

100% POST CONSUMER
RECYCLED PAPER

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Chapter 1

MOTHERBOARD DESCRIPTION

1-1 INTRODUCTION

The **SY-6VBA133-B** AGP/PCI Motherboard is a high-performance Slot 1 supported ATX form-factor system board. **SY-6VBA133-B** uses the VIA Chipset technology and supports Slot 1 class processors. This Motherboard is fully compatible with industry standards and adds many technical enhancements.

1-2 KEY FEATURES

➤ CPU SUPPORT

The SY-6VBA133-B supports a wide range of INTEL CPUs:

- Intel Pentium III 450~866 MHz
- Intel Pentium II 233~450 MHz
- Intel Celeron 266~433 MHz

New released Intel Slot 1 CPUs will very likely be supported by the SY-6VBA133-B as well.

➤ CPU SETTINGS

The SY-6VBA133-B provides the user with a very complete and convenient CPU setting environment. The CPU settings are all adjusted through the special SOYO COMBO page in the BIOS, therefore rendering the use of jumpers obsolete.

■ CPU FSB Frequency

The SY-6VBA133-B supports an incredible wide range of CPU FSB frequency settings:

66, 75, 81, 83, 90, 95, 100, 105, 110, 112, 113, 115, 117, 118, 120, 122, 124, 126, 133, 135, 137, 138, 140, 142, 144, 150 and 155 MHz.

This ensures that the SY-6VBA133-B has an overwhelming overclocking potential.

■ **CPU Multiplier**

The SY-6VBA133-B supports a wide range of multipliers:

2.0x, 2.5x, 3.0x, 3.5x, 4.0x, 4.5x, 5.0x, 5.5x, 6.0x, 6.5x, 7.0x, 7.5x and 8.0x

■ **CPU Core Voltage**

The CPU Core voltage is set automatically according to CPU needs. The SY-6VBA133-B supports an advanced Core voltage feature; it can be adjusted through the BIOS directly without setting jumper. In normal mode the voltage will be standard, apart from that the user can specify increments of 2.5%, 5%, 7.5% and 10% on top of the standard voltage. This will provide the CPU with the power it needs for overclocking.

➤ **EXPANDABILITY**

The SY-6VBA133-B provides all the standard expansion slots, and many more additional expansion features:

◆ **Expansion slots**

- 1 x 32-bit bus mastering AGP slot
- 5 x 32-bit bus mastering PCI slots
- 2 x 16-bit ISA slots

◆ **Enhanced IO**

- Floppy disk controller
- 2x EIDE controllers with support for up to 4 Ultra DMA 33/66 devices
- Standard/EPP/ECP parallel port
- 2x 16550 compatible serial ports
- IrDA compatible infrared port
- 2x USB (Universal Serial Bus) connectors
- PS/2 mouse connector
- PS/2 keyboard connector

➤ **ADVANCED FUNCTIONS**

The SY-6VBA133-B supports advanced functions such as:

- **Wake-On-LAN**

Supports Wake-On-LAN (*Some advanced network cards can wake the system up over the network, the WOL connector is*

provided by the SY-6VBA133-B to support this function).

- **Multiple boot**

The SY-6VBA133-B supports booting from devices such as CD-ROM.

- **Power on by modem or alarm**

If the SY-6VBA133-B system is in suspend mode, it can be switched back on through the modem or RTC alarm through this function. This opens a lot of possibilities, such as remote access that switches the system on only after the modem receives a call.

➤ **FAIL SAFE**

The SY-6VBA133-B comes with added functionality to make managing the system easy and safe

◆ **Hardware Monitor**

The integrated Winbond Hardware Monitor IC and Hardware doctor software enables the user the monitor system voltages, temperatures and FAN speeds. This makes sure that the user is full control of the system

◆ **Power Failure Resume Function**

This function can be set in the BIOS, and determines whether the system will automatically turn on again after a power failure. This function is indispensable for server systems that need to always be on line.

◆ **5VSB Indicator**

This green LED gives an indication of the presence of the 5V Standby voltage. This voltage is always fed into the motherboard and is used for functions such as WOL.

➤ **SOYO Bonus Pack CD-ROM**

➤ **COMPLIANCE**

The SY-6VBA133-B complies with all important industry standards. The following underlines the reliability of the SY-6VBA133-B, a motherboard to trust.

- Year 2000 compliant
- PC99 compliant

- FCC/CE complaint

➤ **USER FRIENDLY**

- SOYO Combo Setup
- Jumperless design
- You can set up the following options through the BIOS setting
 - CPU FSB frequency
 - CPU multiplier
 - CPU Vcore voltage
 - PCI clock
 - AGP Clock
 - SDRAM Clock

1-3 HANDLING THE MOTHERBOARD

To avoid damage to your Motherboard, follow these simple rules while unpacking:

- Before handling the Motherboard, ground yourself by grasping 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 loose, press carefully to seat it firmly in its socket.



Warning: Do not apply power if the Motherboard appears damaged. If there is damage to the board, contact your dealer immediately.

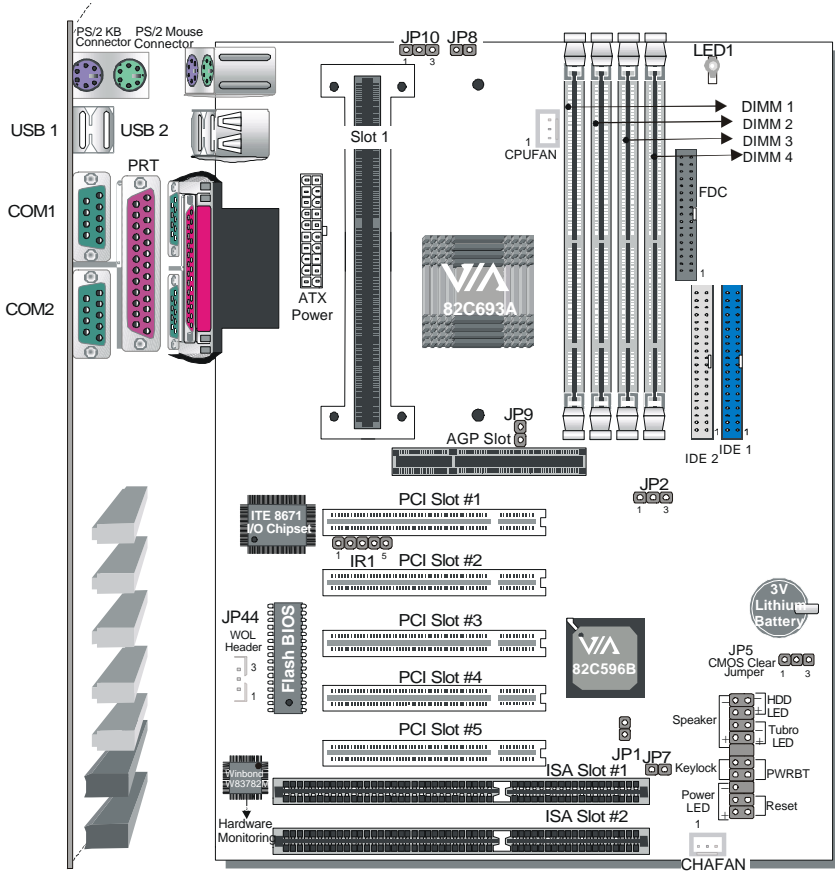
1-4 ELECTROSTATIC DISCHARGE PRECAUTIONS

Make sure to ground yourself before handling the Motherboard or other system components. Electrostatic discharge can easily damage the components. Note that you must take special precautions when handling the Motherboard in dry or air-conditioned environment.

To protect your equipment from electrostatic discharge, take the following precautions:

- Do not remove the anti-static packaging until you are ready to install.
- Ground yourself before removing any system component from its protective anti-static packaging. (To ground yourself, grasp the expansion slot covers or other unpainted portions of the computer chassis.)
- Frequently ground yourself while working or use a grounding strap.
- Handle the Motherboard by its edges and avoid touching its components.

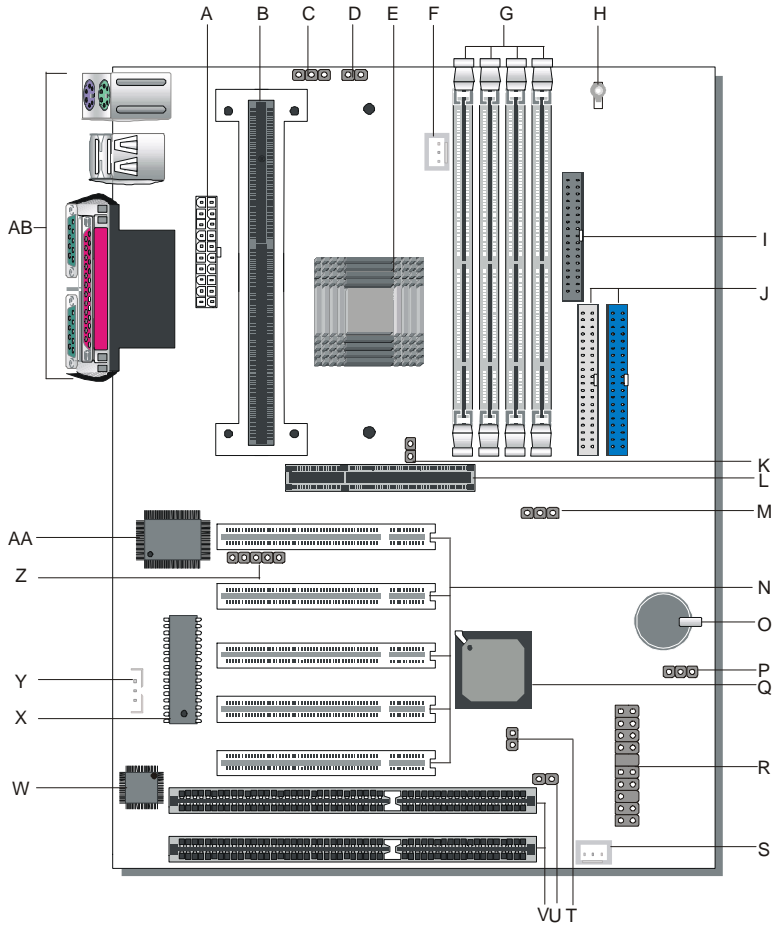
1-5 SY-6VBA133-B MOTHERBOARD LAYOUT



Back Panel

SY-6VBA133-B Platform

1-6 SY-6VBA133-B MOTHERBOARD COMPONENTS



- A** ATX Power Supply Connector
- B** Slot 1 Connector
- C** Power On by Keyboard Jumper
- D** CPU B21 and A14 setting Jumper
- E** Via 82C693A PCI/AGP North Bridge chip
- F** CPU Cooling Fan Connector
- G** DIMM Bank
- H** 5V Stand-by indicator LED
- I** Floppy Disk Drive (FDD) Port
- J** Bus Mastering e-IDE/ATAPI Ports
- K** CPU B21 and A14 setting Jumper
- L** 32-bit AGP Slot
- M** FSB boot up frequency Jumper
- N** 32-bit PCI Mastering Slots
- O** 3V Lithium Battery
- P** CMOS Clear Jumper
- Q** Via 82C596B South Bridge Chip
- R** Front panel connectors
- S** Chassis Cooling Fan
- T** External Suspend Button Header
- U** FSB boot up frequency Jumper
- V** 16-bit ISA Slot
- W** Winboard W83782M hardware monitoring
- X** Flash BIOS
- Y** Wake-On-LAN (WOL) Header
- Z** Serial Infrared (IrDA) Device Header
- AA** ITE 8671 super I/O Controller
- AB** Back panel Connectors

1-7 MICROPROCESSOR

The motherboard supports a single Slot 1 processor. The processor's VID pins automatically program the voltage regulator on the motherboard to the required processor voltage. In addition, the front side bus speed (66 MHz, 100 MHz and 133 MHz) is automatically selected. The motherboard supports all current Slot 1 processor speeds, voltages, and bus frequencies.

1-7.1 Microprocessor Packaging

The processor is packaged in a Single Edge Contact Cartridge (S.E.C.C) or Single Edge Processor Package (S.E.P.P). The cartridge includes the processor core, second-level cache subsystem, thermal plate, and back cover.

The processor connects to the motherboard through the Slot1 connector, a 242-pin edge connector. When mounted in Slot1, the processor is secured by a retention mechanism attached to the motherboard. A passive heatsink is stabilized by the heatsink supports.

1-7.2 Second Level Cache

The second-level cache is located on the substrate of the CPU package. The cache includes 0KB/128KB (Celeron) or 512 KB (PII/PIII) of synchronous pipelined burst static RAM. All supported onboard memory can be cached.

1-7.3 Microprocessor Upgrades

The motherboard can be upgraded with Slot 1 processors that run at higher speeds. When upgrading the processor, use the BIOS configuration mode to change the processor speed.

1-8 MEMORY

1-8.1 Main Memory

The motherboard has four DIMM sockets. SDRAM can be installed in one,

two, three, or four sockets. Using the serial presence detect (SPD) data structure, programmed into an E²PROM on the DIMM, the BIOS can determine the SDRAM's size and speed. Minimum DIMM memory size is 8 MB; maximum DIMM memory size is 256/512 MB. Memory size and speed can vary between sockets.

The motherboard supports the following memory features:

- 168-pin DIMMs with gold-plated contacts
- 66/100/133 MHz SDRAM
- Non-ECC (64-bit) and ECC (72-bit) memory
- 3.3V memory only
- Supports 8/16/32/64/128/256/512* MB DIMM Modules
(*512MB DIMM1,2 only)
- Support unbuffered single- or double-sided DIMMs

Note

Slot 1 processors with 100 MHz front-side bus should be paired only with 100 MHz SDRAM. Processors with 66 MHz front side bus can be paired with either 66 MHz or 100 MHz SDRAM.

1-8.2 SDRAM

SDRAM improves memory performance through memory access that is synchronous with the front-side bus clock. Burst transfer rates at x-1-1-1 timing can be achieved using SDRAM, while asynchronous memory subsystem are typically limited at x-2-2-2 transfer rates.

Note

All memory components and DIMMs used with the SY-6VBA133-B motherboard must comply with the PC SDRAM specifications. These include: the PC SDRAM Specification (memory component specific), the PC Unbuffered DIMM Specification, and the PC Serial Presence Detect Specification.

1-8.3 ECC Memory

ECC memory detects multiple-bit errors and corrects single-bit errors. When ECC memory is installed, the BIOS supports both ECC and non-ECC mode. ECC mode is enabled in the Setup program. The BIOS automatically detects if ECC memory is installed and provides the Setup option for selecting ECC mode. If any non-ECC memory is installed, the Setup option for ECC configuration does not appear and ECC operation is not available.

1-9 CHIPSET

The Apollo Pro 133 is a high performance, cost-effective and energy efficient chip set for the implementation of AGP/PCI/ISA desktop personal computer systems from 66MHz, 100MHz and 133MHz based on 64-bit Slot 1 super-scalar processors.

The Apollo Pro133 chip set consists of the VT82C693A system controller (492 pin BGA) and the VT82C596B PCI to ISA bridge (324 pin BGA). The system controller provides superior performance between the CPU, DRAM, AGP bus, and PCI bus with pipelined, burst, and concurrent operation.

The VT82C693A supports eight banks of DRAMs up to 1.5GB. The DRAM controller supports standard Fast Page Mode (FPM) DRAM, EDO-DRAM, Synchronous DRAM (SDRAM) and Virtual Channel SDRAM (VC SDRAM), in a flexible mix / match manner. The Synchronous DRAM interface allows zero wait state bursting between the DRAM and the data buffers at 66/100/133 MHz. The eight banks of DRAM can be composed of an arbitrary mixture of 1M/2M/4M/8M/16M/32MxN DRAMs. The DRAM controller also supports optional ECC (single-bit error correction and multi-bit detection) or EC (error checking) capability separately selectable on a bank-by-bank basis. The DRAM controller can run at either the host CPU bus frequency (66/100/133 MHz) or at the AGP bus frequency (66 MHz) with built-in PLL timing control.

The VT82C6893A system controller also supports full AGP v1.0 capability for maximum bus utilization including 2x mode transfers, SBA (Side Band Addressing), Flush/Fence commands, and pipelined grants. An eight level request queue plus a four level post-write request queue with thirty-two and sixteen quad words of read and write data FIFO's respectively are included for deep pipelined and split AGP transactions. A single-level GART TLB with 16 full associative entries and flexible CPU/AGP/PCI remapping control is also provided for operation under protected mode operating environments. Both Window 95 VxD and Windows 98 /NT5.0 mini port drivers are supported for interoperability with major AGP-based 3D and DVD- capable multimedia accelerators. The VT82C693A supports two 32-bit 3.3/5V system buses (one AGP and one PCI) that are synchronous/ pseudo-synchronous to the CPU bus. The chip also contains a built-in bus-to-bus bridge to allow simultaneous concurrent operations on each bus. Five levels (double words) of post write buffers are included to allow for concurrent CPU and PCI operation. For PCI master operation, forty-eight levels (double words) of post write buffers and sixteen levels (double words) of prefetch buffers are included for concurrent PCI bus and DRAM/cache accesses. The chip also supports enhanced PCI bus commands such as Memory-Read-Line, Memory-Read-Multiple and Memory-Write-Invalid commands to minimize snoop overhead. In addition, advanced features are supported such as snoop ahead, snoop filtering, L1 write-back forward to PCI master, and L1 write-back merged with PCI post write buffers to minimize PCI master read latency and DRAM utilization. Delay transaction and read caching mechanisms are also implemented for further improvement of over all system performance.

The 324-pinm ball Grid Array VT82C596B PCI to ISA bridge supports four levels (double words) of line buffers, type F DMA transfers and delay transaction to allow efficient PCI bus utilization and (PCI-2.1 compliant) The VT82C596B also includes an integrated keyboard controller with PS/2 mouse support, integrated DS12885 style real time clock with

extended 256 byte CMOS RAM, integrated master mode enhanced IDE controller with full scatter/ gather capability and extension to UltraDMA-33/66 for 33/66 MB/sec transfer rate, integrated USB interface with root Hub and two function ports with built-in physical layer transceivers, Distributed DMA supports, and On Now/ ACPI compliant advanced configuration and power management interface.

For sophisticated power management, the Apollo Pro133 provides independent clock stop control for the CPU/SDRAM, PCI, and AGP buses and Dynamic CKE control for powering down of the SDRAM. A separate suspend-well plane is implemented for the SDRAM control signals for Suspend-to-DRAM operation. Coupled with the VT82C596B south bridge chip, a complete power conscious PC motherboard can be implemented with no external TTLs.

The Apollo Pro133 chipset is ideal for high performance, high quality, high energy efficient and high integration desktop and notebook AGP / PCI / ISA computer systems.

1-10 I/O INTERFACE CONTROLLER

The motherboard uses the ITE 8671 super I/O controller which features:

- Single diskette drive interface
- ISA Plug-and-Play compatible register set
- Two serial ports
- FIFO supports on both serial and diskette interfaces
- One parallel port with Extended Capabilities Port (ECP) and Enhanced Parallel Port (EPP) support
- PS/2 style mouse and keyboard interfaces
- PCI PME interface
- Vialigent auto power management, including:
 - Shadowed write-only registers for ACPI compliance
 - Programmable wake-up event interface

The Setup program provides configuration option for the I/O controller.

1-10.1 Serial Ports

The motherboard has two 9-pin D-Sub serial port connectors located on the back panel. The NS16C5450-compatible UARTs support data transfers at speeds up to 115.2 Kbits/sec with BIOS support.

1-10.2 Parallel Port

The connector for the multimode bi-directional parallel port is a 25-pin D-Sub connector located on the back panel of the motherboard. In the Setup program, there are four options for parallel port operation:

- Compatible (standard mode)
- Bi-directional (PS/2 compatible)
- Bi-directional EPP. A driver from the peripheral manufacturer is required for operation.
- Bi-directional high-speed ECP

1-10.3 Diskette Drive Controller

The I/O controller is software compatible with the 82077 diskette drive controller and supports both PC-AT and PS/2 modes. In the Setup program, the diskette drive interface can be configured for the following diskette drive capacities and sizes.

- 360 KB, 5.25-inch
- 1.2 MB, 5.25-inch
- 720 KB, 3.5-inch
- 1.2 MB, 3.5-inch (driver required)
- 1.25-1.44 MB, 3.5-inch
- 2.88 MB, 3.5-inch

1-10.4 PS/2 Keyboard and Mouse Interface

PS/2 keyboard and mouse connectors are located on the back panel of the motherboard. The +5 V lines to keyboard and mouse connectors are protected with a fuse that prevents motherboard components from being damaged when an over-current condition occurs.

Note

The mouse and keyboard can be plugged into either PS/2 connector. Power to the computer should be turned off before a keyboard or mouse is connected or disconnected.

The keyboard controller contains code, which provides the traditional keyboard and mouse control functions, and also supports Power On/Reset password protection. Power On/Reset password can be specified in the BIOS Setup program.

The keyboard controller also supports the hot-key sequence <Ctrl><Alt>, software reset. This key sequence resets the computer's software by jumping to the beginning of the BIOS code and running the Power On Self Test (POST).

1-10.5 Infrared Support

On the front panel I/O connector, there are six pins that support Hewlett Packard HSDL-1000 compatible infrared (IR) transmitters and receivers. In the Setup program, Serial Port B can be directed to a connected IR device. (In this case, the Serial Port B connector on the back panel cannot be used.) The IR connection can be used to transfer files to or from portable devices like laptops, PDAs, and printers. The Infrared Data Association (IrDA) specification supports data transfers of 115Kbits/sec at a distance of 1 meter.

1-11 HARDWARE MONITOR

The optional hardware monitor subsystem provides low-cost instrumentation capabilities. The features of the hardware monitor subsystem include:

- An integrated ambient temperature sensor
- Fan speed sensors, which monitor the fan 1 and fan 2 connector.
- Power supply voltage monitoring to detect levels above or below acceptable values

When suggested ratings for temperature, fan speed, or voltage are exceeded, an interrupt is activated. The hardware monitor component connects to the SMBus.

1-12 WAKE ON LAN TECHNOLOGY

Wake on LAN technology enables remote wakeup of the computer through a network. Wake on LAN technology requires a PCI add-in network interface card (NIC) with remote wakeup capabilities. The remote wakeup connector on the NIC must be connected to the onboard Wake on LAN technology connector. The NIC monitors network traffic at the MII interface; upon detecting a Magic Packet, the NIC asserts a wakeup signal that powers up the computer. To access this feature uses the Wake on LAN technology connector.

⚠ CAUTION

For Wake on LAN, the 5-V standby line for the power supply must be capable of delivering +5V \pm 5 % at 720 mA. Failure to provide adequate standby current when implementing Wake on LAN can damage the power

Chapter 2

HARDWARE INSTALLATION

Congratulations on your purchase of **SY-6VBA133-B** Motherboard. You are about to install and connect your new Motherboard.



Note: Do not unpack the Motherboard from its protective anti-static packaging until you have made the following preparations.

2-1 PREPARATIONS

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

1. Slot 1 processor with built-in CPU cooling fan (boxed type).



Note: This Motherboard supports non-boxed type CPUs. The heavier CPU cooling fan requires the installation of a CPU support stand.

2. DIMM memory module
3. Computer case and chassis with adequate power supply unit
4. Monitor
5. PS/2 Keyboard
6. Pointing Device (PS/2 mouse)
7. Speaker(s) (optional)
8. Disk Drives: HDD, CD-ROM, Floppy drive ...
9. External Peripherals: Printer, Plotter, and Modem (optional)
10. Internal Peripherals: Modem and LAN cards (optional)

2-2 UNPACKING THE MOTHERBOARD

When unpacking the Motherboard, check for the following items:

-
- ◆ The SY-6VBA133-B Apollo Pro133 AGP/PCI Motherboard
-



-
- ◆ The Quick Start Guide
-



-
- ◆ The Installation CD-ROM
-



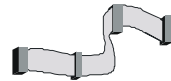
-
- ◆ SOYO Bonus Pack CD-ROM
-



-
- ◆ The CPU Retention Set
-



-
- ◆ One IDE Device ATA 66 Flat Cable
-



-
- ◆ One Floppy Disk Drive Flat Cable
-



Warning: Do not unpack the Motherboard from its anti-static packaging until you are ready to install it.

Like most electronic equipment, your Motherboard may be damaged by electrostatic discharge. To avoid permanent damage to components ground yourself while working by using a grounding strap. Otherwise, ground yourself frequently by touching the unpainted portion of the computer chassis to drain the static charges.

Handle the Motherboard carefully, holding it by the edges.

You are now ready to start the installation.

2-3 INSTALLATION GUIDE

We will now begin the installation of the Motherboard. Please follow the step-by-step procedure designed to lead you to a complete and correct installation.



Warning: Turn off the power to the Motherboard, system chassis, and peripheral devices before performing any work on the Motherboard or system.

BEGIN THE INSTALLATION

2-3.1 CPU Installation

Your SY-6VBA133-B motherboard comes with a CPU retention set kit. The retention set is used to hold the processor attached to the Slot 1 CPU connector on the motherboard.

☑ *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"/> 266MHz (66 x 4.0) | <input type="checkbox"/> 333MHz (66 x 5.0) | <input type="checkbox"/> 400MHz (66 x 6.0) | <input type="checkbox"/> |
| <input type="checkbox"/> 300MHz (66 x 4.5) | <input type="checkbox"/> 366MHz (66 x 5.5) | <input type="checkbox"/> 433MHz (66 x 6.5) | |

FSB 100MHz

| | | | |
|---|---|---|--------------------------|
| <input type="checkbox"/> 350MHz (100 x 3.5) | <input type="checkbox"/> 450MHz (100 x 4.5) | <input type="checkbox"/> 550MHz (100 x 5.5) | <input type="checkbox"/> |
| <input type="checkbox"/> 400MHz (100 x 4.0) | <input type="checkbox"/> 500MHz (100 x 5.0) | <input type="checkbox"/> 600MHz (100 x 6.0) | |

FSB 133MHz

| | | | |
|---|---|---|---|
| <input type="checkbox"/> 400MHz (133 x 3.0) | <input type="checkbox"/> 533MHz (133 x 4.0) | <input type="checkbox"/> 667MHz (133 x 5.0) | <input type="checkbox"/> 800MHz (133 x 6.0) |
| <input type="checkbox"/> 466MHz (133 x 3.5) | <input type="checkbox"/> 600MHz (133 x 4.5) | <input type="checkbox"/> 733MHz (133 x 5.5) | <input type="checkbox"/> 866MHz (133 x 6.5) |

Follow these instructions to install your Slot 1 processor correctly.

➤ Retention Module



1. Open the two sides by folding them up.



2. Push the locks on top of the CPU inward.



3. Insert the CPU into the retention module. The CPU fits in the CPU slot in only ONE way, do not try to force it in.



4. After completely inserting the CPU, push the two locks on top of the CPU outward. Now your CPU is ready for use.



To remove the CPU, press the two notches on top of the CPU inward. Now press the two slides on the retention module down and remove the CPU.



Note: *Installing a heat sink and cooling fan on top of your CPU is necessary for proper heat dissipation. Failing to install these items may result in overheating and possible burn-out of your CPU.*

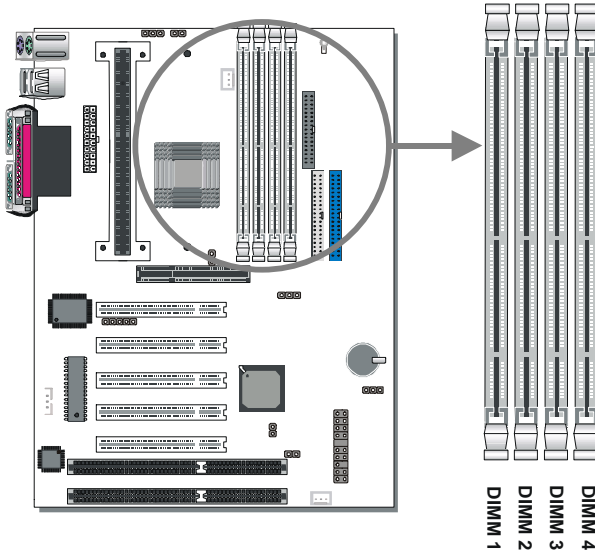
2-3.1.1 CPU Fan Installation

Your Slot 1 processor kit comes with a cooling fan. Mount the fan on the processor according to the instructions provided by the manufacturer. The fan is a key component that will ensure system stability. The fan prevents overheating, therefore prolonging the life of your CPU.

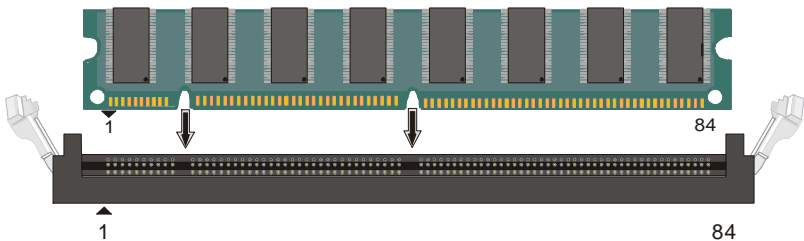


Note: Remember to connect the fan to the appropriate power source.

2-3.2 SDRAM Memory Module Installation



Your board comes with four DIMM sockets, providing support for up to 1.5GB of main memory using unbuffered and registered DIMM modules from 8MB to 256/512MB. 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 (Chapter 3), 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.

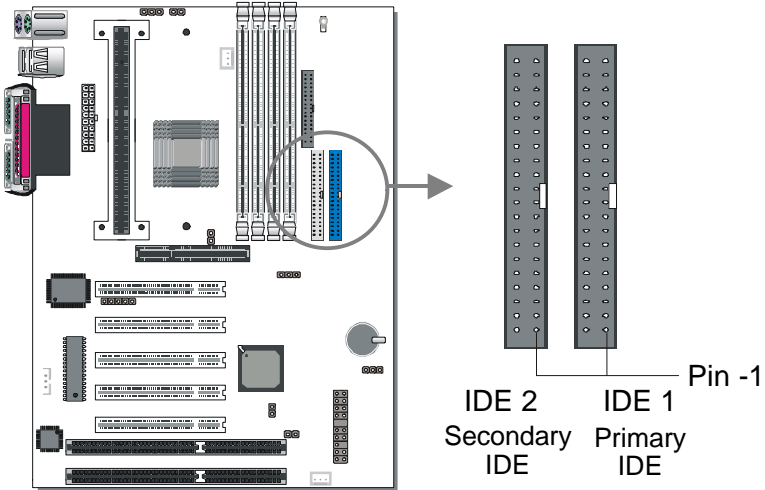


Memory Configuration Table

| Number of Memory Modules | DIMM 1 | DIMM 2 | DIMM 3 | DIMM 4 |
|--|--|-----------------|--|-----------------|
| 1 | | | | 1 st |
| 2 | | | 2 nd | 1 st |
| 3 | | 3 rd | 2 nd | 1 st |
| 4 | 4 th | 3 rd | 2 nd | 1 st |
| RAM Type | SDRAM | | | |
| Memory Module Size (MB) | 8/16/32/64/128/256/512 MB (For DIMM1 & DIMM2) | | 8/16/32/64/128/256 MB (For DIMM3 & DIMM4) | |
| <p>Note: Always install memory modules in the order prescribed in this table.</p> | | | | |

2-3.3 Motherboard Connector

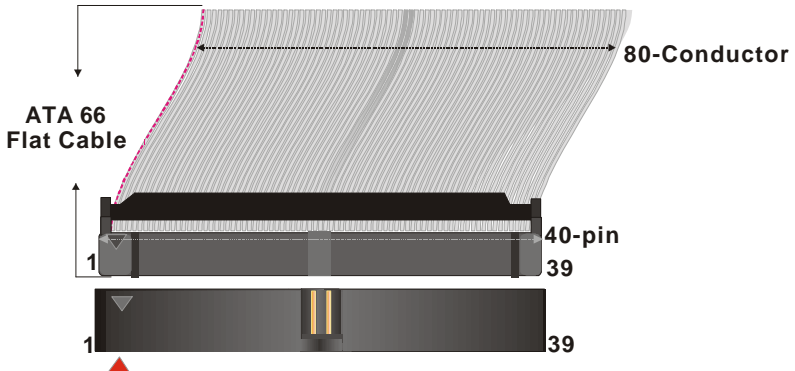
2-3.3.1 IDE Device Installation (HDD, CD-ROM)



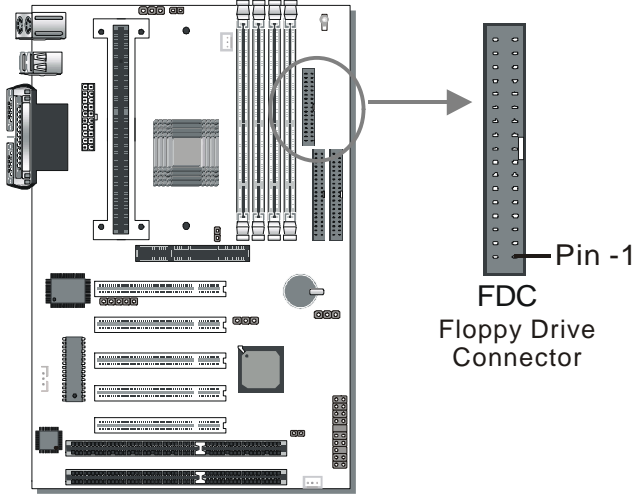
This Motherboard offers two primary and secondary IDE device connectors (IDE1, IDE2). It can support up to four high-speed Ultra DMA 33HDD or CD-ROM.

Connect one side of the ATA66 flat cable to the IDE device (HDD or CD-ROM) and plug the other end to the primary (IDE1) or secondary (IDE2) directionally keyed IDE connector on the Motherboard. ATA66 cable can be used backward compatible with ATA33 HDD.

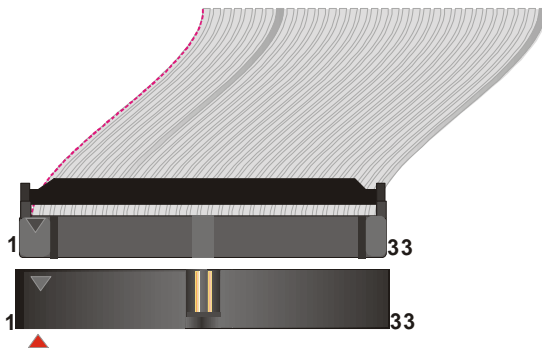
This Motherboard can support up to four HDDs.



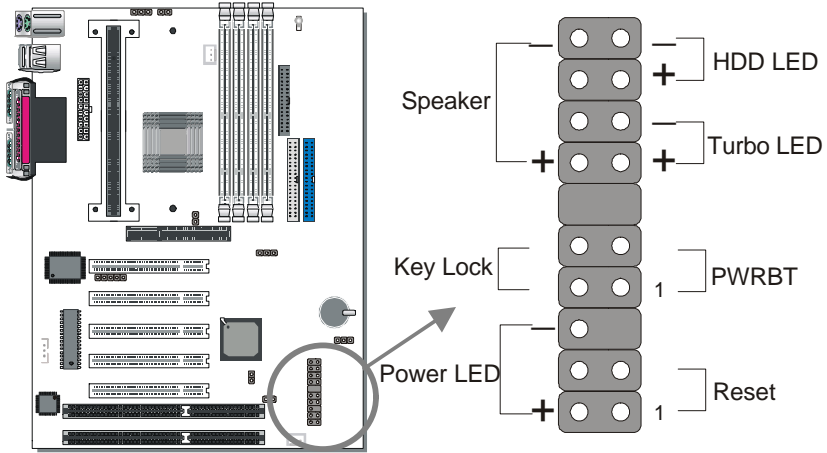
2-3.3.2 Floppy Drive Installation



The system supports 5 possible floppy drive types: 720 KB, 1.2 MB, 1.44 MB, 2.88 MB, and LS-120. In addition, this Motherboard supports a 3-mode (720KB/1.2MB/1.44MB) floppy commonly used in Japan. Connect one side of the 34-pin flat cable to the floppy drive and plug the other end to the floppy drive connector on the Motherboard. This Motherboard can support up to 2 floppy drives.



2-3.3.3 Front Panel Connections



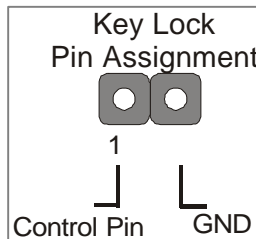
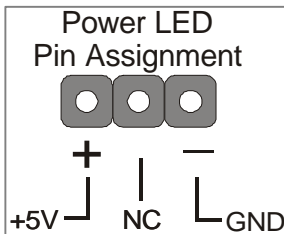
Plug the computer case's front panel devices to the corresponding headers on the Motherboard.

1. Power LED & KeyLock

Plug the Power LED cable into the 5-pin Keylock header.

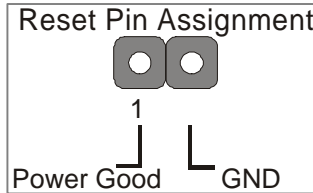
Some systems may feature a KeyLock function with a front panel switch for enabling or disabling the keyboard. Connect the KeyLock switch to the 5-pin Keylock header on the Motherboard.

Please install according to the following pin assignment: pin 1,3 are for Power LED and pin 4,5 are for Keylock.



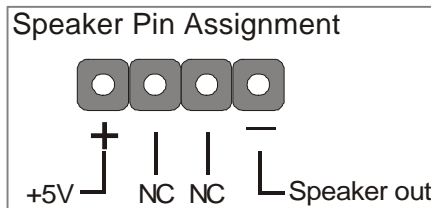
2. Reset

Plug the Reset push-button cable into the 2-pin Reset header on the Motherboard. Pushing the Reset button on the front panel will cause the system to restart the boot-up sequence.



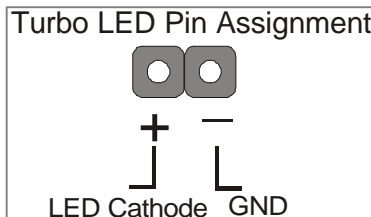
3. Speaker

Attach the 4-pin PC speaker cable from the case to the Speaker header on the Motherboard.



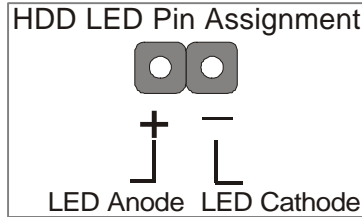
4. Turbo LED

Connecting the 2-pin Turbo LED cable to the corresponding Turbo LED header will cause the LED to light whenever the system is in Turbo mode. The manufacturer has permanently set this Motherboard in Turbo mode due to most hardware and software compliance to turbo mode.



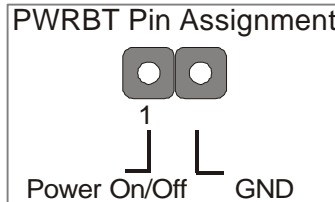
5. IDE LED

Attach the 2-pin IDE device LED cable to the corresponding IDE LED header on the Motherboard. This will cause the LED to lighten when an IDE (HDD, CD-ROM) device is active.



6. ATX Power On/Off Switch

Attach the 2-pin momentary type switch to the PWRBT header for turning On or Off your ATX power supply.

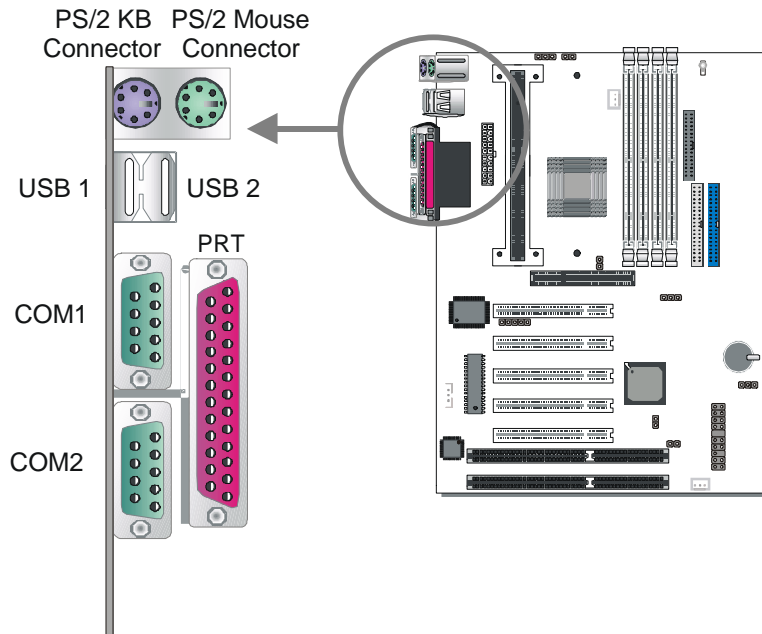


2-3.3.4 Back Panel Connections

All external devices such as the PS/2 keyboard, PS/2 mouse, printer, modem, USB can be plugged directly onto the Motherboard back panel.

Only after you have fixed and locked the Motherboard to the computer case can you start connecting the external peripheral devices.

When connecting an external device, use the following figure to locate and identify which back panel connector to plug the device to.



1. Onboard Serial Ports COM1/COM2

External peripherals that use serial transmission scheme include:

- serial mouse,
- and modem.

Plug the serial device cables directly into the COM1/COM2 9-pin male connectors located at the rear panel of the Motherboard.

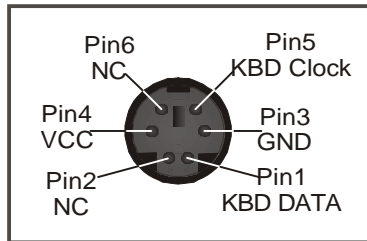
2. Parallel Port PRT

This parallel port is used to connect the printer or other parallel devices.

Plug the parallel device cable into the 25-pin female connector located at the rear panel of the Motherboard.

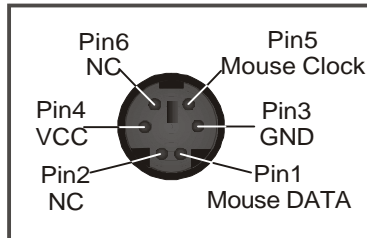
3. PS/2 Keyboard

Plug the keyboard jack directly into the 6-pin female PS/2 keyboard connector located at the rear panel of the Motherboard.



4. PS/2 Mouse

Similarly, plug the mouse jack directly into the 6-pin female PS/2 mouse connector.



5. Universal Serial Bus USB1/USB2

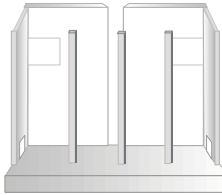
This Motherboard provides two USB ports for your additional devices. Plug the USB device jack into the available USB connector USB1 or USB2.

- USB devices under Win98 are allowed.
- With Win95, use the UHCI specifications.

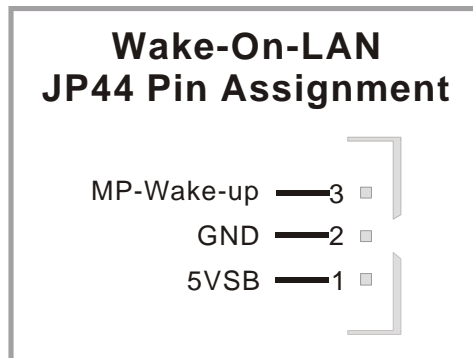
2-3.3.5 Other Connections

1. Wake-On-LAN (WOL)

Attach the 3-pin connector from the LAN card which supports the Wake-On-LAN (WOL) function to the JP44 header on the Motherboard. This WOL function lets users wake up the connected computer through the LAN card.



Please install according to the following pin assignment:



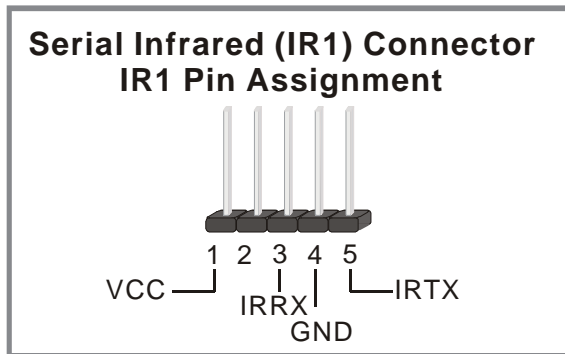
2. Infrared (IR1)

Plug the 5-pin infrared device cable to the IR1 header. This will enable the



infrared transfer function. This Motherboard meets both the ASKIR and HPSIR specifications.

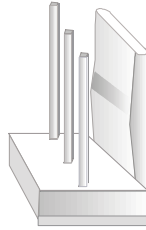
Please install according to the following pin assignment:



3. Other Display Cards

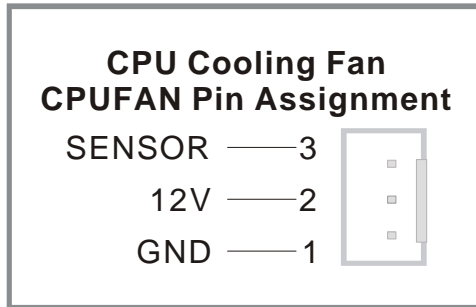
Insert other types of VGA cards into the PCI or ISA expansion slots according to card specifications.

4. Cooling Fan Installation



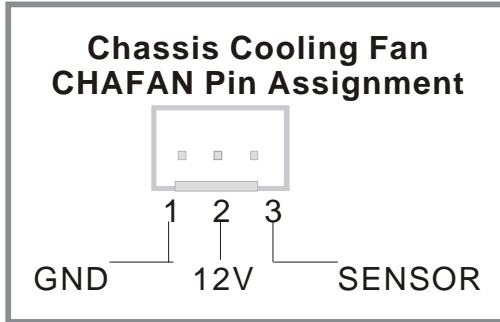
(1) CPU Cooling Fan

After you have seated the CPU properly on the processor, attach the 3-pin fan cable to the CPUFAN connector on the Motherboard. The fan will stop when the system enters into Suspend Mode. (Suspend mode can be enabled from the BIOS Setup Utility, [POWER MANAGEMENT] menu.) To avoid damage to the system, install according to the following pin assignment:



(2) Chassis Cooling Fan

Some chassis also feature a cooling fan. This Motherboard features a CHAFAN connector to provide 12V power to the chassis fan. Connect the cable from the chassis fan to the CHAFAN 3-pin connector. Install according to the following pin assignment:



Note: CPUFAN must be installed for this Motherboard, CHAFAN is optional.

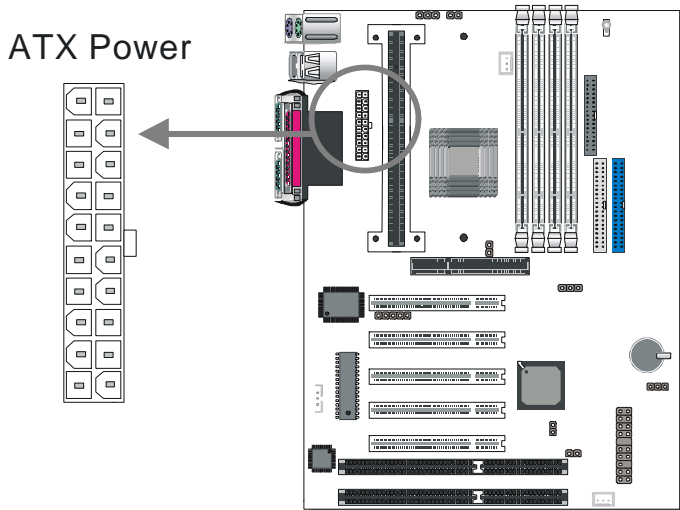
2-3.3.6 AGP VGA Card

Insert the AGP VGA card into the AGP slot. Then connect the monitor information cable to the AGP card back plane external connector. Follow the manufacturer's instructions to perform the AGP VGA drivers installation.

Other Display Cards: Insert other types of VGA cards into the PCI or ISA expansion slots according to card specifications.

2-3.3.7 ATX Power Supply

Plug the connector from the power directly into the 20-pin male ATX PW connector on the Motherboard, as shown in the following figure.





Warning: Follow these precautions to preserve your Motherboard from any remnant currents when connecting to ATX power supply:

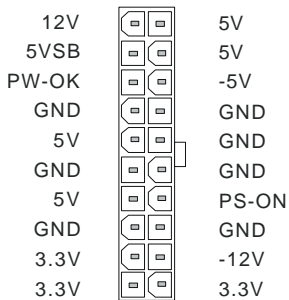
Turn off the power supply and unplug the power cord of the ATX power supply before connecting to ATX PW connector.

The Motherboard requires a power supply with at least 200 Watts and a "power good" signal. Make sure the ATX power supply can take at least 720 mA * load on the 5V Standby lead (5VSB) to meet the standard ATX specification.

* **Note:** If you use the Wake-On-LAN (WOL) function, make sure the ATX power supply can support at least 720 mA on the 5V Standby lead (5VSB).

Please install the ATX power according to the following pin assignment:

ATX Power



➤ **Pay special care to the directionality.**

2-3.4 Jumper Setting

Step 1. 5V Stand-by indicator LED (LED 1)

This LED is lit whenever the 5V Standby voltage coming from the ATX power supply is available. If you have connected your ATX power supply to the motherboard, LED 1 should be lit.

Step 2. External Suspend Button (JP1)







Some cases come with a suspend button, insert the plug into JP1. In addition to this button, the system can also enter the suspend mode through your OS.



Note: Suspend mode only functions if your Power Management mode is APM. Make sure that the BIOS setting for Power Management is APM. Windows 98 can be installed with ACPI Power Management (default is APM), in this case suspend mode will not function either.

Step 3. FSB boot-up frequency and AGP divider: JP2 and JP7

The settings of JP2 and JP7 determine the FSB frequency at boot-up, and more important, they determine the AGP divider and the group of FSB frequencies that can be selected in the BIOS. Refer to the following table:

| JP7 | JP2 | Boot-up FSB | BIOS FSB group | AGP divider |
|---|---|-------------|----------------|-------------|
| Short  | Short Pin 1-2  | 66 | 66~83 | 1 |
| Open  | Short pin 1-2  | 100 | 90~122 | 1.5 |
| Open  | Short pin 2-3  | 133 | 124~155 | 2.0 |

As example, if JP7 is set to open and JP2 to (1-2), the boot-up FSB frequency will be 100MHz. When the BIOS takes control, it will write the BIOS FSB setting to the clock generator. This happens shortly after power-up, and the FSB frequency will then be in accordance to the BIOS setting. The group from which the FSB Frequency can be selected in the BIOS is 90~122MHz and AGP Clock will be 60~81MHz. Note that all FSB Frequencies are available in the BIOS, but that only those in the group as determined by JP2 and JP7 will have effect when selected.

Step 4. CPU B21 and A14 Settings: JP8 and JP9







For certain Intel CPUs, the multiplier is not locked such that setting a multiplier higher than specified on the CPU is possible. For technical details read the following:

Your PII /III 100/66 MHz FSB CPU has an input pin B21 (100/66# signal) to tell it what FSB frequency it is running at; The PIII 133 MHz FSB CPU has two pins B21 and A14 (133/100# signal). JP8 and JP9 are connected to the B21 and A14 input respectively and are used to tell CPU its FSB speed.

The actual FSB Frequency is however set through the BIOS and it may therefore differ from the Frequency specified to the CPU through JP8 & JP9.

Because some INTEL CPUs have their multipliers limited at a FSB Frequency of 100MHz and higher, telling the CPU that it is running at 66MHz through JP8 & JP9 while setting a different (higher) FSB Frequency in the BIOS may allow the user to set a higher multiplier value. Doing so will however force your CPU to operate out of its specifications, and therefore SOYO can not guarantee the proper functioning of your system.

Refer to the following table:

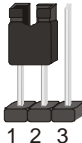

| JP9 | JP8 | tell CPU its FSB Speed | PII, Celeron | PII,PIII | PIII |
|---|---|------------------------|----------------|-------------------------------------|----------------|
| | | | 66MHz FSB | 100MHz FSB | 133MHz FSB |
| Short  | Short  | FSB = 66MHz | Normal setting | *Possible higher multiplier setting | |
| Short  | Open  | FSB = 100MHz | | Normal setting | |
| Open  | Open  | FSB = 133MHz | | | Normal setting |



This setting will tell CPU that it is running on 66MHz; this will release more multiplier settings on some Intel CPUs, but it will make the system operate out of its specifications if the actual FSB frequency is 100MHz higher.

Step 5. Power-On by Keyboard Jumper (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 and the Power-On by Keyboard function is disabled.  |

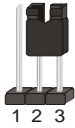
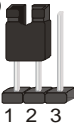


Note: When using the Power-On by Keyboard function, please make sure the ATX power supply can take at least 720mA load on the 5V Standby lead (5VSB) to meet the standard ATX specification.

2-3.5 CMOS Clearing (JP5)

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 JP5. 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 |
|---|--|---|
| 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. | | |

2-3.6 Power On

You have now completed the hardware installation of your Motherboard successfully.

1. Turn the power on
2. To enter the BIOS Setup Utility, press the key while the system is performing the diagnostic checks,



Note: If you have failed to enter the BIOS, wait until the boot up sequence is completed. Then push the RESET button and press key again at the beginning of boot-up, during diagnostic checks.

Repeat this operation until you get the following screen.

3. The BIOS Setup screen appears:

| ROM PCI/ISA BIOS CMOS SETUP UTILITY AWARD SOFTWARE, INC. | |
|--|---------------------------|
| SOYO COMBO SETUP | INTEGRATED PERIPHERALS |
| STANDARD CMOS SETUP | SUPERVISOR PASSWORD |
| BIOS FEATURES SETUP | USER PASSWORD |
| CHIPSET FEATURES SETUP | IDE HDD AUTO DETECTION |
| POWER MANAGEMENT SETUP | SAVE & EXIT SETUP |
| PNP/PCI CONFIGURATION | EXIT WITHOUT SAVING |
| LOAD SETUP DEFAULTS | |
| Esc : Quit | ↑ ↓ → ← : Select Item |
| F10 : Save & Exit Setup | (Shift) F2 : Change Color |
| Time, Date, Hard Disk Type... | |

2-3.7 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 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 key during the system diagnostic checks to enter the Award BIOS Setup program. The CMOS SETUP UTILITY will display on screen. Follow these steps to configure the CPU settings. 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.

(1) CPU Name & CPU ID

The BIOS will read the CPU name string and CPU ID code From the CPU and it will display it here. This item provides information only and can not be change.

(2) CPU Frequency

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

Available [CPU Frequency] settings on your SY-6VBA133-B Motherboard are detailed in the following table.

| CPU Frequency (MHz) | <input type="checkbox"/> 500MHz(66 x 7.5) | <input type="checkbox"/> 750MHz (100 x 7.5) |
|---|---|---|
| <input type="checkbox"/> Manual | <input type="checkbox"/> 533MHz (66 x 8.0) | <input type="checkbox"/> 800MHz (100 x 8.0) |
| <input type="checkbox"/> 200MHz (66 x 3.0) | <input type="checkbox"/> 300MHz (100 x 3.0) | <input type="checkbox"/> 400MHz (133 x 3.0) |
| <input type="checkbox"/> 233MHz (66 x 3.5) | <input type="checkbox"/> 350MHz (100 x 3.5) | <input type="checkbox"/> 466MHz (133 x 3.5) |
| <input type="checkbox"/> 266MHz (66 x 4.0) | <input type="checkbox"/> 400MHz (100 x 4.0) | <input type="checkbox"/> 533MHz (133 x 4.0) |
| <input type="checkbox"/> 300MHz (66 x 4.5) | <input type="checkbox"/> 450MHz (100 x 4.5) | <input type="checkbox"/> 600MHz (133 x 4.5) |
| <input type="checkbox"/> 333MHz (66 x 5.0) | <input type="checkbox"/> 500MHz (100 x 5.0) | <input type="checkbox"/> 666MHz (133 x 5.0) |
| <input type="checkbox"/> 366MHz (66 x 5.5) | <input type="checkbox"/> 550MHz (100 x 5.5) | <input type="checkbox"/> 733MHz (133 x 5.5) |
| <input type="checkbox"/> 400MHz (66 x 6.0) | <input type="checkbox"/> 600MHz (100 x 6.0) | <input type="checkbox"/> 800MHz (133 x 6.0) |
| <input type="checkbox"/> 433MHz (66 x 6.5) | <input type="checkbox"/> 650MHz (100 x 6.5) | <input type="checkbox"/> 866MHz (133 x 6.5) |
| <input type="checkbox"/> 466MHz (66 x 7.0) | <input type="checkbox"/> 700MHz(100 x 7.0) | <input type="checkbox"/> 933MHz (133 x 7.0) |
| <p>Select the working frequency of your Pentium® III, Pentium® II, Celeron™ processor among these preset values.</p> <p>Note: <input checked="" type="checkbox"/> Mark the checkbox that corresponds to the working frequency of your Pentium® III, Pentium® II, Celeron™ processor in case the CMOS configuration should be lost.</p> | | |

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.

(1) CPU Host/PCI Clock

| CPU Host / PCI Clock | | | | | Under this item you find the frequencies your PCI slots run at. |
|--------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---|
| <input type="checkbox"/> 66/33 | <input type="checkbox"/> 95/31 | <input type="checkbox"/> 115/38 | <input type="checkbox"/> 124/41 | <input type="checkbox"/> 140/35 | |
| <input type="checkbox"/> 75/37 | <input type="checkbox"/> 100/33 | <input type="checkbox"/> 117/39 | <input type="checkbox"/> 126/31 | <input type="checkbox"/> 142/35 | |
| <input type="checkbox"/> 78/39 | <input type="checkbox"/> 105/35 | <input type="checkbox"/> 118/39 | <input type="checkbox"/> 133/33 | <input type="checkbox"/> 144/36 | |
| <input type="checkbox"/> 81/40 | <input type="checkbox"/> 110/36 | <input type="checkbox"/> 120/40 | <input type="checkbox"/> 135/33 | <input type="checkbox"/> 150/37 | |
| <input type="checkbox"/> 83/41 | <input type="checkbox"/> 112/37 | <input type="checkbox"/> 122/37 | <input type="checkbox"/> 137/34 | <input type="checkbox"/> 155/38 | |
| <input type="checkbox"/> 90/30 | <input type="checkbox"/> 113/37 | <input type="checkbox"/> 124/31 | <input type="checkbox"/> 138/34 | | |

(2) CPU Ratio

After you have selected the CPU Host/ PCI Clock, choose the right multiplier for the CPU. CPU Ratio options are:

| | | | | |
|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| <input type="checkbox"/> x 2 | <input type="checkbox"/> x 2.5 | <input type="checkbox"/> x 3 | <input type="checkbox"/> x 3.5 | <input type="checkbox"/> x 4 |
| <input type="checkbox"/> x 4.5 | <input type="checkbox"/> x 5 | <input type="checkbox"/> x 5.5 | <input type="checkbox"/> x 6 | <input type="checkbox"/> x 6.5 |
| <input type="checkbox"/> x 7 | <input type="checkbox"/> x 7.5 | <input type="checkbox"/> x 8 | | |

The CPU frequency is then defined as [host clock freq.] x [multiplier], and should equal the working frequency of your CPU.

(3) DRAM Clock

(3) DRAM Clock

Now select the DRAM clock source. It is derived form the CPU FSB clock and it can, depending on the BIOS setting, be:

- Equal to the CPU FSB clock
- CPU FSB clock – PCI clock
- CPU FSB clock + PCI clock

As an example: If the user sets the CPU Host/PCI clock to 105/35 MHz, the options will be:

- **Equal to the CPU FSB clock = 105 MHz**
- **CPU FSB clock – PCI clock = 70 MHz**
- **CPU FSB clock + PCI clock = 140 MHz**

Depending on the DRAM speeds, the user can select one of these speeds through the BIOS.

(4) AGP Clock

The AGP clock is derived from the CPU FSB frequency. It is divided by 1.0, 1.5 or 2.0 depending on the setting of JP2 and JP7:

Please refer to page 40 for the JP2 and JP7 settings.

(5) Vcore Voltage Adjust

The CPU notifies the board of what core voltage it requires by its VID outputs. The on-board voltage regulator uses the VID code to set the core voltage. If the **Vcore Voltage Adjust** is set to normal, the Vcore will be exactly what the VID code specifies. If an adjustment percentage is selected the Vcore will be that percentage higher than the VID code specifies. For instance the CPU VID code specifies 2.0V and the Vcore Voltage adjust is set to +10.0% the actual CPU Voltage will be 2.2V. This function should only be used if the CPU is running on FSB Frequencies beyond the CPU specifications, note that SOYO does not guarantee system stability if this item is not set to normal.

| | | | | |
|---------------------------------|----------------------------------|----------------------------------|---------------------------------|----------------------------------|
| <input type="checkbox"/> Normal | <input type="checkbox"/> + 2.5 % | <input type="checkbox"/> + 5.0 % | <input type="checkbox"/> + 7.5% | <input type="checkbox"/> +10.0 % |
|---------------------------------|----------------------------------|----------------------------------|---------------------------------|----------------------------------|

Step 4. Select [SAVE & EXIT SETUP]

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

2-3.8 Troubleshooting at First Start

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 hear a series of beeps and I do not get anything from my monitor. What could be wrong?

The following lists some basic beep codes and their possible meanings:

- One long beep and 3 very short beeps - The video card is not detected by the motherboard. Please re-seat your video card. If you are using an AGP card, please push your AGP card down real hard. You may have to push VERY hard without the AGP card mounting screw. Make sure not to insert the card the other way around.
- Continuous beeps – One or more of the memory modules is not seated correctly in its socket.

My PCI VGA card works fine with my system, but when I put in a new AGP card, it does not give me any video. Is my AGP slot bad?

This is a common problem with AGP video cards. The reason is that your AGP card did not get seated into the AGP slot fully and firmly. Please push your AGP card down into the socket real hard, it should snap twice. You may have to unscrew the AGP card to allow the card to go further down. Do take care not to damage the card by using too much force.

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

The cause is likely that your AGP card is not running at the correct bus speed. To fix this, please clear the CMOS via JP5 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 south bridge 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 'south bridge' 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 'south bridge' 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 JP5 then choose 'load setup 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. If you are running a Cyrix CPU, make sure the 'linear burst function' is enabled in the bios.

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>



Note on Over-clocking Capability

The SY-6VBA133-B provides over-clocking capability. Due to the over-clocking setting your system may fail to boot up or hang during run time. Please perform the following steps to recover your system from the abnormal situation :

1. Turn off system power (If you use an ATX power supply, and depending on your system, you may have to press the power button for more than 4 seconds to shut down the system.)
2. Set the JP8 and JP9 to short if you use a FSB 66MHz 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 shown on the screen.

4. Press the key during the system diagnostic checks to enter the Award BIOS Setup program.
5. Select [SOYO COMBO SETUP] 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 new 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.

2-3.9 Power Off

There are two possible ways to turn off the system:

1. Use the **Shutdown** command in the **Start Menu** of Windows 95/98 to turn off your computer.
2. Press the mechanical power-button and **hold down for over 4 seconds**, to shutdown the computer. If you press the power-button for less than 4 seconds, then your system will enter into **Suspend Mode**.

You are now ready to configure your system with the BIOS setup program. Go to *Chapter 3: BIOS SETUP*

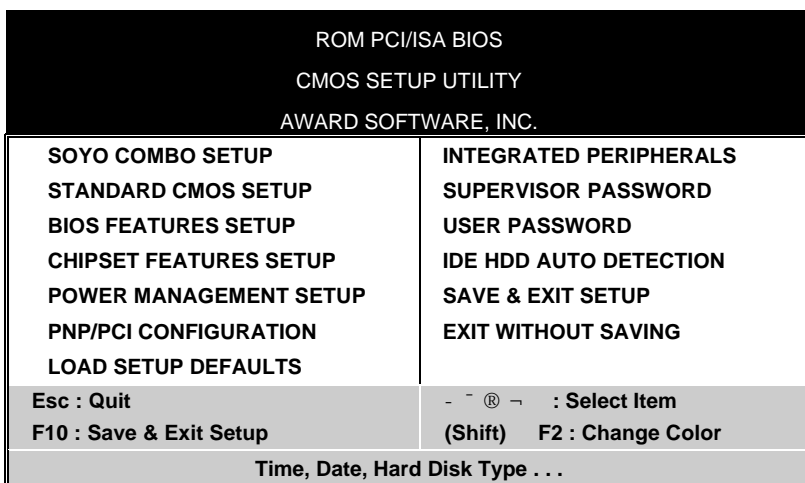
Chapter 3

BIOS SETUP UTILITY

This motherboard's BIOS setup program uses the ROM PCI/ISA BIOS program from Award Software Inc.

To enter the Award BIOS program's Main Menu:

1. Turn on or reboot the system.
2. After the diagnostic checks, press the [Del] key to enter the Award BIOS Setup Utility.



3. Selecting items
 - Use the arrow keys to move between items and select fields.
 - From the Main Menu press arrow keys to enter the selected submenu.

Modifying selected items

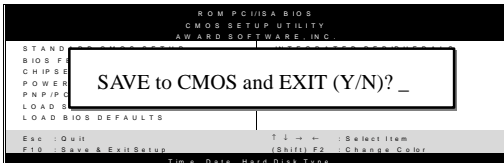
- Use the [Up]/[Down] keys to modify values within the selected fields. Some fields let you enter values directly.

Hot Keys: Function keys give you access to a group of commands throughout the BIOS utility.

| Function | Command | Description |
|----------|---------------------|--|
| F1 | Help | Gives the list of options available for each item. |
| Shift F2 | Color | Change the color of the display window. |
| F5 | Old values | Restore the old values. These are the values that the user started the current session with. |
| F7 | Load Setup Defaults | Loads all options with the Power-On default values. |
| F10 | Save & Exit Setup | Saves your changes and reboots the system. |
| [Esc] | Quit | Lets you return at anytime and from any location to the Main Menu. |

SAVE AND EXIT SETUP

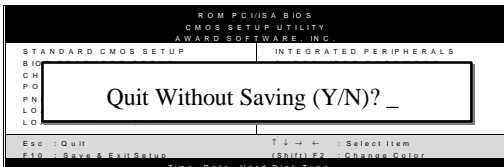
Select the [SAVE & EXIT SETUP] option from the Main Menu to save data to CMOS and exit the setup utility. This option saves all your changes and causes the system to reboot.



Type [Y] to save the changes and exit or [N] to return to the Main Menu and keep current values.

EXIT WITHOUT SAVING

Selecting the [EXIT WITHOUT SAVING] option allows you to abandon all data and exit setup, therefore ignoring all your changes.



Type [Y] to abandon changes and exit or [N] to return to the Main Menu and keep current values.

3-1 SOYO COMBO 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 SETUP].

After the hardware installation is complete, turn the power switch on, then press the key during the system diagnostic checks to enter the Award BIOS Setup program. The CMOS SETUP UTILITY will display on screen. Then, select the [SOYO COMBO SETUP] option from the main menu and press the <Enter> key.

| ROM PCI/ISA BIOS | | | |
|----------------------------|---------------|---------------------------|--------------------------|
| SOYO COMBO SETUP | | | |
| AWARD SOFTWARE, INC. | | | |
| CPU TYPE : | CPU ID : | CPU Warning Temperature : | Disabled |
| CPU Frequency (MHz) : | Manual | Current System Temp. : | 26 ½ C / 78 ½ F |
| CPU Host/PCI Clock : | 100/33 MHz | Current CPU Temperature : | 28 ½ C / 82 ½ F |
| CPU Ratio : | X 5 = 500 Mhz | Current CPUFAN Speed : | 5433 RPM |
| DRAM Clock : | 100 MHz | Current CHAFAN Speed : | 0 RPM |
| AGP Clock : | 66 MHz | 3.3V : | 2.01 V VTT : 1.5 V |
| CAS Latency : | 3 | Vcore : | 3.52 V +5 V : 4.91 V |
| CPU L2 Latency Adjust : | Def 00 | +12 V : | 12.09 V VBAT(V) : 3.02 V |
| Vcore Voltage Adjust : | Normal | 5VSB(V) : | 4.89 V |
| Boot Sequence : | A,C,SCSI | Memory Ultra fast : | Enabled |
| Quick Power On Self Test : | Enabled | PWRON After PWR-Fail : | Off |
| POWER ON Function : | BUTTON ONLY | | |
| Hot Key Power ON : | Ctrl-F1 | | |
| Modem Ring Resume : | Disabled | | |
| RTC Alarm Resume : | Disabled | | |
| Date (of Month) : | | | |
| Timer (hh:mm:ss) : | | | |
| | | ESC : Quit | ↑ ↓ → ← : Select Item: |
| | | F1 : Help | PU / PD / + / - : Modify |
| | | F5 : Old Values | (Shift) F2 : Color |
| | | F7 : Load Setup Defaults | |

The [SOYO COMBO SETUP] menu combines the main parameters that you need to configure, all in one menu, for a quick setup in BIOS.

3-1.1 Quick CPU Frequency Setup

| Quick CPU Frequency Setup | Setting | Description | Note |
|---|---|--------------------|--|
| CPU Name & CPU ID | The BIOS will read the CPU name string and CPU ID code From the CPU and it will display it here. This item provides information only and can not be change. | | |
| CPU Frequency | Manual | 500MHz (100 x 5) | Select the working frequency of your Slot 1 processor among these preset values. Note: Setting this field to [Manual] requires you to fill in the next two consecutive fields: (1) the CPU Host/PCI Clock, and (2) the CPU Ratio. |
| | 200MHz (66 x 3) | 550MHz (100 x 5.5) | |
| | 233MHz (66 x 3.5) | 600MHz (100 x 6) | |
| | 266MHz (66 x 4) | 650MHz (100 x 6.5) | |
| | 300MHz (66 x 4.5) | 700MHz(100 x 7) | |
| | 333MHz (66 x 5) | 750MHz(100 x 7.5) | |
| | 366MHz (66 x 5.5) | 800MHz (100 x 8) | |
| | 400MHz (66 x 6) | 400MHz (133 x 3) | |
| | 433MHz (66 x 6.5) | 466MHz (133 x 3.5) | |
| | 466MHz (66 x 7) | 533MHz (133 x 4) | |
| | 500MHz(66 x 7.5) | 600MHz (133 x 4.5) | |
| | 533MHz (66 x 8) | 666MHz (133 x 5) | |
| | 300MHz (100 x 3.5) | 733MHz (133 x 5.5) | |
| | 350MHz (100 x 3.5) | 800MHz (133 x 6) | |
| 400MHz (100 x 4) | 866MHz (133 x 6.5) | | |
| 450MHz (100 x 4.5) | 933MHz (133 x 7) | | |
| If [CPU Frequency] field is set to [Manual] | | | |
| CPU Host/PCI Clock | 66/33 MHz | 120/40 MHz | Select the host clock of your Slot 1 processor among these values. Note: For the ZX chipset, 66 and 100 MHz host clock frequencies are acceptable. However, the system stability is not guaranteed for other frequencies due to the limitations of this chipset. |
| | 75/37 MHz | 122/37 MHz | |
| | 78/39 MHz | 124/31 MHz | |
| | 81/40 MHz | 124/41 MHz | |
| | 83/41 MHz | 126/31 MHz | |
| | 90/30 MHz | 133/33 MHz | |
| | 95/31 MHz | 135/33 MHz | |
| | 100/33 MHz | 137/34 MHz | |
| | 105/35 MHz | 138/34 MHz | |
| | 110/36 MHz | 140/35 MHz | |
| | 112/37 MHz | 142/35 MHz | |
| | 113/37 MHz | 144/36 MHz | |
| | 115/38 MHz | 150/37 MHz | |
| 117/39 MHz | 155/38 MHz | | |
| 118/39 MHz | | | |

Quick CPU Frequency Setup (Continued)

| Quick CPU Frequency Setup | | | | Setting | | | | Description | | | | Note | | |
|---|--|-----|-----|--|-----|-----|---|---|-----|-----|----------------|------|--|--|
| If [CPU Frequency] field is set to [Manual] | | | | | | | | | | | | | | |
| CPU Ratio | | | | After you have selected the host clock, choose the right multiplier for the CPU. Options are: [2, 2.5, 3., 3.5, 4, 4.5, 5, 5.5,6,6.5,7.0,7.5,8.0]. The CPU frequency is then defined as [host clock freq.]x[multiplier], and should be the working frequency of your Pentium® III, Pentium® II & Celeron™ processor. | | | | | | | | | | |
| | | | | DRAM Clock | | | | Select the DRAM clock source it can, depending on the host clock frequency, be equal to CPU-PCI, CPU or CPU+PCI. The table below lists all possible combinations. | | | | | | |
| | | | | 66~83 | | | 90~122 | | | | 124~155 | | | |
| CPU-PCI | | | | | 66 | 70 | 74 | 75 | 83 | 93 | 95 | 100 | | |
| | | | | | 76 | 77 | 78 | 79 | 102 | 103 | 104 | 105 | | |
| | | | | | 80 | 85 | | | 107 | 108 | 113 | 117 | | |
| CPU | | 66 | 75 | 78 | 90 | 95 | 100 | 105 | 124 | 126 | 133 | 135 | | |
| | | | | | 110 | 112 | | | 137 | 138 | | | | |
| | | 81 | 83 | | 113 | 115 | 117 | 118 | 140 | 142 | 144 | 150 | | |
| | | | | | 120 | 122 | | | 145 | | | | | |
| CPU+PCI | | 100 | 112 | 117 | 120 | 126 | 133 | 140 | | | | | | |
| | | | | | 146 | 150 | 152 | 156 | | | | | | |
| | | 121 | 124 | | 160 | 157 | | | | | | | | |
| AGP Clock | | | | The AGP clock is derived from the host clock. It is divided by 1.0, 1.5 or 2.0 depending on the host clock frequency. See the table below: 66~83 AGP = CPU Host ÷ 1.0 90~122 AGP = CPU Host ÷ 1.5 124~155 AGP = CPU Host ÷ 2.0 | | | | | | | | | | |
| CAS Latency | | | | 3 | | | This item sets the speed with which the motherboard reads the memory. | | | | | | | |

Quick CPU Frequency Setup (Continued)

| Quick CPU Frequency Setup | Setting | Description | Note |
|-----------------------------|-----------|---|---------|
| CPU L2 Cache Latency Adjust | Def 00 | This item allows the user to adjust the CPU L2 cache latency. This item should only be used by experienced users. Setting it to an inappropriate value can crash the system. | Default |
| | Set 01~15 | | |
| Vcore voltage Adjust | Normal | | Default |
| | +2.5 % | The CPU notifies the board of what core voltage it requires by its VID outputs. The on-board voltage regulator uses the VID code to set the core voltage. If the Vcore Voltage Adjust is set to normal, the Vcore will be exactly what the VID code specifies. If an adjustment percentage is selected the Vcore will be that percentage higher than the VID code specifies. For instance the CPU VID code specifies 2.0V and the Vcore Voltage adjust is set to +10.0% the actual CPU Voltage will be 2.2V. This function should only be used if the CPU is running on FSB Frequencies beyond the CPU specifications, note that SOYO does not guarantee system stability if this item is not set to normal. | |
| | +5.0% | | |
| | +7.5 % | | |
| | +10.0% | | |

3-1.2 System Boot Control Settings

| System Boot Control Settings | Setting | Description | Note |
|------------------------------|-------------|---|------|
| Boot Sequence | A, C, SCSI | Choose the boot sequence adapted to your needs, for example: <ul style="list-style-type: none"> ● [A, C, SCSI] means the BIOS will look for an operating system first in drive A, then in drive C, and eventually in SCSI device. | |
| | C, A, SCSI | | |
| | C, CDROM, A | | |
| | CDROM, C, A | | |
| | D, A, SCSI | | |
| | E, A, SCSI | | |
| | F, A, SCSI | | |
| | SCSI, A, C | | |
| | SCSI, C, A | | |
| | C only | | |
| LS/ZIP, C | | | |

3-1.3 Quick Power On Self Test Settings

| | Setting | Description | Note |
|--|----------|----------------------------------|---------|
| | Disabled | | |
| | Enabled | Provides a fast POTS at boot-up. | Default |

3-1.4 Power Management

| PM Events | Setting | Description | Note |
|---|-----------------------|---|---------|
| POWER ON Function | BUTTON-ONLY | Disables the Wake-Up by Keyboard function. | Default |
| | KB Power ON Password | Enables you to wake-up the system by entering a password at the keyboard. | |
| | Hot Key | You can wake-up the system by pressing the key combination of your choice (Ctrl-F1~F12). | |
| If [POWER ON Function] is set to [KB Power ON Password] | | | |
| KB Power ON Password | Enter (your password) | Set the password that will wake-up your system. | |
| If [POWER ON Function] is set to [Hot Key] | | | |
| Hot Key Power On | Ctrl-F1~F12 | Choose the key combination that will wake-up the system. [Ctrl-F1 to Ctrl-F12] | |
| Modem Ring Resume | Disabled | An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state. | Default |
| | Enabled | | |
| RTC Alarm Resume | Disabled | The system ignores the alarm. | Default |
| | Enabled | Set alarm to power on the system by the date (1-31) or time (hh:mm:ss). If the date is set to [0], the system will self-power on by alarm everyday at the set time. | |

3-1.5 CPU Device Monitoring

| CPU Device Monitoring | Setting | Description | Note |
|--|----------|---|---------|
| CPU Warning Temperature | Disabled | | Default |
| | Enabled | Set CPU temperature from 50°C to 120°C. The CPU will slow down when CPU temperature goes beyond the preset value. The CPU will continue to run slow until the temperature returns back within the safe range. | |
| Current System Temp. | °C/°F | Show the current status of the system temperature. | |
| Current CPU Temperature | °C/°F | Show the current status of CPU temperature. | |
| Current CPUFAN Speed | °C/°F | Show the current status of CPU Fan | |
| Current CHAFAN Speed | °C/°F | Show the current status of the chassis Fan | |
| 3.3V, VTT, Vcore, +5, +12, VBAT, 5VSB | V | Show the current voltage status. | |

3-1.6 Other Control Options

| Other Control Options | Setting | Description | Note |
|--------------------------|----------|--|---------|
| Memory Ultra fast | Disabled | Setting this item to be enabled will set the memory to run at the fastest speed. Only use this setting with good quality DIMM modules. | Default |
| | Enabled | | |
| PWRON After PWR | On | The system will switch on when power comes back after a power failure. | |
| | Off | The system will remain off when power comes back after a power failure. | Default |
| | Auto | The system will return to the state it was in before the power failure when power returns. (i.e: If the system was on, it will switch on again, if it was off, it will remain off) | |

3-2 STANDARD CMOS SETUP

Select the [STANDARD CMOS SETUP] option from the Main Menu and press [Enter] key.

ROM PCI/ISA BIOS
 STANDARD CMOS SETUP
 AWARD SOFTWARE, INC.

| | |
|-----------------------------------|--|
| Date (mm:dd:yy) : Thu, Jan 1 1998 | |
| Time (hh:mm:ss) : 1 : 9 :25 | |
| HARD DISKS | |
| TYPE | SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE |
| Primary Master : Auto | 0 0 0 0 0 0 0 AUTO |
| Primary Slave : Auto | 0 0 0 0 0 0 0 AUTO |
| Secondary Master : Auto | 0 0 0 0 0 0 0 AUTO |
| Secondary Slave : Auto | 0 0 0 0 0 0 0 AUTO |
| Drive A : 1.44M, 3.5 in. | |
| Drive B : None | |
| Floppy 3 Mode Support : Disabled | |
| Video : EGA/VGA | |
| Halt On : All, But Keyboard | |
| | Base Memory: 640K Extended Memory: 31744K Other Memory: 384K <hr style="width: 50%; margin: 0 auto;"/> Total Memory: 32768K |
| ESC : Quit | ← → ⊞ → : Select Item |
| F1 : Help | (Shift) F2 : Change Color PU / PD / + / - : Modify |

This screen allows you to modify the basic CMOS settings.

After you have completed the changes, press [Esc] key to return to the Main Menu.

3-2.1 Date & Time

| | Display | Setting | Please Note |
|-------------|------------|-----------------------|---|
| Date | mm/dd/yyyy | Type the current date | You can also the PUp/PDn keys to toggle |
| | | | |
| Time | hh:mm:ss | Type the current time | 24-hour clock format 3:15 PM is displayed as 15:15:00 |
| | | | |

3-2.2 Hard Disks Type & Mode

Choose the type and mode for the hard disks that you have already installed.

| Primary (Secondary) Master & Slave | Setting | Description | Note |
|--|---------|---|---------|
| Type | Auto | BIOS detects hard disk type automatically. | Default |
| | User | User defines the type of hard disk. | |
| | None | | |
| Mode | Auto | BIOS detects hard disk mode automatically. | Default |
| | Normal | Normal IDE hard disk | <528MB |
| | LBA | Enhanced IDE hard disk | >528MB |
| | Large | Large IDE hard disk (for certain hard disk) | |



Note: If you have any questions on your hard disk type or mode, ask your hard disk provider or previous user for details.

3-2.3 Floppy Drives

| Floppy Drives | Setting | Description | Note |
|------------------------------|----------------------------|--|---|
| Drives A & B | 360KB, 5.25 in. | | |
| | 1.2MB, 5.25 in. | | |
| | 720KB, 3.5 in. | | |
| | 1.44MB, 3.5 in. | | Default |
| | 2.88MB, 3.5 in. | | |
| | None | Not installed | |
| Floppy 3-Mode Support | Disabled | | Default |
| | Drive A Drive B Both | Supports 3-mode floppy diskette: 740KB/1.2MB/ 1.44MB on selected disk drive. | Special disk drive commonly used in Japan |
| | | | |

3-2.4 Video

Select the video mode: EGA/VGA (Default), CGA 40, CGA 80, Mono (Monochrome).

3-2.5 Halt On

When the BIOS detects system errors, this function will stop the system.

Select which type of error will cause the system halt: All Errors (Default), No Errors, All But Diskette, All But Keyboard, All But Disk/Key.

3-3 BIOS FEATURES SETUP

Select the [BIOS FEATURES SETUP] option from the Main Menu and press [Enter] key.

| ROM PCI/ISA BIOS | | | |
|----------------------------|------------|---------------------------------|------------------------------|
| BIOS FEATURES SETUP | | | |
| AWARD SOFTWARE, INC. | | | |
| Virus Protection | : Disabled | Security Option | : Setup |
| CPU Internal Cache | : Enabled | PCI/VGA Palette Snoop | : Disabled |
| External Cache | : Enabled | OS Select For DRAM > 64 MB | : Non-OS2 |
| CPU L2 Cache ECC Checking | : Enabled | HDD S.M.A.R.T. capability | : Disabled |
| Processor Number Feature | : Enabled | Video BIOS Shadow | : Enabled |
| Swap Floppy Drive | : Disabled | C8000-CBFFF Shadow | : Disabled |
| Boot Up Floppy Seek | : Enabled | D0000-D7FFF Shadow | : Disabled |
| Boot Up NumLock Status | : On | D8000-DFFFF Shadow | : Disabled |
| IDE HDD Block Mode | : Enabled | | |
| Cate A20 Option | : Fast | | |
| Memory Parity / ECC Check | : Disabled | ESC : Quit | - ^ ® ↵ : Select Item |
| Typematic Rate Setting | : Disabled | F1 : Help | PU/PD/+/- : Modify |
| Typematic Rate (Chars/Sec) | : 6 | F5 : Old Values | (Shift) F2 : Color |
| Typematic Delay (Msec) | : 250 | F7 : Load Setup Defaults | |

After you have completed the changes, press [Esc] key and follow the instructions on your screen to save your settings or exit without saving.

3-3.1 PBVA-Virus Protection

| | Setting | Description | Note |
|-------------------------|----------|--|---------|
| Virus Protection | Disabled | | Default |
| | Enabled | Enable this option to protect the boot sectors and partition tables of your hard disk. Any attempt to write to them will the system to halt and display a warning message. | |

3-3.2 Cache Memory Options

| | Setting | Description | Note |
|--------------------|----------|-----------------------------------|---------|
| CPU Internal Cache | Disabled | | |
| | Enabled | Enables the CPU's internal cache. | Default |
| External Cache | Disabled | | |
| | Enabled | Enables the external memory. | Default |

3-3.3 L2 Cache Memory

| | Setting | Description | Note |
|---------------------------|----------|---|---------|
| CPU L2 Cache ECC Checking | Disabled | | |
| | Enabled | This option activates the CPU L2 cache ECC checking function. | Default |

3-3.4 Processor Number Feature

| | Setting | Description | Note |
|--------------------------|----------|--|---------|
| Processor Number Feature | Disabled | | |
| | Enabled | If this item is set to enabled, Application programs can read the unique CPU-ID number in your Pentium III CPU . Set to disabled, the CPU-ID number can not be read anymore by any software. | Default |

3-3.5 System Boot Control Settings

| System Boot Control Settings | Setting | Description | Note |
|------------------------------|----------|---|---------|
| Swap Floppy Drive | Disabled | | Default |
| | Enabled | Changes the sequence of A and B drives. | |

System Boot Control Settings (Continued)

| System Boot Control Settings | Setting | Description | Note |
|-------------------------------|----------|---|---------|
| Boot Up Floppy Seek | Disabled | | |
| | Enabled | If this item is set to enabled, the system will test the floppy drive by moving it's head from and back to pos 0. | Default |
| Boot Up NumLock Status | On | Puts numeric keypad in NumLock mode at boot-up. | Default |
| | Off | Puts numeric keypad in arrow key mode at boot-up. | |

3-3.6 Other Control Options

| | Setting | Description | Note |
|--------------------------------|----------|---|---------|
| IDE HDD Block Mode | Disabled | Invokes multi-sector transfer instead of one sector per transfer. Not all HDDs support this function. | Default |
| | Enabled | | |
| Gate A20 Option | Normal | | |
| | Fast | Allows RAM access above 1MB using the fast gate A20 line. | Default |
| Memory Parity/ECC check | Disabled | | Default |
| | Enabled | Enabled option this Memory Parity/ECC check. | |

3-3.7 Typematic Settings

| Typematic Settings | Setting | Description | Note |
|---|---------------|--|---------|
| Typematic Rate Setting | Disabled | | Default |
| | Enabled | Enables to adjust the keystroke repeat rate. | |
| The following [Typematic Rate] and [Typematic Delay] fields are active only if [Typematic Rate Setting] is set to [Enabled] | | | |
| Typematic Rate | 6 (Char/sec) | Choose the rate at which a character is repeated when holding down a key. | Default |
| | 8 (Char/sec) | | |
| | 10 (Char/sec) | | |
| | 12 (Char/sec) | | |
| | 15 (Char/sec) | | |
| | 20 (Char/sec) | | |
| | 24 (Char/sec) | | |
| 30 (Char/sec) | | | |
| Typematic Delay | 250 (msec) | Choose how long after you press a key down the character begins repeating. | Default |
| | 500 (msec) | | |
| | 750 (msec) | | |
| | 1000 (msec) | | |

3-3.8 Security Option

Use this feature to prevent unauthorized system boot-up or use of BIOS Setup. The following table describes the security settings.

| | Setting | Description | Note |
|------------------------|---------|--|---------|
| Security Option | System | Each time the system is booted, the password prompt appears. | |
| | Setup | If a password is set, the password prompt only appears when you attempt to enter the BIOS Setup program. | Default |

3-3.9 Other Control Options

| Other Control Options | Setting | Description | Note |
|-----------------------------------|----------|---|---------|
| PCI/VGA Palette Snoop | Disabled | | Default |
| | Enabled | The color of the monitor may be altered when using an MPEG card. Enable this option to restore the monitor's normal color. | |
| OS Select for DRAM>64MB | OS2 | When using an OS2 operating system. | |
| | Non-OS2 | When using another, non-OS2 operating system. | Default |
| HDD S.M.A.R.T. capability | Disabled | | Default |
| | Enabled | Enable this field when your HDD supports the S.M.A.R.T. function. Consult your HDD provider for details. | |
| Video BIOS Shadow | Disabled | | |
| | Enabled | The BIOS is shadowed in a 16K segment if it is enabled and if it has BIOS present. These 16 segments can be shadowed from ROM to RAM. BIOS shadow copies BIOS code from slower ROM to faster RAM. BIOS can then execute from RAM. | Default |

3-4 CHIPSET FEATURES SETUP



Caution: Change these settings only if you are already familiar with the Chipset.

The [CHIPSET FEATURES SETUP] option changes the values of the chipset registers. These registers control the system options in the computer.

| ROM PCI/ISA BIOS CMOS SETUP UTILITY CHIPSET FEATURES SETUP | |
|--|------------|
| DRAM Timing | : Normal |
| SDRAM Bank Interleave | : 4 Way |
| Memory Hole | : Disabled |
| Read Around Write | : Enabled |
| Concurrent PCI/Host | : Disabled |
| System BIOS Cacheable | : Disabled |
| Video RAM cacheable | : Disabled |
| AGP Aperture Size | : 64M |
| AGP-2X Mode | : Enabled |
| OnChip USB | : Enabled |
| USB Keyboard Support | : Disabled |
| ESC : Quit - ~ @ ~ : Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Values (Shift) F2 : Color F7 : Load Setup Defaults | |

After you have completed the changes, press [Esc] and follow the instructions on your screen to save your settings or exit without saving. The following table describes each field in the CHIPSET FEATURES SETUP Menu and how to configure each parameter.

CHIPSET FEATURES SETUP

| CHIPSET FEATURES | Setting | Description | Note |
|------------------------------|----------|--|---------|
| DRAM Timing | Normal | Choose DRAM Timing | Default |
| | Fast | | |
| SDRAM Bank Interleave | Disabled | Increase DRAM performance. | Default |
| | 2 Way | | |
| | 4 Way | | |
| Memory Hole | Disabled | Some interface cards will map their ROM address to this area. If this occurs, select 15M – 16M in this field. | Default |
| | 15M -16M | | |
| Read Around Write | Disabled | DRAM optimization feature: If a memory read is addressed to a location whose latest write is being held in a buffer before being written to memory, the read is satisfied through the buffer contents, and the read is not sent to the DRAM. | Default |
| | Enabled | | |
| Concurrent PCI/Host | Disabled | When disabled, CPU bus will be occupied during the entire PCI operation period. | Default |
| | Enabled | | |
| System BIOS Cacheable | Disabled | Selecting <i>Enabled</i> allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result. | Default |
| | Enabled | | |
| Video RAM Cacheable | Disabled | The ROM area A0000-BFFFF is cacheable. | Default |
| | Enabled | | |

CHIPSET FEATURES SETUP (Continued)

| CHIPSET FEATURES | Setting | Description | Note |
|-----------------------------|----------------------|---|-------------|
| AGP Aperture Size | 64 4-128MB | AGP could use the DRAM as its video RAM. Choose the DRAM size that you wish to allocate as video RAM. | Default |
| | AGP – 2X Mode | Disabled | |
| | Enabled | Enable only if your AGP card supports 2x mode (faster) | Default |
| OnChip USB | Disabled | Disable if you use a separate USB controller card | |
| | Enabled | | Default |
| USB Keyboard Support | Disabled | | Default |
| | Enabled | Enabled if you use an USB Keyboard. | |

3-5 POWER MANAGEMENT SETUP

The [POWER MANAGEMENT SETUP] sets the system's power saving functions.

| ROM PCI/ISA BIOS | | | |
|------------------------|----------------|---------------------|------------------------------|
| POWER MANAGEMENT SETUP | | | |
| AWARD SOFTWARE, INC. | | | |
| ACPI function | : Enabled | Primary INTR | : OFF |
| PM Control by APM | : Yes | IRQ3 (COM 2) | : Primary |
| Video Off After | : NA | IRQ4 (COM 1) | : Primary |
| Video Off Method | : Blank Screen | IRQ5 (LPT 2) | : Primary |
| | | IRQ6 (FLOPPY DISK) | : Primary |
| Power Management | : User Define | IRQ7 (LPT 1) | : Primary |
| HDD Power Down | : Disable | IRQ8 (RTC Alarm) | : Disabled |
| Doze Mode | : Disable | IRQ9 (IRQ2 Redir) | : Secondary |
| Suspend Mode | : Disable | IRQ10 (Reserved) | : Secondary |
| MODEM Use IRQ | : 3 | IRQ11 (Reserved) | : Secondary |
| Soft-Off by PWRBTN | : Instant -Off | IRQ12 (PS/2 Mouse) | : Primary |
| | | IRQ13 (Coprocessor) | : Primary |
| ** PM Events ** | | IRQ14 (Hard Disk) | : Primary |
| VGA | : OFF | IRQ15 (Reserved) | : Disabled |
| LPT& COM | : LPT/COM | | |
| HDD & FDD | : ON | | |
| DMA/master | : OFF | | |
| | | ESC | : Quit |
| | | - ® - | : Select Item |
| | | F1 | : Help |
| | | PU/PD/+/- | : Modify |
| | | F5 | : Old Values |
| | | (Shift) F2 | : Color |
| | | F7 | : Load Setup Defaults |

After you have completed the Power Management Setup, press [Esc] to return to the Main Menu.

3-5.1 Power Management Controls

| Power Management Controls | Setting | Description | Note | | |
|---------------------------|----------------|--|---------------|---------------|----------------|
| ACPI function | Disabled | | | | |
| | Enabled | ACPI (Advanced Configuration Power Management Interface) | Default | | |
| PM Control by APM | Yes | To use Advanced Power Management (APM) you must run [power.exe] under DOS V6.0 or later version. | Default | | |
| | No | | | | |
| Video Off After | Standby | Choose the PM mode you want video to go off after the mode is being active. | | | |
| | Suspend | | Default | | |
| | Doze | | | | |
| Video Off Method | V/H Sync+Blank | Selects the method by which the monitor is blanked. | Default | | |
| | Blank screen | | | | |
| | DPMS Supported | | | | |
| | 3-11, NA | | | | |
| Power Management | User Define | Lets you define the HDD and system power down times. | Default | | |
| | Disable | Disables the Green PC Features. | | | |
| | | Doze timer | Standby timer | Suspend timer | HDD power down |
| | Min Saving | 1 Hour | 1 Hour | 1 Hour | 15 Min |
| | Max Saving | 1 Min | 1 Min | 1 Min | 1 Min |

3-5.2 PM Timers

| PM Timers | Setting | Description | Note |
|---|------------|---|---|
| The following [HDD Power Down] field may be configured only if [Power Management] is set to [User Define] | | | |
| HDD Power Down | Disabled | | Default |
| | 1-15Min | When the set time has elapsed, BIOS sends a command to the HDD to power down. This turns off the HDD motor. | Some older model HDDs may not support this advanced function. |
| The following [Doze Mode] field may be configured only if [Power Management] is set to [User Define] | | | |
| Doze Mode | Disable | | Default |
| | 1Min-1Hour | When the set time has elapsed, BIOS sends a command to the system to enter Doze Mode. | System clock drops to 33MHz. |
| The following [Suspend Mode] field may be configured only if [Power Management] is set to [User Define] | | | |
| Suspend Mode | Disable | | Default |
| | 1Min-1Hour | In Suspend mode, the CPU stops completely (no instructions are executed.) | Only an SL-Enhanced (or SMI) CPU can enter this mode. |

3-5.3 Power Management Controls

| Power Management Controls | Setting | Description | Note |
|---------------------------|--------------|---|---------|
| MODEM Use IRQ | NA 3 | Assigns an IRQ# to the modem device. | Default |
| Soft-off by PWRBTN | Delay 4 Sec. | Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has "hung." | Default |
| | Instant-Off | | |

3-5.4 PM Events

| PM Events | Setting | Description | Note |
|----------------------|-------------------------------|--|---------|
| VGA | ON | When Enabled, you can set the LAN awakens the system. | |
| | OFF | | Default |
| LPT & COM | NONE LPT COM LPT/COM | When On of LPT & COM, any activity from one of the listed system peripheral devices or IRQs wakes up the system. | Default |
| | | | |
| HDD & FDD | ON | When On of HDD & FDD, any activity from one of the listed system peripheral devices wakes up the system. | Default |
| | OFF | | |
| DMA/master | ON | When you are On of DMA/ Master, any activity from one of the list system peripheral devices wakes up the system. | |
| | OFF | | |
| Primary INTR | ON | | Default |
| | OFF | When set to On, any event occurring at will awaken a system which has been powered down. The following is a list of IRQ's, Interrupt ReQuests, which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service. When set Off, activity will neither prevent the system from going into a power management mode nor awaken it. | |

3-6 PNP/PCI CONFIGURATION SETUP

This option sets the motherboard's PCI Slots.

| ROM PCI/ISA BIOS | | | | | | | | | | | |
|--------------------------|-------------|----------|-------------------------|------------------------|----------|----------------------------|-------------------|----------|---------------|---|--------------------|
| PNP/PCI CONFIGURATION | | | | | | | | | | | |
| AWARD SOFTWARE, INC. | | | | | | | | | | | |
| PNP OS Installed | : | No | CPU to PCI Write Buffer | : | Disabled | | | | | | |
| Resources Controlled By | : | Manual | PCI Dynamic Bursting | : | Disabled | | | | | | |
| Reset Configuration Data | : | Disabled | PCI Delay Transaction | : | Disabled | | | | | | |
| IRQ - 3 | assigned to | : | Legacy ISA | PCI #2 Access #1 Retry | : | Disabled | | | | | |
| IRQ - 4 | assigned to | : | Legacy ISA | AGP Master 1 WS Write | : | Disabled | | | | | |
| IRQ - 5 | assigned to | : | PCI/ISA PnP | AGP Master 1 WS Read | : | Disabled | | | | | |
| IRQ - 7 | assigned to | : | PCI/ISA PnP | Assign IRQ For USB | : | Enabled | | | | | |
| IRQ - 9 | assigned to | : | PCI/ISA PnP | Assign IRQ For VGA | : | Enabled | | | | | |
| IRQ - 10 | assigned to | : | PCI/ISA PnP | Slot 1/5 Use IRQ No | : | Auto | | | | | |
| IRQ - 11 | assigned to | : | PCI/ISA PnP | Slot 2 Use IRQ No | : | Auto | | | | | |
| IRQ - 12 | assigned to | : | PCI/ISA PnP | Slot 3 Use IRQ No | : | Auto | | | | | |
| IRQ - 14 | assigned to | : | PCI/ISA PnP | Slot 4 Use IRQ No | : | Auto | | | | | |
| IRQ - 15 | assigned to | : | PCI/ISA PnP | | | | | | | | |
| DMA - 0 | assigned to | : | PCI/ISA PnP | | | | | | | | |
| DMA - 1 | assigned to | : | PCI/ISA PnP | | | | | | | | |
| DMA - 3 | assigned to | : | PCI/ISA PnP | | | | | | | | |
| DMA - 5 | assigned to | : | PCI/ISA PnP | | | | | | | | |
| DMA - 6 | assigned to | : | PCI/ISA PnP | | | | | | | | |
| DMA - 7 | assigned to | : | PCI/ISA PnP | | | | | | | | |
| | | | | ESC | : | Quit | ~ | ® | ← | : | Select Item |
| | | | | F1 | : | Help | PU/PD/+/- | : | Modify | | |
| | | | | F5 | : | Old Values | (Shift) F2 | : | Color | | |
| | | | | F7 | : | Load Setup Defaults | | | | | |

After you have completed the PCI Slot Configuration, press [Esc] and follow the instructions on your screen to save your settings or exit without saving.

3-6.1 PNP/PCI Configuration Controls

| PNP/PCI Controls | Setting | Description | Note |
|---------------------------------|----------|--|--------------------|
| PNP OS Installed | Yes | This item allows you to determine install PnP OS or not. | Default |
| | No | | |
| Resources Controlled By | Manual | BIOS does not manage PCI/ISA PnP card IRQ assignment. Requires to assign IRQ-# and DMA-# to PCI or ISA PnP manually. IRQ-3,4,5,7,9,10,11,12,14,15 assigned to: _ DMA-0,1,3,5,6,7 assigned to: _ | |
| | Auto | The Plug-and-Play BIOS auto manages PCI/ISA PnP card IRQ assignment automatically. | Recommended |
| Reset Configuration Data | Disabled | Retain PnP configuration data in BIOS. | Default |
| | Enabled | Reset PnP configuration data in BIOS. | |

3-6.2 PNP/PCI Configuration Setup

| PNP/PCI Setup | Setting | Description | Note |
|---|-------------|--|---|
| If [Resources Controlled By] is set to [Manual] | | | |
| IRQ-# and DMA-# assigned to: | PCI/ISA PnP | Choose IRQ-# and DMA-# assigned to PCI/ISA PnP card. | IRQ-3,4,5,7,9,10,11,12,14,15 DMA-0,1,3,5,6,7 |
| | Legacy ISA | Choose IRQ-# and DMA-# assigned to Legacy ISA card. | IRQ-3,4,5,7,9,10,11,12,14,15 DMA-0,1,3,5,6,7 |

3-6.3 PCI Slot Configuration

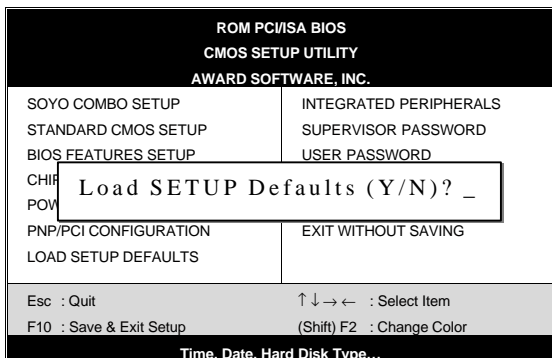
| PCI Slot Configuration | Setting | Description | Note |
|-------------------------|----------|---|---------|
| CPU to PCI Write Buffer | Disabled | When this field is <i>Enabled</i> , writes from the CPU to the PCI bus are buffered, to compensate for the speed differences between the CPU and the PCI bus. When <i>Disabled</i> , the writes are not buffered and the CPU must wait until the write is complete before starting another write cycle. | Default |
| | Enabled | | |
| PCI Dynamic Bursting | Disabled | When <i>Enabled</i> , every write transaction goes to the write buffer. Burstable transactions then burst on the PCI bus and nonburstable transactions don't. | Default |
| | Enabled | | |
| PCI Delay Transaction | Disabled | The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select <i>Enabled</i> to support compliance with PCI specification version 2.1. | Default |
| | Enabled | | |
| PCI #2 Access #1 Retry | Disabled | When PCI#2 (AGP bus) access to PCI#1 (PCI bus) has a error occurred. | Default |
| | Enabled | | |
| AGP Master 1 WS Write | Disabled | When <i>Enabled</i> , writes to the AGP(Accelerated Graphics Port) are executed with one wait states. | Default |
| | Enabled | | |
| AGP Master 1 WS Read | Disabled | When <i>Enabled</i> , read to the AGP (Accelerated Graphics Port) are executed with one wait states. | Default |
| | Enabled | | |
| Assign IRQ For USB | Disabled | BIOS will assign IRQ for USB port. | Default |
| | Enabled | BIOS won't assign IRQ for USB port. | |

PCI Slot Configuration (Continued)

| PCI Slot Configuration | Setting | Description | Note |
|---|--------------------------|---|---------|
| Assign IRQ For VGA | Enabled | BIOS will assign IRQ for VGA port. | Default |
| | Disabled | BIOS won't assign IRQ for VGA port. | |
| Your OS may reassign another interrupt to a PCI slot after BIOS passes control to the OS, especially if you use Windows 95, 98 or NT. | | | |
| Slot 1/5, 2, 3, 4 Use IRQ NO. | Auto | Set to Auto the BIOS will using IRQs Automatically. | Default |
| | 3,4,5,7,9,10,11,12,14,15 | | |

3-7 LOAD SETUP DEFAULTS

Select the [LOAD SETUP DEFAULTS] option from the Main Menu to load the system values you have previously saved. This option is recommended if you need to reset the system setup and to retrieve the old values.



Type [Y] to use the Setup Defaults followed by [Enter] or otherwise [N] to return to the Main Menu and keep current values.



Warning: If you run into any problem after changing the BIOS configuration, please load the SETUP DEFAULTS for stable performance.

3-8 INTEGRATED PERIPHERALS



Caution: Change these settings only if you are already familiar with the Chipset.

The [INTEGRATED PERIPHERALS] option changes the values of the chipset registers. These registers control the system options in the computer.

The following screen shows setup default settings.

| ROM PCI/ISA BIOS | | | |
|------------------------|------------|--------------------------|-----------------------|
| INTEGRATED PWEIPHERALS | | | |
| AWARD SOFTWARE, INC. | | | |
| OnChip IDE Channel0 | : Enabled | Onboard Serial Port 1 | : 3F8/IRQ4 |
| OnChip IDE Channel1 | : Enabled | Onboard Serial Port 2 | : 2F8/IRQ3 |
| IDE Prefetch Mode | : Disabled | UR2 Mode | : Standard |
| Primary Master PIO | : Auto | UR2 Duplex Mode | : Full |
| Primary Slave PIO | : Auto | | |
| Secondary Master PIO | : Auto | Onboard Parallel Port | : 378/IRQ7 |
| Secondary Slave PIO | : Auto | Parallel Port Mode | : SPP |
| Primary Master UDMA | : Auto | ECP Mode Use DMA0 | : 1 |
| Primary Slave UDMA | : Auto | | |
| Primary Master UNMA | : Auto | | |
| Primary Slave UDMA | : Auto | | |
| Init Display First | : PCI Slot | | |
| Onboard FDC Controller | : Enabled | ESC : Quit | - ~ ® ~ : Select Item |
| | | F1 : Help | PU/PD/+- : Modify |
| | | F5 : Old Values | (Shift) F2 : Color |
| | | F7 : Load Setup Defaults | |

The following tables describe each field in the INTEGRATED PERIPHERALS Menu and provide instructions on how to configure the IDE controls, FDC controls, and the onboard serial and parallel ports.

3-8.1 IDE Device Controls

| IDE Controls | Setting | Description | Note |
|--|----------|--|---------|
| On-Chip PCI IDE ➤ Primary ➤ Secondary | Disabled | Turn off the on-board IDE | |
| | Enabled | Use the on-board IDE | Default |
| IDE HDD Block Mode | Disabled | | Default |
| | Enabled | Invokes multi-sector transfer instead of one sector per transfer. Not all HDDs support this function. | |
| IDE ➤ Primary Master PIO ➤ Primary Slave PIO ➤ Secondary Master PIO ➤ Secondary Slave PIO | mode 0-4 | 0 is the slowest speed 4 is the fastest speed | |
| | Auto | For better performance and stability, we suggest you use the Auto setting to set the HDD control timing. | Default |
| IDE ➤ Primary Master UDMA ➤ Primary Slave UDMA | Disabled | | |
| | Auto | Select Auto to enable Ultra DMA Mode support. | Default |

3-8.2 Init Display Controls

| Init Display Controls | Setting | Description | Note |
|---------------------------|-----------------|---|---------|
| Init Display First | PCI Slot AGP | Choose which card – AGP Display card or PCI VGA card – to initialize first. | Default |

3-8.3 FDC Controls

| FDC Controls | Setting | Description | Note |
|-------------------------------|----------|---|---------|
| Onboard FDC controller | Disabled | Turn off the on-board floppy controller | |
| | Enabled | Use the on-board floppy controller | Default |

3-8.4 Onboard Serial Ports

| Onboard Serial Ports | Setting | Description | Note |
|--|----------|--|------------------|
| Onboard Serial Port 1 Onboard Serial Port 2 | Disabled | | |
| | 3F8/IRQ4 | Choose serial port 1 & 2's I/O address. | Default (port 1) |
| | 2F8/IRQ3 | Do not set port 1 & 2 to the same address except for Disabled or Auto. | Default (port 2) |
| | 3E8/IRQ4 | | |
| | 2E8/IRQ3 | | |
| | Auto | | |
| UR2 Mode | Standard | Supports a Standard serial infrared IrDA. | Default |
| | IrDA 1.0 | | |
| | ASKIR | Supports a Sharp serial interface format. | |
| If [UR2 Mode] is set to [IrDA 1.0]/[ASKIR] | | | |
| UR2 Duplex Mode | Half | Choose [Half] or [Duplex] to set UR2 in half duplex mode or full duplex mode respectively. Refer to your IR device specifications to select the suitable mode. | Default |
| | Duplex | | |

3-8.5 Onboard Parallel Ports

| Onboard Parallel Ports | Setting | Description | Note |
|--|-----------|--|---------|
| Onboard Parallel Port | 378H/IRQ7 | Choose the printer I/O address. | Default |
| | 3BCH/IRQ7 | | |
| | 278H/IRQ5 | | |
| Parallel Port Mode | ECP/EPP | The mode depends on your external device that connects to this port. | Default |
| | SPP | | |
| | ECP | | |
| | EPP/SPP | | |
| If [Parallel Port Mode] is set to [ECP] mode | | | |
| ECP Mode use DMA | 3 | Choose DMA3 | Default |
| | 1 | Choose DMA1 | |

3-8.6 MULTI I/O ADDRESSES

Default settings for multi-I/O addresses are as follows:

| Port | I/O Address | IRQ | Status |
|-------------|-------------|-----|---------|
| LPT1 | 378H | 7 | ECP/EPP |
| COM1 | 3F8H | 4 | |
| COM2 | 2F8H | 3 | |



Warning: If a default I/O address conflicts with other I/O cards such as sound card, you must change one of the I/O addresses to remedy to this address conflict. (I/O addresses can be adjusted from the BIOS Setup Utility)

3-9 SUPERVISOR PASSWORD

Based on the setting you have made in the [Security Option] of the [BIOS FEATURES SETUP] section, the password prevents access to the system or the setup program by unauthorized users. Follow this procedure to set a new password or disable the password:

1. Choose [BIOS FEATURES SETUP] in the Main Menu and press [Enter]. Select the [Security Options] item and set the field to:
 - a. [System]: The password is required every time the system is booted. This means only a person who knows the password can use this computer.
 - b. [Setup]: The password is required only when you attempt to enter the BIOS Setup program.
2. Choose [SUPERVISOR PASSWORD] from the Main Menu and press [Enter]. The following prompt appear:

Enter Password:



Warning: If you forget or lose the password, the only way to access the system is to set jumper JP5 to clear the CMOS RAM. All setup information is lost and you must run the BIOS setup program again.



Note: If you do not wish to use the password function, press [Enter] directly and the following message appears:

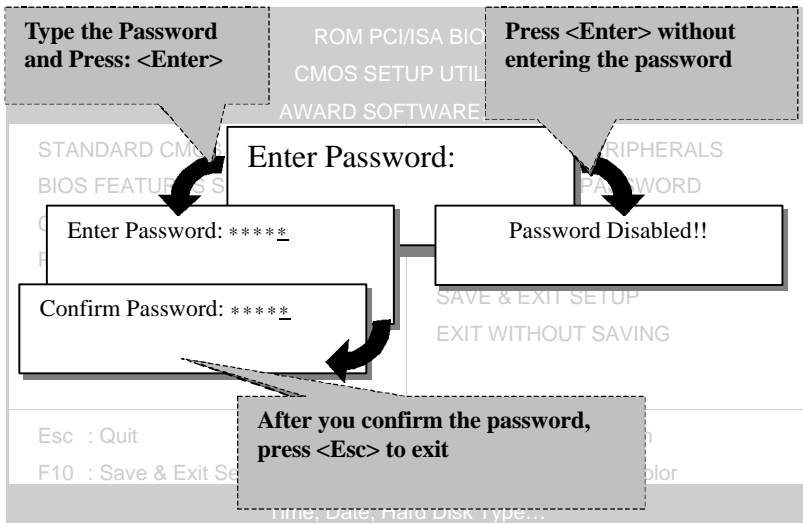
Password Disabled!!

3. Enter your new password and press [Enter]. The following message appears, prompting to confirm the new password:

Confirm Password:

4. Re-enter your password and then press [Enter] to exit to the Main Menu.

This diagram outlines the password selection procedure:



3-10 USER PASSWORD

When the user password option is on, you are not allowed to change any setting in the [CMOS SETUP UTILITY] except for changing the user's password.

The password setting procedure is similar to that for the [SUPERVISOR PASSWORD] (Refer to section 3-9).

3-11 IDE HDD AUTO DETECTION

This Main Menu function automatically detects the hard disk type and configures the STANDARD CMOS SETUP accordingly.

**ROM PCI/ISA BIOS
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.**

| HARD DISKS | TYPE | SIZE | CYLS | HEAD | PRECOMP | LANDZ | SECTOR | MODE |
|---|------|------|------|---------|---------|--------|--------|------|
| Primary Master : | | | | | | | | |
| Select Primary Master Option (N=Skip) : N | | | | | | | | |
| OPTIONS | SIZE | CYLS | HEAD | PRECOMP | LANDZ | SECTOR | MODE | |
| 2(Y) | 1707 | 827 | 64 | 0 | 3308 | 63 | LBA | |
| 1 | 1707 | 3309 | 16 | 65535 | 3308 | 63 | NORMAL | |
| 3 | 1707 | 827 | 64 | 65535 | 3308 | 63 | LARGE | |

Note: Some Oses(SCO-UNIX Before v5.0) must use "NORMAL" for installation

ESC : Skip



Note: This function is only valid for IDE type of hard disk drives.

Chapter 4

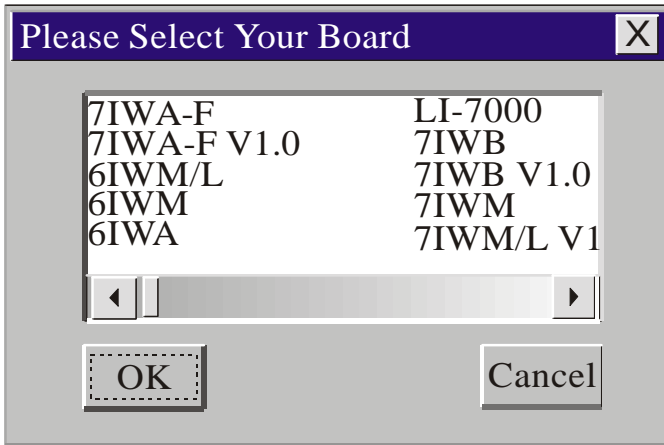
DRIVERS INSTALLATION

Your SY-6VBA133-B Motherboard comes with a CD-ROM labeled "SOYO CD." The SOYO CD contains the user's manual file for your new Motherboard, the drivers software available for installation, and 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.



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

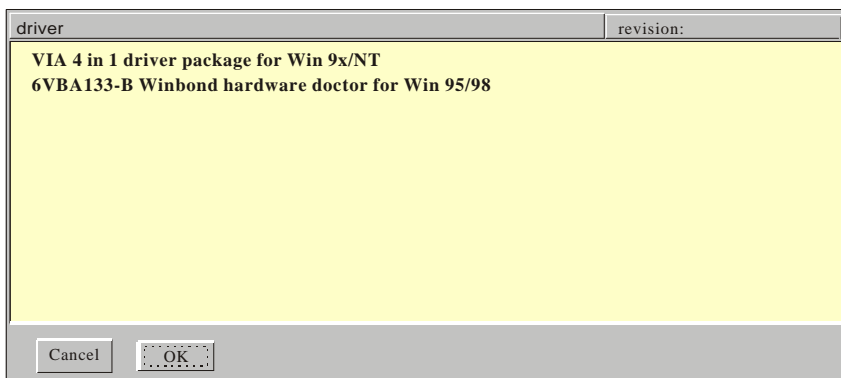
The following describes the best way of installing Windows 95 or Windows 98 on your 6VBA 133-B Motherboard:

- The following BIOS default settings should not be changed:
 1. The 'OnChip USB Controller' item under 'Chipset 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
- If you installed Windows 95 you will now need to upgrade your USB driver by running the following program on your Windows CD:
Win95/OSR2/Usbsupp/USBsupp.exe
- After installation of windows, you will need to install the VIA drivers. Follow the instructions below.

Click the Install drivers button to display the list of drivers that can be installed on your Motherboard. The start-up program displays the drivers available for the 6VBA 133.



(Driver Installation Menu)

A short description of all available drivers follows:

➤ **VIA 4in1 driver package**

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.

➤ **6VBA133-B Winbond hardware doctor 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.

This utility comes with a preset monitoring range for the CPU voltage.

However, the core voltage of the processor you purchased may fall out of this preset range, so you may need to adjust the pre-set value. Please refer to the SY-6VBA 133-B Motherboard's CD manual for the details.

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.

Step 4. Select which driver you want to install and click OK

Notice 1: 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.

Notice 2: You may click *Cancel* to abort the driver installation and return to the main menu.

Notice 3: 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.

