

SY-7VBA133U Motherboard

Pentium® III & CeleronTM

Processor supported

VIA VT82C694T AGP/PCI/ISA 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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Version 1.2

7VBA133U SERIAL

FOR HOME OR OFFICE USE

100% POST CONSUMER RECYCLED PAPER



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Chapter 1

MOTHERBOARD DESCRIPTION

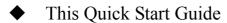
1-1 INTRODUCTION

The **SY-7VBA133U** AGP/PCI/ISA Motherboard is a high-performance Socket 370 supported ATX form-factor system board. The **SY-7VBA133U** uses VIA Chipset technology and supports Socket 370 class processors. This Motherboard is fully compatible with industry standards and adds many technical enhancements.

1-2 UNPACKING THE MOTHERBOARD

When unpacking the Motherboard, check for the following items:

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









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.

1-3 KEY FEATURES

> CPU SUPPORT

The SY-7VBA133U supports a wide range of INTEL CPU:

- Supports Intel® processors
 - CeleronTM
 - Pentium[®] III Coppermine/Tualatin

New released Intel Socket 370 CPUs will very likely be supported by the SY-7VBA133U as well.

> CPU SETTINGS

The SY-7VBA133U 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-7VBA133U supports an incredible wide range of CPU FSB frequency settings:

66~255MHz. (CPU FSB Frequency can be setup by 1MHz increment) This ensures that the SY-7VBA133U has an overwhelming overclocking potential.

■ CPU Multiplier

The SY-7VBA133U supports a fixed ratio CPU.

> EXPANDABILITY

The SY-7VBA133U provides all the standard expansion slots, and many more additional expansion features:



Expansion slots

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

♦ Enhanced IO

- Floppy disk controller
- 2x EIDE controllers with support for up to 4 Ultra DMA 33/66/100 devices
- Standard/EPP/ECP parallel port
- 2x 16550 compatible serial ports
- IrDA compatible infrared port
- 4x USB (Universal Serial Bus) connectors
- PS/2 mouse connector
- PS/2 keyboard connector

> ADVANCED FUNCTIONS

The SY-7VBA133U 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-7VBA133U to support this function).

Multiple boot

The SY-7VBA133U supports booting from devices such as CD-ROM.

■ Power on by modem or alarm

If the SY-7VBA133U 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-7VBA133U comes with added functionality to make managing the system easy and safe

♦ Hardware Monitor

The integrated Hardware Monitor IC and Hardware doctor software



enables the user to 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.

SOYO BONUS PACK

> COMPLIANCE

The SY-7VBA133U complies with all important industry standards. The following underlines the reliability of the SY-7VBA133U, a motherboard to trust.

■ PC99, ACPI compliant

> USER FRIENDLY

- SOYO COMBO Setup
- Jumperless design
- You can set up the following options trough the BIOS setting
 - CPU FSB frequency
 - PCI clock
 - AGP Clock
 - SDRAM Clock



1-4 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.

1-5 ELECTROSTATIC DISCHARGE PRECAUTIONS

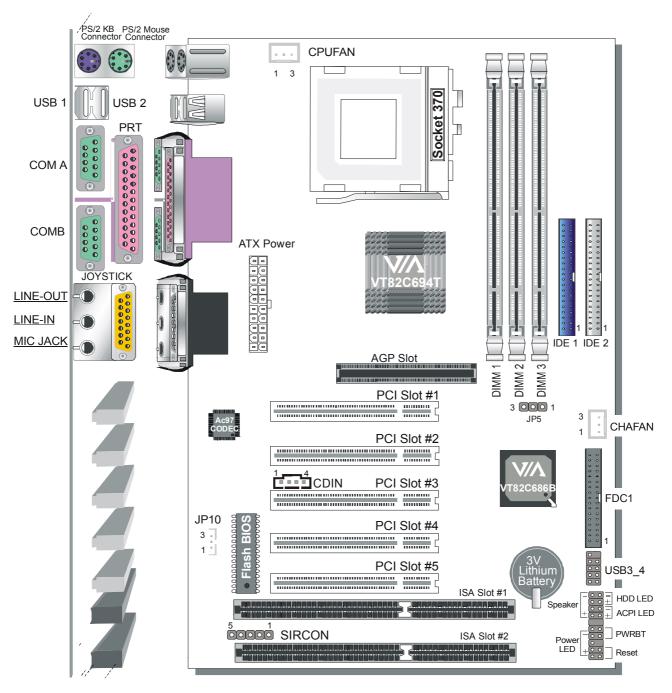
Make sure to ground yourself before handling the Motherboard or other system components. Electrostatic discharge can easily damage the components. Note that you must take special precautions when handling the Motherboard in dry or air-conditioned environment.

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

- > Do not remove the anti-static packaging until you are ready to install.
- For 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.



1-6 SY-7VBA133U MOTHERBOARD LAYOUT

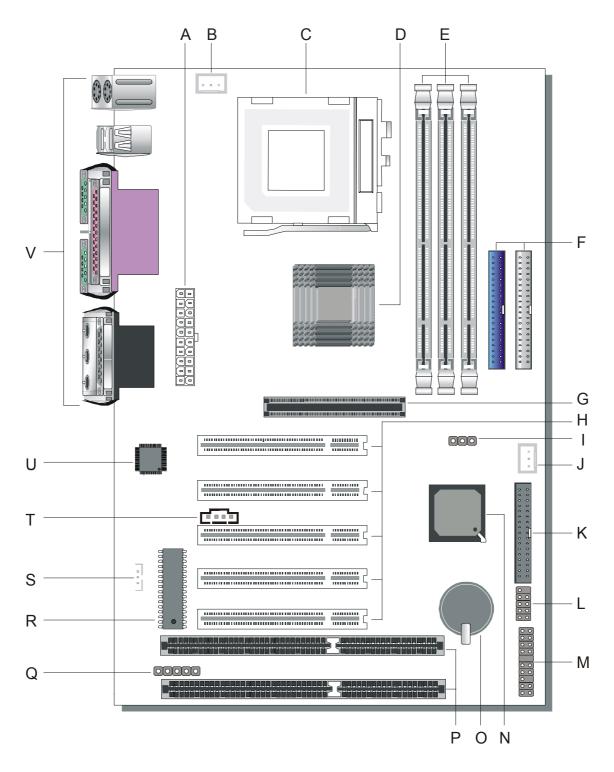


Back Panel

SY-7VBA133U Platform



1-7 SY-7VBA133U MOTHERBOARD COMPONENTS





- **A** ATX Power Supply
- **B** CPU Cooling Fan Connector
- C Connector Socket 370 Connector
- D VIA 6946T North Bridge chip
- **E DIMM Banks**
- F Bus Mastering E-IDE/ATAPI Ports
- G 32-bit AGP Slot
- **H** 32-bit PCI Mastering Slots
- I CMOS Clear Jumper
- J Chassis Cooling Fan Connector
- K Floppy Disk Drive (FDD) Port
- L USB Ports
- M Front panel connectors
- N VIA 686B South Bridge Chip
- O 3V Lithium Battery
- P 16-bit ISA Slot
- Q Serial Infrared (IrDA) Device Header
- **R** Flash BIOS
- S Wake-On-LAN (WOL) Header
- T CD-IN Connector
- U Onboard Audio Chip
- V Back panel Connectors



Chapter 2

HARDWARE INSTALLATION

Congratulations on your purchase of **SY-7VBA133U** 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. Socket 370 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 (s)
- 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: Sound card, Modem and LAN cards (optional)



2-2 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

Step 1 Install the CPU

Your SY-7VBA133U motherboard comes with a CPU retention set kit. The retention set is used to hold the processor attached to the Socket 370 CPU connector on the motherboard.

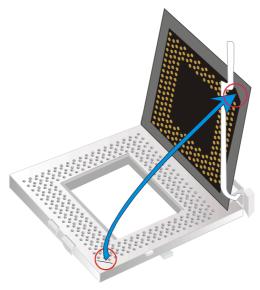
CPU Mount Procedure: To mount the Pentium®, CeleronTM, Tualatin processor that you have purchased separately, follow these instructions.

1. Lift the socket handle up to a vertical position.

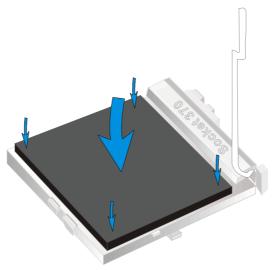




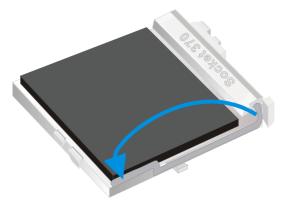
2. Align the blunt edge of the CPU with the matching pinhole distinctive edge on the socket.



3. Seat the processor in the socket completely and without forcing.



4. Then close the socket handle to secure the CPU in place.







Remember to connect the CPU Cooling Fan to the appropriate power connector on the Motherboard. *The fan is a key component that will ensure system stability. The fan prevents overheating, therefore prolonging the life of your CPU.*

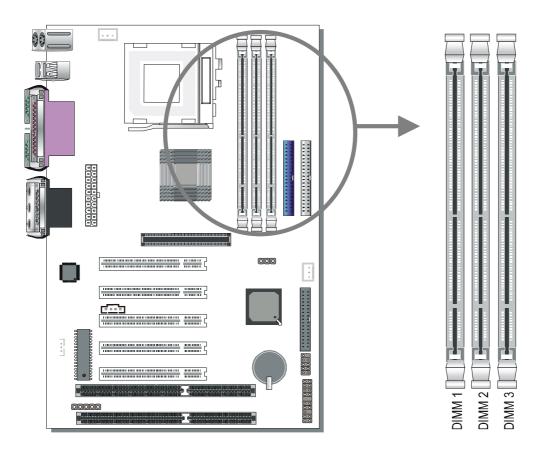
CPU Fan Installation

Your Socket 370 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.

Step 2 Install Memory Module





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

Memory Configuration Table

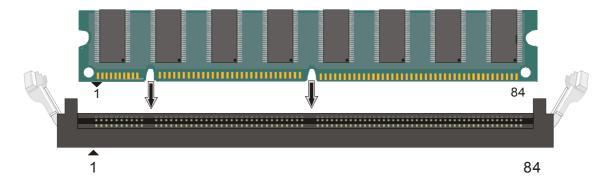
Number of Memory Modules	DIMM 1	DIMM 2	DIMM 3
RAM Type		SDRAM	
Memory Module Size (MB)		128/256/512 MB	

Step 3 Install Expansion Card

The motherboard has 1 AGP slot, 5 PCI slots and 2 ISA slots.

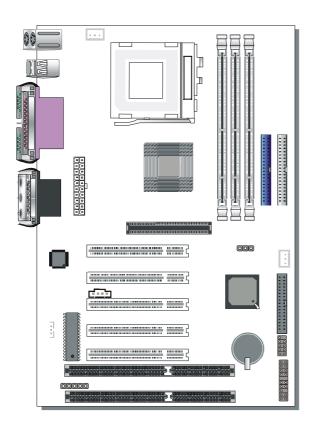
- 1. Read the related expansion card's instruction document before inserting the expansion card into the computer.
- 2. Press the expansion card firmly into expansion slot in motherboard.
- 3. Be sure the metal contacts on the card are indeed seated in the slot.

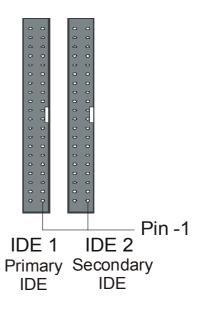




- 4. Replace the screw to secure the slot bracket of the expansion card.
- 5. Install related driver from the operating system.

Step 4 Connect cables, case wires, and power supply A. IDE Device Installation (HDD, CD-ROM)

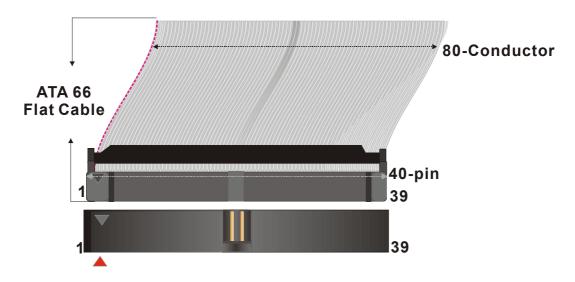




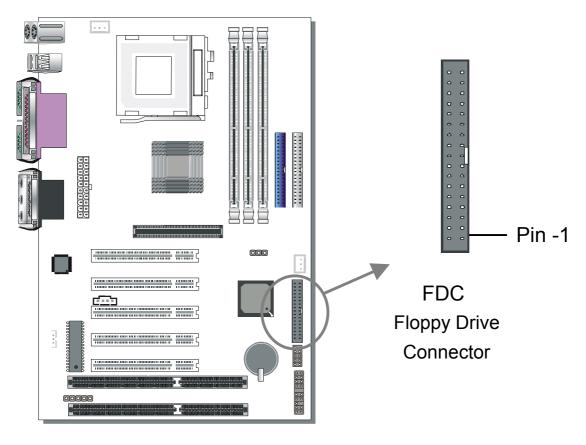
This Motherboard offers two primary and secondary IDE device connectors (IDE1, IDE2). It can support up to four high-speed Ultra DMA 33/66/100HDD or CD-ROM.



Connect one side of the ATA66/100 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. The ATA66/100 cable is backward compatible with ATA33 HDDs. This Motherboard can support up to four HDDs.



B. Floppy Drive Installation

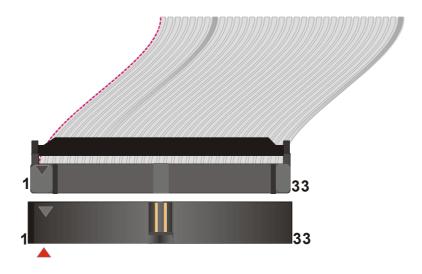




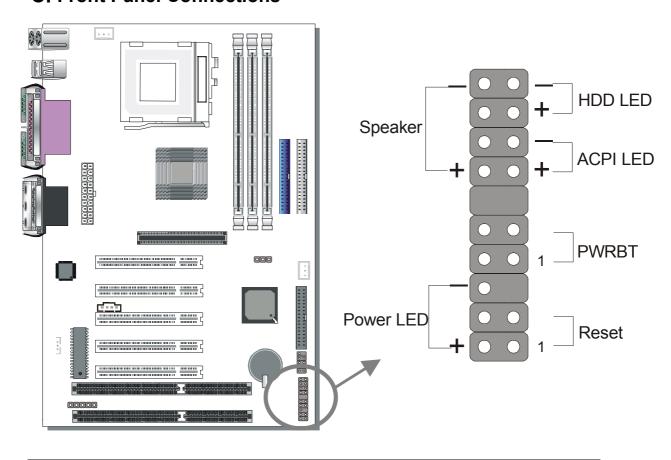
The system supports 5 possible floppy drive types: 720 KB, 1.2 MB, 1.44 MB, 2.88 MB, and LS-120.

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.



C. Front Panel Connections

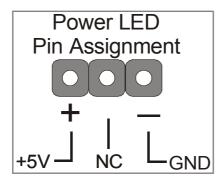




Plug the computer case's front panel devices to the corresponding headers on the Motherboard.

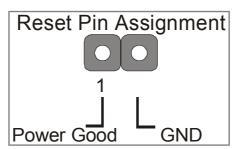
1. Power LED

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



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

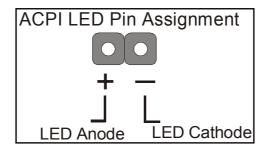
Attach the 4-pin PC speaker cable from the case to the Speaker header on the Motherboard.





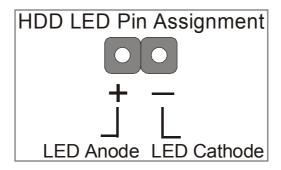
4. ACPI LED

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



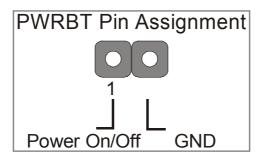
5. IDE LED

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.



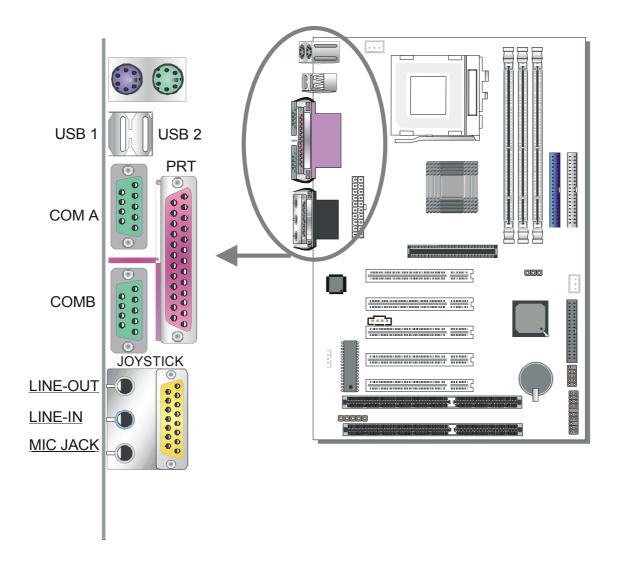


D. Back Panel Connections

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 COMA/COMB

External peripherals that use serial transmission scheme include:

- serial mouse,
- and modem.

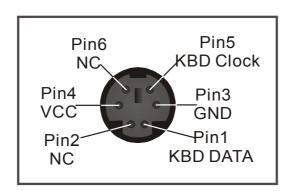
Plug the serial device cables directly into the COMA/COMB 9-pin male connectors located at the rear panel of the Motherboard.

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.

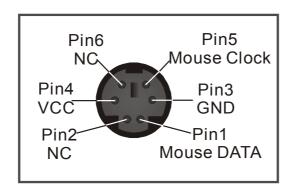
3. PS/2 Keyboard

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.



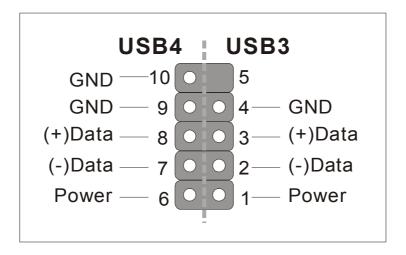


5. Universal Serial Bus USB1/USB2/(USB3, USB4)

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

- Standard device drivers come with the Win98 for commonly used USB devices.
- With Win95, use the flow UHCI specifications. To use USB devices under Win95, usually you have to install the device that driver comes with the USB device you have purchased.

USB3 and 4 are available. To make use of these USB ports, purchase a USB cable from your dealer. The lay-out of USB3 and 4 is as follows:





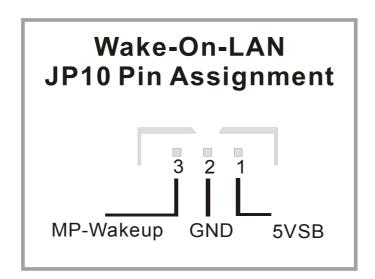
E. Other Connections

1. Wake-On-LAN (WOL)

Attach the 3-pin connector from the LAN card which supports the Wake-On-LAN (WOL) function to the JP10 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. Standard Infrared (SIRCON)

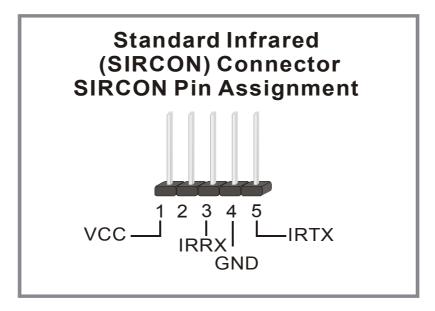
Plug the 5-pin infrared device cable to the SIRCON header.



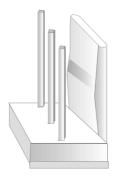


This will enable the infrared transfer function. This Motherboard meets both the ASKIR and HPSIR specifications.

Please install according to the following pin assignment:



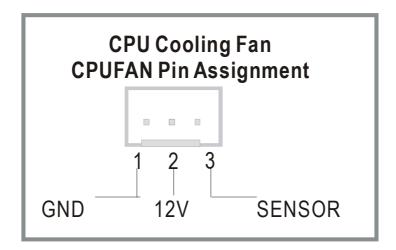
3. Cooling Fan Installation



(1) CPU Cooling Fan

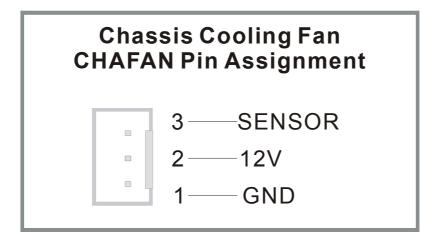
After you have seated the CPU properly on the processor, attach the 3-pin fan cable to the CPUFAN connector on the Motherboard. The fan will stop when the system enters into Suspend Mode. (Suspend mode can be enabled from the BIOS Setup Utility, [POWER MANAGEMENT] menu.) To avoid damage to the system,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



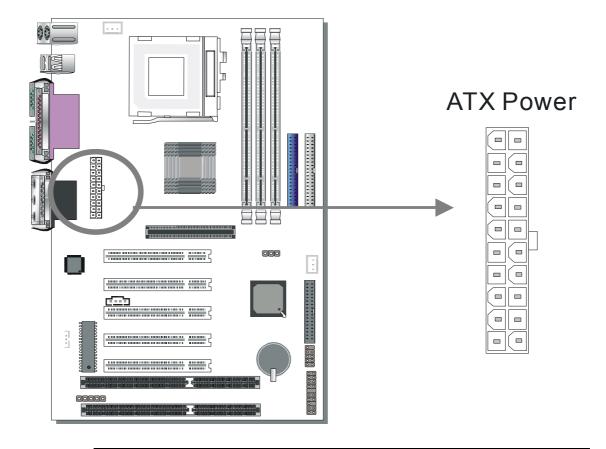


Note: CPUFAN must be installed for this Motherboard, CHAFAN is optional.



F. 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.

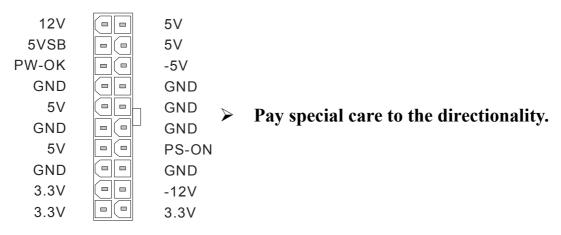
* *Note:* If you use the Wake-On-LAN (WOL) function, make sure the ATX power supply can support at least 720 mA on the 5V Standby lead



(5VSB).

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

ATX Power



CMOS Clear (JP5)

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

- 1. Clear the CMOS memory by momentarily shorting pin 2-3 on jumper JP5. This jumper can be easily identified by its white colored cap.
- 2. Then put the jumper back to 1-2 to allow writing 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 new settings

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



Step 5 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:

CMOS Setup Utility – Copyright (C) 1984-2001 Award Software		
➤ SOYO COMBO Feature	▶ PC Health Status	
▶ Standard CMOS Features	Load Optimized Defaults	
▶ Advanced BIOS Features	Load Fail - Safe Defaults	
▶ Advanced Chipset Features	Set Supervisor Password	
▶ Integrated Peripherals	Set User Password	
▶ Power Management Setup	Save & Exit Setup	
▶ PnP/PCI Configurations	Exit Without Saving	
Esc : Quit F10 : Save & Exit Setup	↑↓→ : Select Item	
Change CPU's Clock & Voltage		



2-3 QUICK BIOS SETUP

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

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

Step 1. Select [STANDARD CMOS SETUP]

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

Step 2. Select [LOAD OPTIMIZED DEFAULTS]

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

Step 3. Select [SOYO COMBO FEATURE]

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

Step 4. Select [SAVE & EXIT SETUP]

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

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.

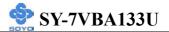
To enter the Award BIOS program's Main Menu:

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

CMOS Setup Utility – Copyright (C) 1984-2001 Award Software			
➤ SOYO COMBO Feature	▶ PC Health Status		
▶ Standard CMOS Features	Load Fail - Safe Defaults		
▶ Advanced BIOS Features	Load Optimized Defaults		
▶ Advanced Chipset Features	Set Supervisor Password		
▶ Integrated Peripherals	Set User Password		
▶ Power Management Setup	Save & Exit Setup		
▶ PnP/PCI Configurations	Exit Without Saving		
Esc : Quit F10 : Save & Exit Setup	↑↓→ : Select Item		
Change CPU's Clock & Voltage			

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.



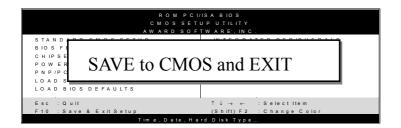
Hot Keys: Function keys give you access to a group of commands throughout the BIOS utility.

Function	Command	Description
F1	General Help	Gives the list of options available for each item.
F5	Previous Values	Restore the old values. These are the values that the user started the current session with.
F6	Load Fail-Safe Defaults	Loads all items with the most conservative values.
F7	Load Optimized Defaults	Loads all options with the optimize values.
F10	Save	Saves your changes and reboots the system.
[Esc]	Exit	Returns at anytime and from any location to the Main Menu.
[Enter]	Select	Will display a overlapping window with all options for the current item.
[+/-/PU/PD]	Value	Using the +, -, Page Up and Page Down keys the user can toggle the value of the current item.



SAVE AND EXIT SETUP

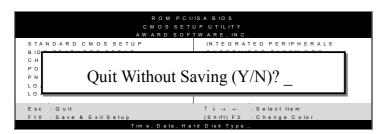
Select the [SAVE & EXIT SETUP] option from the Main Menu to save data to CMOS and exit the setup utility. This option saves all your changes and causes the system to reboot.



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.



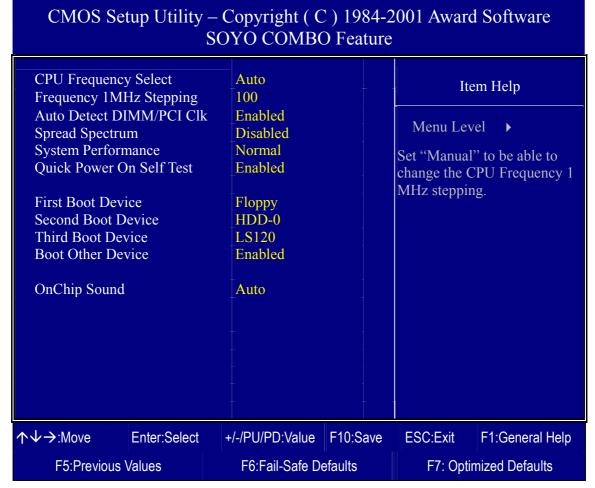
Type [Y] to abandon changes and exit or [N] to return to the Main Menu and keep current values.



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.



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 Frequency Select	Auto Manual	Set the [CPU Frequency Select] field to "Manual", to be able to change the CPU frequency 1 MHz stepping.	Default
Frequency 1MHz Stepping	66~255 MHz	Press "Page Up" / "Page Down" k Over Clock the CPU Front Side B 1MHz increment or Press "Enter" then type the desired CPU Front S	lus in key,
Auto Detect DIMM/PCI Clk	Disabled Enabled	When enabled, this item will auto detect if the DIMM and PCI socket have devices and will send clock signal to DIMM and PCI devices. When disabled, it will send the clock signal to all DIMM and PCI socket.	Default
Spread Spectrum	Disabled Enabled	This item allows you to enable/disable the spread spectrum modulate.	Default
System Performance	Normal Maximum	Adjust your computer performance.	Default
Quick Power On Self Test	Disabled Enabled	Provides a fast POTS at boot-up.	Default



3-1.2 System Boot Control Settings

System Boot	Setting	Description	Note
Control Settings			
First /Second/Third Boot Device	Floppy LS/ZIP HDD-0 SCSI CDROM HDD-1	Select Your Boot Device Priority	
	HDD-2 HDD-3 LAN Disabled	-	
Boot Other Device	Disabled Enabled	Select Your Boot Device Priority	Default
OnChip Sound	Disabled Auto	This item allows you to control the onboard AC 97 audio/ MC 97 Modem.	Default



3-2 STANDARD CMOS SETUP

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

CMOS Setup Utility – Copyright (C) 1984-2001 Award Software Standard CMOS Features Date (mm:dd:yy) Mon, Jan 1 2001 Item Help Time (hh:mm:ss) 0:1:45 Menu Level ▶ IDE Primary Master Press Enter None ▶ IDE Primary Slave Press Enter None Change the day, month, year ▶ IDE Secondary Master Press Enter None and century ▶ IDE Secondary Slave Press Enter None 1.44M, 3.5 in. Drive A Drive B None Floppy 3 Mode Support Disabled Video EGA/VGA Halt On All Errors Base Memory 640K **Extended Memory** 30720K **Total Memory** 31744K **↑**↓→:Move F1:General Help Enter:Select +/-/PU/PD:Value F10:Save **ESC:Exit** F5:Previous Values F6:Fail-Safe Defaults F7: Optimized Defaults

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
IDE HDD Auto-Detection	Press Enter	To auto-detect the HDD's size, head on this channel	
IDE Primary Slave	Auto	BIOS detects hard disk type automatically.	Default
(User Type)	User None	User defines the type of hard disk.	
Access 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. 2.88MB, 3.5 in.		Default
	None	Not installed	
Floppy 3-Mode Support			Default Special disk drive commonly used in Japan



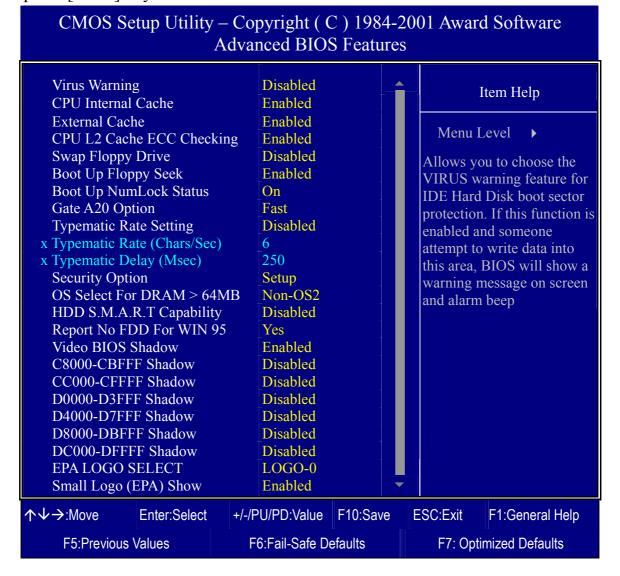
3-2.4 Others Optional

	Setting	Description	Note
Video	EGA/VGA	Select the video mode.	Default
	CGA 40		
	CGA 80		
	MONO		
	(Monochrome)		
Halt On	ALL Errors	When the BIOS detects system	Default
	No Errors	errors, this function will stop the	
	All, But Keyboard	system. Select which type of	
	All, But Diskette	error will cause the system halt.	
	All, But Disk/Key		



3-3 ADVANCED BIOS FEATURES

Select the [Advanced BIOS Features] option from the Main Menu and press [Enter] key.



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 Virus Warning

	Setting	Description	Note
Virus	Disabled	If set to enabled, the Paragon	Default
Warning	Enabled	Anti-Virus. Function will scan your boot drive for boot virusses. If a boot virus is detected, the BIOS will 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

L2 Cache Memory

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

3-3.3 Floppy Driver Settings

	Setting	Description	Note
Swap Floppy Drive		Changes the sequence of A and B drives.	Default

3-3.4 Boot Up Floppy Seek

	Setting	Description	Note
Boot Up Floppy	Disabled	Seeks disk drives during boot up.	
Seek	Enabled	Disabling speeds boot up.	Default

3-3.5 Boot Up NumLock Status

	Setting	Description	Note
Boot Up NumLock		Puts numeric keypad in NumLock mode at boot-up.	Default
Status		Puts numeric keypad in arrow key mode at boot-up.	



3-3.6 Gate A20 Options

	Setting	Description	Note
Gate A20	Normal	Lets chipset control GateA20.	
Options	Fast	A pin in the keyboard controller	Default
		controls GateA20.	

3-3.7 Typematic Settings

Typematic Settings	Setting	Description	Note
Typematic Rate Setting		Keystrokes repeat at a rate determined by the keyboard.	Default
	Enabled	When enables, the typematic rate and typematic delay can be selected.	
The following [Typema only if [Typematic Rate	-	d [Typematic Delay] fields ar set to [Enabled]	e active
Typematic Rate	6 (Char/sec) 8 (Char/sec) 10 (Char/sec) 12 (Char/sec) 15 (Char/sec) 20 (Char/sec) 24 (Char/sec) 30 (Char/sec)	character is repeated when holding down a key.	Default
Typematic Delay	250 (msec) 500 (msec) 750 (msec) 1000 (msec)	Choose how long after you press a key down the character begins repeating.	Default

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	
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
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 Enabled	Enable this field when your HDD supports the S.M.A.R.T. function. Consult your HDD provider for details.	Default
Report No FDD For WIN 95	Yes	Windows will release IRQ line 6 (normally used by the Floppy Disk Drive) after you disable your on-board FDD and set this field to [Yes].	
	No	Windows will reserve INT 6 for your FDD, whether it is disabled or not.	Default
Video BIOS	Disabled		
Shadow	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
C8000-C8FFF	Disabled	If set to "Enabled", the flash ROM	Default
Shadow	Enabled	address "C8000-C8FFF" will be shadowed from ROM to RAM.	
CC000-CFFFF	Disabled	If set to "Enabled", the flash ROM	Default
Shadow	Enabled	address "CC000-CFFFF" will be shadowed from ROM to RAM.	



Other Control Options	Setting	Description	Note
D0000-D3FFF Shadow	Disabled Enabled	If set to "Enabled", the flash ROM address "D0000-D3FFF" will be shadowed from ROM to RAM.	Default
D4000-D7FFF Shadow	Disabled Enabled	If set to "Enabled", the flash ROM address "D4000-D7FFF" will be shadowed from ROM to RAM.	Default
D8000-DBFFF Shadow	Disabled Enabled	If set to "Enabled", the flash ROM address "D8000-DBFFF" will be shadowed from ROM to RAM.	Default
DC000-DFFFF Shadow	Disabled Enabled	If set to "Enabled", the flash ROM address "DC000-DFFFF" will be shadowed from ROM to RAM.	Default
EPA LOGO SELECT	LOGO-0 LOGO-1	Allows user to display SOYO logo or own logo. Logo-0 Shows SOYO logo. Logo-1 Shows user logo (Default Blank).	Default
Small Logo(EPA) Show	Disabled Enabled	Set Enabled to Show Logo(EPA).	Default



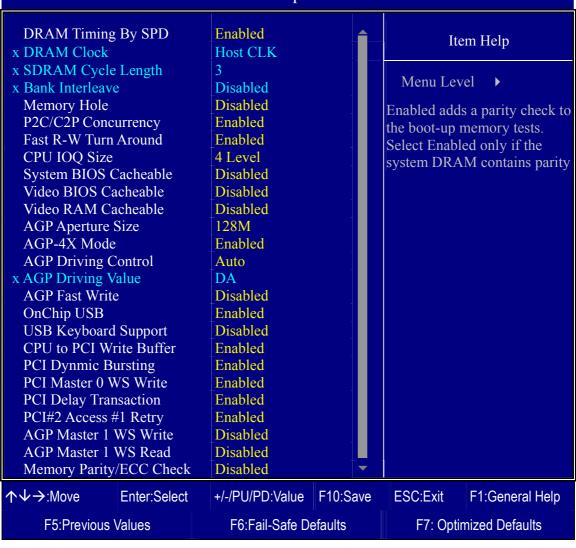
3-4 ADVANCED CHIPSET FEATURES



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

The [Advanced Chipset Features] option changes the values of the chipset registers. These registers control the system options in the computer.

CMOS Setup Utility – Copyright (C) 1984-2001 Award Software Advanced Chipset Features





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 Advanced Chipset Features Menu and how to configure each parameter.

3-4.1 CHIPSET FEATURES SETUP

CHIPSET FEATURES	Setting	Description	Note
DRAM Timing By SPD	Disable Enabled	If enable the DRAM will auto detect the DRAM timing.	Default
DRAM Clock	Host Clock HCLK-33M HCLK+33M	This item allows you to control the DRAM speed.	Default
SDRAM Cycle Length	3	When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. Do not reset this field from the default value specified by the system designer.	Default
Bank Interleave	4 Bank Disabled 2 Bank	Increase DRAM performance.	Default
Memory Hole	Disabled Enabled	Some interface cards will map their ROM address to this area. If this occurs, select [Enabled] in this field.	Default
P2C/C2P Concurrency	Disabled Enabled	This item allows you to enable/disable the PCI to CPU, CPU to PCI concurrency	Default



CHIPSET FEATURES SETUP (Continued)

CHIPSET FEATURES	Setting	Description	Note
Fast R-W Turn Around	Disabled Enabled	This item controls the DRAM timing. It allows you to enable/ disable the fast read/write turn around.	Default
CPU IOQ Size	4 Level 1 Level	This item is related to cache performance. A queue size of 4 gives highest performance.	Default
System BIOS Cacheable	Disabled Enabled	The ROM area F0000H-FFFFFH is cacheable.	Default
Video BIOS Cacheable	Disabled Enabled		Default
Video RAM Cacheable	Disabled Enabled	When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. Do not reset this field from the default value specified by the system designer	Default
AGP Aperture Size	4M, 8M, 16M, 32M,	Select the size of Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation.	Default
AGP-4X Mode	Disabled Enabled	This item allows you to enable / disable the AGP-4X Mode.	Default
AGP Driving Control	Auto Manual	This item allows you to adjust the AGP driving force. Choose <i>Manual</i> to key in a AGP Driving Value in the next selection. This field is recommended to set in Auto for avoiding any error in your system.	Default



CHIPSET FEATURES SETUP (Continued)

CHIPSET FEATURES	Setting	Description	Note
AGP Driving Value	Min=0000 ~ Max=00FF	This item allows you to adjust the AGP driving force.	
AGP Fast Write	Disabled Enabled	The VIA chipset will use fast write to AGP if this item is enabled. Not all AGP cards support fast write.	Default
OnChip USB	Disabled Enabled	This should be enabled if your system has a USB installed on the system board and you want to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature.	Default
USB Keyboard Support	Disabled Enabled	Select <i>Enabled</i> if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.	Default
CPU to PCI Write Buffer	Disabled Enabled	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
PCI Dynmic Bursting	Disabled Enabled	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



CHIPSET FEATURES SETUP (Continued)

CHIPSET FEATURES	Setting	Description	Note
PCI Master 0	Disabled		
WS Write	Enabled	When <i>Enabled</i> , writes to the PCI bus are executed with zero wait states.	Default
PCI Delay	Disabled	The chipset has an embedded 32-bit	
Transaction	Enabled	posted write buffer to support delay transactions cycles. Select <i>Enabled</i> to support compliance with PCI specification version 2.1.	Default
PCI#2 Access	Disabled	When disabled, PCI#2 will not be	
#1 Retry	Enabled	disconnected until access finishes (difault). When enabled, PCI#2 will be disconnected if max retries are attempted without success.	Default
AGP Master 1	Disabled		Default
WS Write	Enabled	When <i>Enabled</i> , writes to the AGP(Accelerated Graphics Port) are executed with one wait states.	
AGP Master 1	Disabled		Default
WS Read	Enabled	When <i>Enabled</i> , read to the AGP (Accelerated Graphics Port) are executed with one wait states.	
Memory	Disabled		Default
Parity/ECC Check	Enabled	This item enabled to detect the memory parity and Error Checking & Correcting.	



F7: Optimized Defaults

3-5 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.

CMOS Setup Utility – Copyright (C) 1984-2001 Award Software Integrated Peripherals OnChip IDE Channel0 Enabled Item Help OnChip IDE Channel1 Enabled **IDE Prefetch Mode** Enabled Menu Level Primary Master PIO Auto **Primary Slave** PIO Auto Secondary Master PIO Auto Secondary Slave PIO Auto Auto Primary Master **UDMA** Primary Slave **UDMA** Auto Secondary Master UDMA Auto Secondary Slave UDMA Auto Init Display First **AGP** IDE HDD Block Mode Enabled Onboard FDD Controller Enabled Onboard Serial Port 1 3F8/IRO4 Onboard Serial Port 2 2F8/IRQ3 **UART 2 Mode** Standard x IR Function Duplex Half x TX,RX inverting enable No, Yes Onboard Parallel Port 378/IRQ7 Onboard Parallel Mode ECP/EPP x ECP Mode Use DMA x Parallel Port EPP Type Epp1.9 Onboard Legacy Audio Enabled Sound Blaster Disabled SB I/O Base Address 220H SB IRQ Select IRQ 5 SB DMA Select DMA₁ MPU-401 Disabled MPU-401 I/O Address 330-333H Game Port (200-207H) Enabled **↑**↓→:Move Enter:Select F10:Save F1:General Help +/-/PU/PD:Value **ESC:Exit**

F6:Fail-Safe Defaults

F5:Previous Values



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.

3-5.1 IDE Device Controls

IDE Controls	Setting	Description	Note
On-Chip PCI IDE > Primary	Disabled	Turn off the on-board IDE	
> Secondary	Enabled	Use the on-board IDE	Default
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	Disabled		
>Primary Master UDMA >Primary Slave UDMA >Secondary Master UDMA >Secondary Slave UDMA	Auto	Select Auto to enable Ultra DMA Mode support.	Default

3-5.2 Keyboard Controls

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

3-5.3 IDE HDD Block Mode

	Setting	Description	Note
IDE HDD Block Mode	Disabled		
	Enabled	Invokes multi-sector transfer instead of one sector per transfer. Not all HDDs support this function.	Default



3-5.4 FDC Controls

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

3-5.5 Onboard Serial Ports

Onboard Serial Ports	Setting	Description	Note
Onboard Serial Port 1 /	Disabled 3F8/IRQ4	Choose serial port 1 & 2's I/O	Default
Serial Port 2	31 0/11(0)	address.	(port 1)
	2F8/IRQ3	Do not set port 1 & 2 to the same address except for	Default (port 2)
	3E8/IRQ4	Disabled or Auto.	
	2E8/IRQ3		
	Auto		
UART 2 Mode	Standard	The second serial port offers	Default
	HPSIR	these InfraRed interface	
	ASKIR	modes.	
If [UART Mode So	elect] is set to [In	·DA]/[ASKIR]	
IR Function	Half	Choose [Half] or [Duplex] to	Default
Duplex	Full	set UR2 in half duplex mode or full duplex mode	
		respectively. Refer to your IR	
		device specifications to select	
		the suitable mode.	
TX,RX inverting	No,Yes	This item allow you to enable	Default
enable	No, No/	the TX, RX inverting which	
	Yes, No/	depends on different H/W	
	Yes, Yes.	requirement. This field is not	
		recommended to change its	
		default setting for avoiding	
		any error in your system	



3-5.6 Onboard Parallel Ports

Onboard Parallel	Setting	Description	Note
Ports			
Onboard Parallel	Disabled	Choose the printer I/O	
Port	378/IRQ7	address.	Default
	3BC/IRQ7		
	278/IRQ5		
Onboard Parallel	Normal	The mode depends on your	Default
Port Mode	EPP	external device that	
	ECP	connects to this port.	
	ECP+EPP		
If [Parallel Port Mode] is	s set to [ECP] mo	ode	
ECP Mode Use	3	Choose DMA3	Default
DMA	1	Choose DMA1	
If [Parallel Port Mode] is	s set to [EPP] mo	de	
Parallel Port EPP	EPP 1.9	Select EPP port type 1.9	Default
TYPE	EPP 1.7	Select EPP port type 1.7	

3-5.7 Onboard Legacy Audio

This field controls the onboard legacy audio.

	Setting	Description	Note
Onboard	Disabled	Set this item to Enabled if using	
Legacy Audio	Enabled	software (like DOS games) that needs a 'legacy' audio device.	Default
Sound Blaster	Disabled	Set this item to enabled if your	Default
	Enabled	on-board audio-chip is sound Blaster compatible.	
SB I/O Base Address	220H	Select the base address for your sound Blaster (SB) compatible Audio IC.	Default
SB IRQ Select	IRQ 5	Select the IRQ your SB Audio IC uses.	Default
SB DMA Select	DMA1	Select the DMA channel your SB Audio IC uses.	Default



	Setting	Description	Note
MPU-401	Disabled	Enable/Disable MIDI K/B support.	Default
	Enabled		
MPU-401 I/O		Select an I/O address for MIDI port,	
Address	310-313H	using default is recommended.	
	320-323H		
	330-333H		Default
Game Port	Enabled	Enable/Disable Game port.	Default
(200-207H)	Disabled		



3-6 POWER MANAGEMENT SETUP

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

CMOS Setup Utility – Copyright (C) 1984-2001 Award Software Power Management Setup

ACP Vide Vide MOI Soft- State	er Management I Suspend Type o Off Option o Off Method DE Use IRQ Off by PWRBTN After Power Failure e Up Events	Press Enter S1 (POS) Suspend -> Off V/H SYNC+Bla 3 Instant-Off Off Press Enter	nk	Menu L	tem Help	
↑↓→ :M	ove Enter:Select	+/-/PU/PD:Value	F10:Save	ESC:Exit	F1:General Help	
F5:	Previous Values	F6:Fail-Safe De	F6:Fail-Safe Defaults		F7: Optimized Defaults	

CMOS Setup Utility – Copyright (C) 1984-2001 Award Software Wake Up Events

VGA		OFF			Item Help	
LPT & COM		LPT/COM		M	1 . .	
HDD & FDD		ON		Menu I	_evel ▶	
PCI Master		OFF				
PowerOn by I	PCI Card	Disabled				
Modem Ring	Resume	Disabled				
RTC Alarm R	esume	Disabled				
x Date (of Mon	th)	$\lfloor 0$				
x Resume Time	(hh:mm:ss)	0:0:0				
Primary INTE		ON		ļ		
▶ IRQs Activity	Monitoring	Press Enter				
↑↓→:Move	Enter:Select	+/-/PU/PD:Value	F10:Save	ESC:Exit	F1:General Help	
F5:Previous Values		F6:Fail-Safe Defaults		F7: Opt	F7: Optimized Defaults	

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



3-6.1 Power Management Controls

	Setting	Description			Note	
Power Management		· ·	Lets you define the HDD and system power down times.			
		Doze timer	Standby timer	timer	HDD power down	
	Min Saving	1 Hour	1 Hour	1 Hour	15 Min	
	Max Saving	1 Min	1 Min	1 Min	1 Min	
ACPI Suspend Type	S1(POS) S3(STR)	The system will enter the S1 state during suspend. (Low latency wake up)			Default	
Video Off Option	Suspend> Off Always On All Modes> Off	When enabled, this feature allows the VGA adapter to operate in a power saving mode.			Default	
Video Off Method	V/H Sync+Blank Blank screen DPMS	Selects the method by which the monitor is blanked.			Default	
MODEM Use IRQ	3 3-11, NA	Assigns an IRQ# to the modem device.			Default	
Soft-Off by	Instant-off				Default	
PWR-BTTN	Delay 4 Sec.	Turns off t seconds af button.	•	power 4 g the power		



Power Management Controls (Continued)

	Setting	Description	Note
State After Power Failure	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)	
Wake Up Events	Press Enter	Select items that will wake up your system when in one of sleep modes. Press enter to go the select item page.	

Wake Up Events	Setting	Description	Note
VGA	OFF		Default
	ON	You can set the VGA awakens the system.	
LPT & COM	LPT/COM NONE,	When <i>On of</i> LPT & COM, any activity from one of the listed	Default
	LPT,	system peripheral devices or IRQs	
	COM	wakes up the system.	
HDD & FDD	OFF	When On of HDD & FDD, any	
	ON	activity from one of the listed system peripheral devices wakes up the system.	Default
PCI Master	OFF	When On of PCI Master, any	Default
T CI Wastel	ON	activity from one of the listed system peripheral devices wakes up the system	Detautt



Wake Up Events	Setting	Description	Note
PowerOn by PCI Card	Disabled Enabled	If enabled any PCI interrupt will wake up the system.	Default
Modem Ring Resume	Disabled Enabled	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
Resume by Alarm	Disabled Enabled	The system ignores the alarm. 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.	Default
Primary INTR	ON OFF	When set to <i>On</i> , any event occurring at will awaken a system which has been powered down.	Default
IRQs Activity Monitoring (Press Enter)	Primary	IRQ3(COM2), IRQ4(COM1), IRQ5(LPT2), IRQ6(Floppy Disk), IRQ7(LPT1), IRQ12(PS/2 mouse), IRQ13(Coprocessor), IRQ14(HardDsik) IRQ9(IRQ2 Redir)	
	Secondary Disabled	IRQ9(IRQ2 Redir), IRQ10(Reserved), IRQ11(Reserved) IRQ8 (RTC Alarm), IRQ15 (Reserved)	



3-7 PNP/PCI CONFIGURATION SETUP

This option sets the Motherboard's PCI Slots.

CMOS Setup Utility – Copyright (C) 1984-2001 Award Software PnP/PCI Configurations

PNP OS Installed Reset Configuration Data	NO Disabled	Item Help
Resources Controlled By x IRQ Resources x DMA Resources	Auto (ESCD) Press Enter Press Enter	Menu Level ▶
PCI/VGA Palette Snoop Assign IRQ For VGA Assign IRQ For USB INT Pin 1 Assignment INT Pin 2 Assignment INT Pin 3 Assignment INT Pin 4 Assignment	Disabled Enabled Enabled Auto Auto Auto Auto	
↑↓→:Move Enter:Select	+/-/PU/PD:Value F10:Save	ESC:Exit F1:General Help
F5:Previous Values	F6:Fail-Safe Defaults	F7: Optimized Defaults



Note: Starred (*) items will disappear when the [Resources Controlled By] option is set to [Auto].

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.



3-7.1 PNP/PCI Configuration Controls

Setting	Description	Note	
Yes	Set this field to [Yes] if you are running Windows 95, which is PnP compatible.		
No	If the OS you are running does not support PnP configuration.	Default (If there is any doubt, set this field to [No])	
Disabled	Retain PnP configuration data in BIOS.	Default	
Enabled	Reset PnP configuration dat in BIOS.	a	
Manual	card IRQ assignment.		
ISA PnP m IRQ-3,4,5,	anually. 7,9,10,11,12,14,15 assigned		
Auto (ESCD)	The Plug-and-Play BIOS auto manages PCI/ISA PnP card IRQ assignment automatically.	Recommended	
ntrolled By	is set to [Manual]		
IRQ-# and DMA-# assigned to: PCI/ISA PnP Choose IRQ-# and DMA-# assigned to PCI/ISA PnP card. PCI/ISA PnP card. DMA-#			
Legacy ISA	DMA-# assigned to	RQ-3,4,5,7,9,10, 11,12,14,15 DMA-0,1,3,5,6,7	
	Yes No Disabled Enabled Manual Requires to ISA PnP m IRQ-3,4,5, DMA-0,1,3 Auto (ESCD) ntrolled By PCI/ISA Processors of the processors of the processor	Yes Set this field to [Yes] if you are running Windows 95, which is PnP compatible. No If the OS you are running does not support PnP configuration. Disabled Retain PnP configuration data in BIOS. Enabled Reset PnP configuration data in BIOS. Manual BIOS does not manage PCI/card IRQ assignment. Requires to assign IRQ-# and DMA-# t ISA PnP manually. IRQ-3,4,5,7,9,10,11,12,14,15 assigned DMA-0,1,3,5,6,7 assigned to: Auto The Plug-and-Play BIOS (ESCD) auto manages PCI/ISA PnP card IRQ assignment automatically. Introlled By] is set to [Manual] PCI/ISA PnP Choose IRQ-# and DMA-# assigned to PCI/ISA PnP card. Legacy ISA Choose IRQ-# and DMA-# assigned to PCI/ISA PnP card.	

Under this item the user can assign an IRQ to a PCI slot. However, there under some conditions the IRQ will not be assigned as selected under this item:

- 1. IRQs 0, 1, 2, 6, 8, 13 can NOT be assigned, because they are fixed.
- 2. IRQs 5, 9, 10, 11 are available
- 3. IRQs 3,4,7,12,14 and 15 will only be assigned if they are free. See the table below on how to free them:



PNP/PCI Configuration Setup (Continued)

PNP/PCI		Setting	Desc	cription	Note	
Setup						
Interrupt	How to set the BIOS to release the IRQ to the PnP Interrupt pool:					
Line	PnP / I	PCI configuration Integrated Peripherals				
IRQ 15	IRQ 1:	5: PCI / ISA PnP On-Chip Secondary PCI IDE: disabled			I IDE: disabled	
IRQ 14	IRQ 14	4: PCI/IS	A PnP	On-Chip Primary PCI II	DE: disabled	
Interrupt 12 will be released by the				ased by the PnP		
IRQ 12 IRQ 1		2: PCI/IS	A PnP	BIOS automatically if th	? PS/2 Mouse Port	
				is not used.		
IRQ 7	IRQ 7:	PCI/IS	A PnP	Onboard parallel port:	disabled	
IRQ 4	IRQ 4:	PCI/IS	A PnP	Onboard Serial port 1:	disabled	
IRQ 3	IRQ 3:	PCI/IS	A PnP	Onboard Serial port 2:	disabled	
	•			errupt to a PCI slot after	BIOS passes control	
to the	OS, esp	pecially if you	u use W	indows 95, 98 or NT.		
Assign I	RO	Disabled	BIOS v	will assign IRQ for		
For			VGA/USB port.			
VGA/USB		Enabled	BIOS won't assign IRQ for Do		Default	
		VGA/USB port.				
5. 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.						
			Set to Auto the BIOS will		Default	
1/2/3/4			using	IRQs Automatically.		
Assignment						



3-7.2 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)

3-8 PC HEALTH STATUS

This option sets the Motherboard's PC Health Status.

CMOS Setup Utility – Copyright (C) 1984-2001 Award Software PC Health Status

1 C Heatui Status					
Current CPU Temp. Current System Temp.		37 ° C / 98 ° 31 ° C / 87 °		Item Help	
Current CPUFA Current CHAFA Vcore 2.5V 3.3V 5V		5192 RPI 0 RPI 1.73 V 2.56 V 3.41 V 5.15 V		Menu L	evel >
12V		12.18 V			
↑↓→:Move E	Enter:Select	+/-/PU/PD:Value	F10:Save	ESC:Exit	F1:General Help
F5:Previous Values		F6:Fail-Safe Defaults		F7: Optimized Defaults	



Note: Starred (*) items will disappear when the [Resources Controlled By] option is set to [Auto].



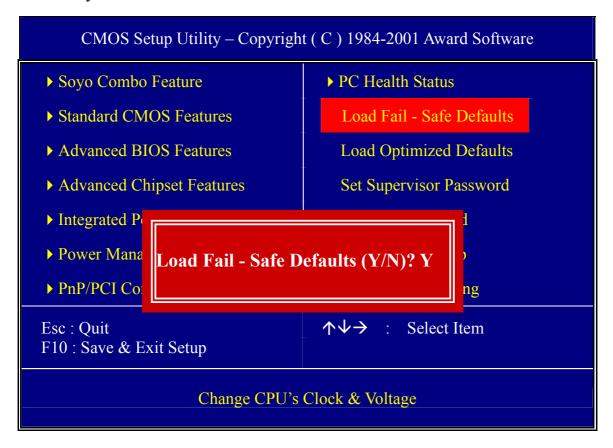
3-8.1 CPU Device Monitoring

CPU Device	Setting	Description	Note
Monitoring			
Current CPU Temp.	°C/°F	Show the current status of CPU temperature.	
Current System Temp.	°C/°F	Show the current status of the system temperature.	
Current CPUFAN Speed	RPM	Show the current status of CPU Fan	
Current CHAFAN Speed	RPM	Show the current status of the chassis Fan	
Vcore, 2.5V, 3.3V, +5V, +12V	V	Show the current voltage status.	



3-9 LOAD FAIL-SAFE DEFAULTS

Select the [Load Fail-Safe Defaults] option from the Main Menu to load a pre-defined safe bios settings. This option is recommended if you have instability issue.

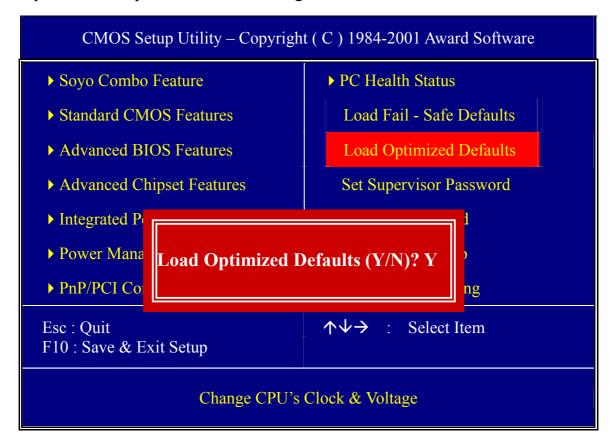


Type [Y] to use the Setup Defaults followed by [Enter] or otherwise [N] to return to the Main Menu and keep current values.



3-10 LOAD OPTIMIZED DEFAULTS

Select the [Load Optimized Defaults] option from the Main Menu to load a pre-defined optimized BIOS settings.



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 Fail-Safe Defaults for stable performance.



3-11 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!!

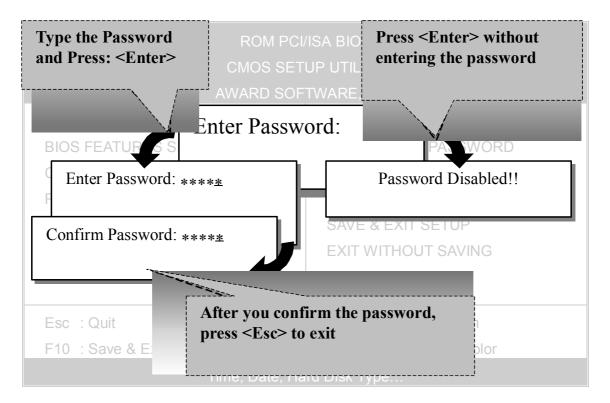


3. Enter your new password and press [Enter]. The following message appears, prompting to confirm the new password:

Confirm Password:

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

This diagram outlines the password selection procedure:



3-12 USER PASSWORD

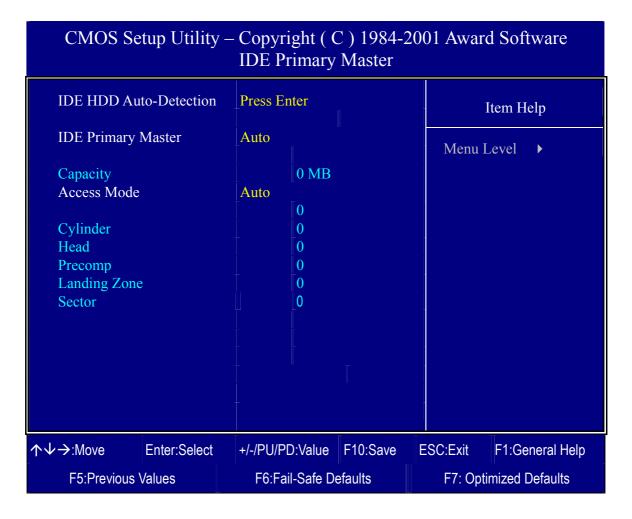
When the user password option is on, you are not allowed to change any setting in the [CMOS SETUP UTILITY] except for changing the user's password.

The password setting procedure is similar to that for the [SUPERVISOR PASSWORD] (Refer to section 3-11).



3-13 IDE HDD AUTO DETECTION

This Main Menu function automatically detects the hard disk type and configures the [Standard CMOS Features] accordingly.





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



Chapter 4

DRIVERS INSTALLATION



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

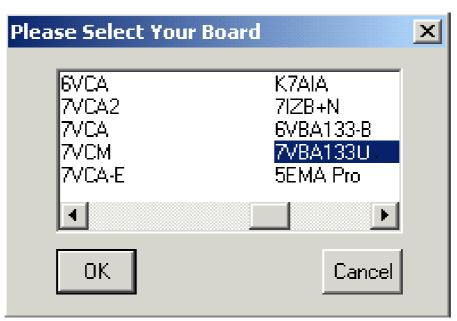
Your SY-KT333 DRAGON Plus motherboard comes with a CD-ROM labeled "SOYO CD." The SOYO CD contains

- a. The user's manual for your new motherboard in PDF format,
- b. The drivers software available for installation, and
- c. A database in HTML format with information on SOYO motherboards and other products.

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

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

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



(SOYO CD Start Up Program Menu)



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



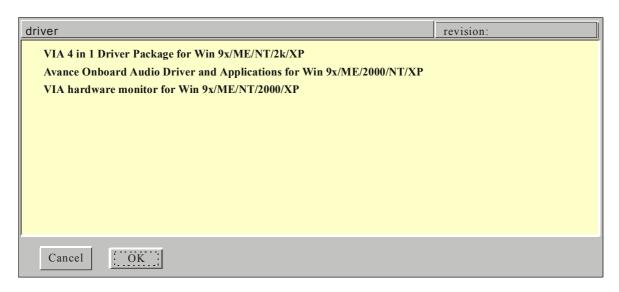
The user's manual files included on the SOYO CD are in PDF (Postscript Document) format. In order to read a PDF file, the appropriate Acrobat Reader software must be installed in your system.

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



Step 2. Install Drivers and Utilities

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



(Driver Installation Menu)

A short description of all available drivers follows:

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

VIA 4 In 1 driver includes four system drivers to improve the performance and maintain the stability of systems using VIA chipsets. These four drivers are:

VIA Registry (INF) Driver, VIA AGP VxD driver, VIA ATAPI Vendor Support Driver and VIA PCI IRQ Miniport Driver. For Windows NT users, the VIA IDE Bus Mastering driver is the only driver to be installed in your system.

A description of 4 drivers followa:

—Bus Master PCI IDE Driver

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



—AGP VxD Driver

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

—VIA Chipset Functions Registry

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

—IRQ remapping utility (This driver is installed automatically)

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

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

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

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

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

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

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



Step 3. Check the Latest Releases

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

APPENDIX A

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 VIA 4 in 1 driver from the SOYO CD, this is because Windows does not properly recognize relatively new chipsets.

Audio Issues

How can I disable the on-board Audio?

Set the "OnChip sound" option in the BIOS to disable this option can be found under SOYO COMBO Feature.

I do not get any sound from my on-board audio. What could be wrong? Please make sure the speaker is connected to the speaker out port on your sound card.

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

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

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

This is because the 3-wire audio cable from the CD-ROM to the sound card is not connected or it is loose.

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

I can not get my board to run properly.

Please make sure you have the latest bios and driver from the SOYO web site at:

http://www.soyo.com

APPENDIX B

How to contact us:

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

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

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