

SY-7VEM PRO Motherboard

Pentium[®] III & CeleronTM

Processor supported

Via VT8601T AMR/PCI/ISA Motherboard

66/100/133 MHz Front Side Bus supported

ATX Form Factor

User's Manual

SOYОтм

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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".

Edition: January 2002 Version 1.0 7VEM PRO 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-7VEM PRO** AMR/PCI/ISA Motherboard is a high-performance Socket 370 supported ATX form-factor system board. The **SY-7VEM PRO** 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:







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-7VEM PRO supports a wide range of INTEL CPUs:

- FSB 133MHz: Intel Pentium® III 533MHz~1.2GHz
- FSB 100MHz: Intel Pentium® III 500MHz~1.2GHz
- FSB 66MHz: Intel Celeron® II 566~766 MHz

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

> EXPANDABILITY

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

• Expansion slots

- 2 x 32-bit bus master PCI slots
- 1 x 16-bit ISA slots
- 1 x AMR 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



- 1 x 16550 compatible serial ports
- IrDA compatible infrared port
- 4x USB (Universal Serial Bus) connectors
- PS/2 mouse connector
- PS/2 keyboard connector
- Power on by modem or alarm

> FAIL SAFE

The SY-7VEM PRO 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 CD-ROM

> COMPLIANCE

The SY-7VEM PRO complies with all important industry standards. The following underlines the reliability of the SY-7VEM PRO, 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
 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.
- 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-7VEM PRO MOTHERBOARD LAYOUT



Back Panel

SY-7VEM PRO Platform

1-7 SY-7VEM PRO MOTHERBOARD COMPONENTS





- A ATX Power Supply Connector
- B Via VT8601T North Bridge chip
- C Socket 370 Connector
- **D DIMM Banks**
- E CPU Cooling Fan Connector
- F Bus Mastering e-IDE/ATAPI Ports
- **G** Front panel connectors
- H CMOS Clear Jumper
- I Flash BIOS
- J Via VT82C686B South Bridge Chip
- **K** Chassis Cooling Fan
- L 32-bit PCI Mastering Slots
- M Serial Infrared (IrDA) Device Header Port
- N Floppy Disk Drive (FDD)
- **O** USB Ports
- P **3V** Lithium Battery
- Q 16-bit ISA Slot
- R AMR Slot
- **S PHONE-IN** Connectors
- **T** AUX-IN Connectors
- **U CD-IN** Connectors
- V AC97 Codec Chip
- W REALTEK Chip
- **X** Front panel Connectors
- **Y** Back panel Connectors



Chapter 2

HARDWARE INSTALLATION

Congratulations on your purchase of **SY-7VEM PRO** 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: 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.

- Step 1. Install the Central Processing Unit (CPU)
- Step 2. Install memory modules
- Step 3. Install expansion cards
- Step 4. Connect cable, case wires, and power supply
- Step 5. Power on and enter BIOS setup
- Step 6. Install supporting software tools. See Chapter 4 for more info.



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 CPU Installation

Your SY-7VEM PRO 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.

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

FSB 66MHz

566MHz (66 x 8.5)	600MHz (66 x 9.0)	633MHz (66 x 9.5)	67MHz (66 x 10.0)	700MHz (66 x 10.5)
733MHz (66x11.0)	766MHz (66x11.5)			

FSB 100MHz

500MHz (100 x 5.0)	600MHz (100 x 6.0)	700MHz (100 x 7.0)	800MHz (100 x 8.0)
550MHz (100 x 5.5)	650MHz (100 x 6.5)	750MHz (100 x7.5)	850MHz (100 x 8.5)
900MHz (100 x 9.0)	950MHz (100 x 9.5)	\Box 1GHz (100 x10.0)	1.1GHz (100 x 11.0)
1.2GHz (100 x 12.0)			

FSB 133MHz

533MHz(133x4.0)	667MHz(133x5.0)	800MHz(133x 6.0)	933MHz(133x 7.0)	1.13GHz(133x 8.5)
600MHz(133x4.5)	733MHz(133x5.5)	866MHz(133x 6.5)	1GHz(133x 7.5)	1.2GHz(133x8.5)

CPU Mount Procedure: To mount the Celeron [™] 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.*





Your board comes with three DIMM sockets, providing support for up to 1GB of main memory using unbuffered and registered DIMM modules from 8MB to 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



Step 3 Connect cables, case wire, 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 33/66/100 HDD 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.



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.



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. 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 light up when an IDE (HDD, CD-ROM) device is active.





5. 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 Port COMA

External peripherals that use serial transmission scheme include:

- serial mouse,
- and modem.

Plug the serial device cables directly into the COMA 9-pin male connector 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. 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:





2. 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 two cooling fans. This Motherboard features two CHAFAN1/CHAFAN2 connectors 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.



3. CD Line-in (CDIN1)

This Motherboard provides two CD-Line in connectors. Please connect the 4-pin audio cable from your CD-ROM drive to either CDIN1 or CDIN2. (It fits in only one, depending on the cable that came with your CD-ROM drive)

Please install according to the following pin assignment:



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

3.3V -12V GND	3.3V 3.3V GND	
PS-ON	5V	
GND	GND 🍃	Pay special care to the directionality
GND	5V	i ay special care to the uncertonality.
GND	GND	
-5V	PW-OK	
5V	5VSB	
5V	12V	

G. CMOS Clearing (JP5)

After you have turned off your computer, clear the CMOS memory by momentarily shorting pins 2-3 on jumper JP5, for a few seconds. Then restore JP5 to the initial 1-2 jumper setting in order to recover and retain the default settings.

Jumper JP5 can be easily identified by its white colored cap.

CMOS Clearing	Clear CMOS Data		Retain CM	OS Data
JP5 Setting	Short pin 2-3 for <i>at least 5 seconds</i> to clear the CMOS	1 2 3	Short pin 1-2 to retain new settings	1 2 3
<i>Note:</i> 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	$\wedge \psi \rightarrow \leftarrow$: 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 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.

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 DEFAULT]

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

Step 3. Select [SAVE & EXIT SETUP]

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



2-3.1 Quick Trouble shoot tips Boot-up issue

The system do not power-up, no beeping sound heard and the CPU fan does not turn on.

- 1. check if the power cord is plug to the power source
- 2. check if the power is connected to the M/B
- 3. check if the case power button is connected to the M/B power button connector (see connectors and plug-ins in the Quick start guide for more info)
- 4. make sure the power supply is not defective. Change the power supply.
- 5. remove the M/B from the case and test the system. The M/B might be shorted to the case.

The system power-up, no video, no beeping sound heard, but the CPU fan is turning.

- 1. Clear CMOS battery. (JP5 connector, see Quick start guide for more info on how to clear the CMOS)
- 2. check all the jumper settings on the M/B. (if the M/B have any)
- 3. check if the CPU is ok by using another CPU (check the Quick start guide for CPU supported on this M/B)
- 4. check if the power supply is ok
- 5. make sure the CPU fan is connected to CPUFAN1 connector
- 6. remove the M/B from the case and test the system. The M/B might be shorted to the case.

The system power-up, no video, CPU fan is spinning and beeping heard.

- clear CMOS battery. (JP5 connector, see Quick start guide for more info on how to clear the CMOS)
- 2. check the memory module if inserted properly on the M/B

3. if yes, change the memory module, it might be defective. Make sure the memory specification is supported by the M/B. (for more info on this, check our FAQ website)

The system turns on for some seconds then shutdown by itself.

- 1. check if the CPU fan is connected to the CPUFAN1 connector
- 2. the CPU might be overheating. Check the CPU FAN if it is defective or see if the CPU fan is in contact with the CPU.
- clear CMOS battery. (JP5 connector, see Quick start guide for more info on how to clear the CMOS)
- 4. make sure the power supply you have on your system support the M/B specification. At least 250 watts. Check Intel website for approve power supply.
- 5. if you already checked the power supply specification, change the power supply it might be defective.
- 6. remove the M/B from the case and test the system. The M/B might be shorted to the case.

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...". Don't go any further. What should I do?

- clear CMOS battery. (JP5 connector, see Quick start guide for more info on how to clear the CMOS)
- 2. if still has the problem, unplug all other add-on cards except video card and floppy drive see if it can boot from floppy. Then put peripherals in one by one to identify which one cause the lockup
- 3. change the CPU

During Boot-up, my computer says CMOS memory Checksum error. What is the problem?

- 1. clear CMOS memory
- 2. re-flash BIOS. Check on how to flash bios on the later part of this book
- 3. change the CMOS battery, the battery might be drained
- 4. the BIOS chip might be failing
- 5. This message will come up if the CMOS has been reset, try go to Bios setup and load setup defaults, save and exit.

<u>Stability issue</u>

My system intermittently locks up, very unstable

- check the CPU temp. it might be overheating. Check the CPU FAN if it is defective or see if the CPU fan is in contact with the CPU.
- 2. do not over-clock your CPU
- 3. check the specification of the memory module, maybe the M/B do not support it. (i.e. ECC and registered)
- 4. go to BIOS setup and load fail safe settings
- 5. check website for latest bios update
- 6. check website for FAQ's regarding instability issue
- 7. change the memory module or CPU

My system is not stable under Windows Operating System with VIA chipset M/B

- 1. do all the "My system intermittently locks up, very unstable" instruction above
- 2. re-install the VIA 4 in 1 in normally mode
- 3. re-install the operating system

BIOS issue

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 kvxa_2BA1 (meaning BIOS revision 2BA1 for the SY-K7V Dragon plus board) or 6BA+ IV_2AA2 which means SY-6BA+ IV motherboard with 2AA2 bios.

How can I flash the BIOS?

- 1. download the BIOS on our support website
- 2. Make a bootable floppy disk with out any memory manager loaded. (i.e. himem, emm386, etc..)
- 3. copy the BIOS file and awdflash utility to the diskette
- 4. type "awdflash biosname.bin /sn /py"
- 5. then reboot.

After flashing the BIOS, my system will not boot-up

- 1. try clearing the CMOS
- 2. the BIOS chip is defected due to unsuccessful flash, contact your nearest Soyo branch for re-flashing

Is there a way to reprogram my BIOS after an unsuccessful flash?

No, you need to send back the BIOS ROM to your nearest Soyo branch for re-flashing.

CPU issue

During Boot-up, my CPU speed is displayed wrong.

- 1. Check the jumper on the M/B, if the CPU frequency is set to 133MHz. (if jumper available)
- 2. Check the front side bus setting in the BIOS setup

VGA issue

I cannot set my VGA to go higher than 16 color in M/B with VIA chipset (640x 480)

Make sure that you have installed the VIA 4 in 1 driver and the correct



VGA driver

Audio issue

How can I disable the on-board Audio?

Go to the SOYO Combo Feature in the BIOS setup, then set the "Onchip sound" or "AC97 Audio" to disable. Please also make sure 'Legacy Audio' is disable if there is one.

I cannot get the sound working on my system.

- 1. check if the speaker wire is connected to the line out connector in the M/B
- 2. check if the speaker power is powered on
- 3. install the audio driver supplied on our driver disc.
- 4. if sound already installed, check our website for audio driver update.

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 on-board CDIN1 connector in the M/B.

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

- 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 word, if your ISA sound card takes IRQ5, then set IRQ5 to 'Legacy ISA'.
- 2. install the VIA 4 in 1 driver for the motherboard

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

Please go to sound properties and check if the recorder and microphone in
Hardware Installation



the are enabled check if Microphone is ok

<u>Hard disk issue</u>

My Western digital HDD is not detected during boot-up or No fix disk present.

Change the jumper settings to cable select or single or remove the jumpers.

For updated FAQs, please check <u>http://www.soyo.com.tw/faq.htm</u> or http://www.soyousa.com/faqs.html

2-3.2 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.
- 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 Phoenixnet 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			
► 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		
► PC Health Status			
Esc : Quit F10 : Save & Exit Setup	$\wedge \psi \rightarrow \leftarrow$: 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.

ROM PCI. CMOSSET AWARDSOF	YISA BIOS UPUTILITY TWARE, INC.
STANDARD CMOS SETUP	IN TEGRATED PERIPHERALS
Quit Without Sa	aving (Y/N)? _
Esc : Quit	$\uparrow \downarrow \rightarrow \leftarrow$: Select Item
F10 : Save & Exit Setup	(Shift) F 2 : Change Color
Time, Date, Ha	rd Disk Type

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



3-1 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 Time (hh:mm	:yy) ::ss)	Fri, Jan 1 200 1 : 22 : 12	00	It	tem Help	
 IDE Primary IDE Primary IDE Seconda IDE Seconda DE Seconda Drive A Drive B Floppy 3 Mod Video Halt On Base Memory Extended Me Total Memory 	Master Slave ry Master ry Slave de Support de Support	Fri, Jan 1 2000 1 : 22 : 12 None None None None 1.44M, 3.5 in. None Disabled EGA/VGA All Errors 640K 30720K 31744K		 i) 1:22:12 Aster None None None None Slave None Support Disabled EGA/VGA All Errors 640K 30720K 31744K 		vel 🕨
$\wedge \psi \rightarrow \leftarrow$:Move	Enter:Select	+/-/PU/PD:Valu	e F10:Save	ESC:Exit	F1:General Help	
F5:Previous Values F6:Fail-Safe		Defaults	F7: Opti	mized 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.



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

CMOS Setup Utility – Copyright (C) 1984-2001 Award Software IDE Primary Master				
IDE HDD Auto-Detection	Press Enter		I	tem Help
IDE Primary Master Access Mode Capacity	Auto Auto 0 MB		Menu L	evel 🕨
Cylinder Head Precomp Landing Zone				
Sector				
$\wedge \psi \rightarrow \leftarrow$:Move Enter:Select	+/-/PU/PD:Value	F10:Save	ESC:Exit	F1:General Help
F5:Previous Values	ious Values F6:Fail-Safe Defaults F7: Optim		nized Defaults	



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

3-1.1 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



3-1.2 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)	er Type) User User defines the type of hard disk.		
	None		
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.

3-1.3 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	
Flonny 3-Mode	Disabled		Default
Support	Drive A	Supports 3 mode	Special disk drive
Support			
	Drive B	floppy diskette:	commonly used in
	Both	740KB/1.2MB/	Japan
		1.44MB on selected	
		disk drive.	



3-1.4 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		



3-2 ADVANCED BIOS FEATURES

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

CMOS Setup Utility – Copyright (C) 1984-2001 Award Software Advanced BIOS Features					
Virus Warning CPU Internal Cache	Disabled Enabled			Item Help	
External Cache CPU L2 Cache ECC Checki Quick Power On Self Test	Enabled ing Enabled Enabled		Menu I	Level >	
First Boot Device Second Boot Device Third Boot Device	Floppy HDD-0 LS120				
Boot Other Device Swap Floppy Drive	Enabled Disabled				
Boot Up Floppy Seek Boot Up NumLock Status Gate A20 Option	Enabled On Fast				
Typematic Rate Setting x Typematic Rate (Chars/Sec) x Typematic Delay (Msec)	Disabled 6 250				
Security Option OS Select For DRAM > 641	Setup MB Non-OS2				
Video BIOS Shadow C8000-CBFFF Shadow	Enabled Disabled				
CC000-CFFFF Shadow D0000-D3FFF Shadow D4000-D7FFF Shadow	Disabled Disabled Disabled				
D8000-DBFFF Shadow DC000-DFFFF Shadow EPA LOGO SELECT	Disabled Disabled LOGO-0				
Small Logo (EPA) Show	Enabled				
$\uparrow \lor \rightarrow \leftarrow$:Move Enter:Select	+/-/PU/PD:Value	F10:Save	ESC:Exit	F1:General Help	
F5:Previous Values	F5:Previous Values F6:Fail-Safe Defaults F7: Optimized Defau		imized 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.



3-2.1 Virus Warning

-	Setting	Description	Note
Virus Protection	Disabled	If set to enabled, the Paragon	Default
	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.	

3-2.2 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	Default
		memory.	
CPU L2 Cache ECC	Disabled	This option activates the	
Checking		CPU L2 cache ECC	
	Enabled	checking function.	Default

3-2.3 Quick Power On Self Test

	Setting	Description	Note
Quick Power	Enabled	Provides a fast POST at boot-up.	Default
On Self Test	Disabled		



3-2.4 System Boot Control Settings

System Boot	Setting	Description	Note
Control Settings			
First /Second/Third Boot Device	Floppy HDD-0 LS/ZIP SCSI CDROM HDD-1 HDD-2 HDD-3 LAN Displad	Select Your Boot Device Priority	
Boot Other	Disabled	Select Your Boot Device	
Device	Enabled	Priority	Default

3-2.5 Floppy Driver Settings

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

3-2.6 Boot Up Floppy Seek

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

3-2.7 Boot Up NumLock Status

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



3-2.8 Gate A20 Options

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

3-2.9 Typematic Settings

Typematic Settings	Setting	Description	Note
Typematic Rate Setting	Disabled	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	tic Rate] and [7 Setting] is set	Typematic Delay] fields are to [Enabled]	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)	Choose the rate at which a 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



3-2.10 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.

3-2.11 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	Disabled	Enable this field when your HDD	
S.M.A.R.T Capability	Enabled	supports the S.M.A.R.T. function. Consult your HDD provider for details.	Default
Video BIOS	Disabled		
Shadow	Enabled The BIOS i is enabled a These 16 se ROM to RA code from s can then exc	s shadowed in a 16K segment if it nd if it has BIOS present. egments can be shadowed from AM. BIOS shadow copies BIOS lower ROM to faster RAM. BIOS ecute from RAM.	Default
EPA LOGO	LOGO-0	Allows user to display SOYO	Default
SELECT	LOGO-1	logo or own logo. Logo-0 Shows SOYO logo. Logo-1 Shows user logo (Default Blank).	
Small Logo	Disabled	Set Enabled to show small Logo	
(EPA) Show	Enabled	(EPA).	Default

3-3 ADVANCED CHIPSET FEATURES

STOP

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 Se	Advanced Chipset Features						
DRAM Clock DRAM Timing x SDRAM Cycle	g By SPD e Length	Host CLK Enabled 3		Ite	em Help		
x Bank Interleave Memory Hole	e	Disabled Disabled		Menu Lev	el 🕨		
P2C/C2P Conc Fast R-W Turn	urrency Around	Disabled Disabled					
Video RAM Ca	Cacheable acheable	Disabled					
AGP Aperture	Size	64M Fnabled					
USB Keyboard OnChip Sound	l Support	Disabled Auto					
OnChip Moder CPU to PCI W	n rite Buffer Bursting	Auto Enabled					
PCI Master 0 V PCI Delay Trai	VS Write	Enabled Disabled					
PCI#2 Access a AGP Master 1	#1 Retry WS Write	Enabled Disabled					
AGP Master 1	WS Read	Disabled					
			_				
$\wedge \psi \rightarrow \leftarrow$:Move	Enter:Select	+/-/PU/PD:Value	F10:Save	ESC:Exit	F1:General Help		
F5:Previous Values		F6:Fail-Safe De	efaults	F7: Optimized Defaults			

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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.

CHIPSET FEATURES	Setting	Description	Note
DRAM Clock	Host CLK HCLK-33M HCLK+33M By Auto	This item allows you to control the DRAM speed.	Default
DRAM Timing By SPD	Enabled Disabled	If enable the DRAM will auto detect the DRAM timing.	Default
SDRAM Cycle Length	32	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
PCI Master Pipeline Req	Disabled Enabled	Disabled/Enabled PCI Master Pipeline Req.	Default
Memory Hole	Disabled 15M – 16M	Some interface cards will map their ROM address to this area. If this occurs, select [Enabled] in this field.	Default

3-3.1 CHIPSET FEATURES SETUP



P2C/C2P Concurrency	Disabled Enabled	This item allows you to enable/disable the PCI to CPU, CPU to PCI concurrency	Default
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
System BIOS Cacheable	Disabled Enabled	The ROM area F0000H-FFFFFH is cacheable.	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
Frame Buffer Size	2M 4M 8M	Select the size of frame buffer of on board VGA.	Default
AGP Aperture Size	64M 32M, 128M.	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
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	Disabled		Default
Keyboard Support	Enabled	Select <i>Enabled</i> if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.	
On Chip Sound	Auto	This item allows you to control the onboard AC 97 audio.	Default
	Disabled		
On Chip	Auto	This item allows you to control the	Default
Modem	Disabled	onboard Modem Codecs.	
CPU to PCI	Disabled	When this field is <i>Enabled</i> , writes	
Write Buffer	Enabled	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 Dvnmic	Disabled	When <i>Enabled</i> . every write	
Bursting	Enabled	transaction goes to the write buffer. Burstable transactions then burst on the PCI bus and nonburstable transactions don't.	Default
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	Default
Transaction	Enabled	32-bit posted write buffer to support delay transactions cycles. Select <i>Enabled</i> to support compliance with PCI specification version 2.1.	



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 Enabled, writes to the	
		AGP(Accelerated Graphics Port)	
		are executed with one wait states.	
ACD Mostor 1	Disabled		Default
AGI Mastel I	Disableu		Delault
WS Read	Enabled	When <i>Enabled</i> , read to the AGP	
		(Accelerated Graphics Port) are	
		executed with one wait states.	



3-4 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		It	em Heln	
OnChip IDE Channel1	Enabled				
IDE Prefetch Mode	Enabled			1	
Primary Master PIO	Auto		Menu Le	vel 🕨	
Primary Slave PIO	Auto				
Secondary Master PIO	Auto				
Secondary Slave PIO	Auto				
Primary Master UDMA	Auto				
Primary Slave UDMA	Auto				
Secondary Master UDMA	Auto				
Secondary Slave UDMA	Auto				
Init Display First	PCI slot				
IDE HDD Block Mode	Enabled				
Onboard FDD Controller	Enabled				
Onboard Serial Port 1	3F8/IRQ4				
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	Normal				
x ECP Mode Use DMA	_3				
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	DMA 1				
MPU-401	Disabled				
MPU-401 I/O Address	330-333H				
Game Port (200-207H)	Enabled	•			
$\wedge \psi \rightarrow \leftarrow$:Move Enter:Select	+/-/PU/PD:Value	F10:Save	ESC:Exit	F1:General Help	
F5:Previous Values	F6:Fail-Safe De	efaults	F7: Opt	imized 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.

3-4.1 IDE Device Controls

IDE Controls	Setting	Description	Note
On-Chip PCI IDE ≻ Primary ≻ Secondary	Disabled Enabled	Turn off the on-board IDE 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

3-4.2 Display Controls

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

3-4.3 IDE HDD Block Mode

	lung	Description	Note
IDE HDD Block Mode Dis	isabled		
En	nabled	Invokes multi-sector transfer instead of one sector per transfer. Not all HDDs support this	Default



3-4.4 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	

3-4.5 Onboard Serial Ports

Onboard Serial Ports	Setting	Description	Note
Onboard	Disabled		
Serial Port 1 / Serial Port 2	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	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 2 Mode]	is set to [HPSII	R]/[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/ Yes, No/ Yes, Yes.	the TX, RX inverting which depends on different H/W requirement. This field is not recommended to change its default setting for avoiding any error in your system	



3-4.6 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		
Parallel Port Mode	Normal	The mode depends on your	Default
	EPP	external device that	
	ECP	connects to this port.	
	ECP/EPP		
If [Parallel Port Mode] is	s set to [ECP] mo	de	
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	
TYPE	EPP 1.7	Select EPP port type 1.7	Default

3-4.7 Onboard Legacy Audio

This field controls the onboard legacy audio.

	Setting	Description	Note
Onboard Legacy Audio	Disabled Enabled	Set this item to Enabled if using software (like DOS games) that needs a 'legacy' audio device.	Default
Sound Blaster	Disabled Enabled	Set this item to enabled if your on-board audio-chip is sound Blaster compatible.	Default
SB I/O Base Address	220H 240H 260H 280H	Select the base address for your sound Blaster (SB) compatible Audio IC.	Default
SB IRQ Select	IRQ 5 IRQ 7 IRQ 9 IRQ 10	Select the IRQ your SB Audio IC uses.	Default



SB DMA Select	DMA1	Select the DMA channel your SB	Default
	DMA0	Audio IC uses.	
	DMA2		
	DMA3		

Onboard Legacy Audio (Continued)

This field controls the onboard legacy audio.

	Setting	Description	Note
MPU-401	Disabled	Set this item to enabled to make use	Default
	Enabled	of MIDI.	
MPU-401 I/O	330-333H	Select the I/O address for your MIDI	Default
Address	300-303H	functionality.	
	310-313H		
	320-323H		
Game Port	Disabled	Set this item to enabled to make use	
(200-207H)	Enabled	of the game port.	Default



3-5 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							
 Power Management ACPI Suspend Type Video Off Option Video Off Method MODEM Use IRQ Soft-Off by PWRBTN Wake Up Events 	Press Enter S1 (POS) Suspend -> Off V/H SYNC+Bla 3 Instant-Off Press Enter	nk	Menu I	Item Help Level ►			
$\wedge \psi \rightarrow \leftarrow$:Move Enter:Sele	ect +/-/PU/PD:Value	F10:Save	ESC:Exit	F1:General Help			
F5:Previous Values	F6:Fail-Safe De	efaults	F7: Opti	mized Defaults			

CMOS Setup Utility – Copyright (C) 1984-2001 Award Software Wake Up Events								
VGA LPT & COM HDD & FDD PCI Master Wake Up On LAN/R RTC Alarm Resume x Date (of Month) x Resume Time (hh:mr Primary INTR IRQs Activity Monit	ing m:ss) oring	OFF LPT/COM ON OFF Disabled Disabled 0 : 1 : 2 ON Press Enter		Menu I	l <u>tem Help</u> Level ►			
↑↓→ ←:Move Enter:S	Select	+/-/PU/PD:Value	F10:Save	ESC:Exit	F1:General Help			
F5:Previous Values		F6:Fail-Safe De	efaults	F7: Opti	mized Defaults			

BIOS Setup Utility



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

Power Management Controls	Setting	Description	Note
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

3-5.1 Power Management Controls



Power Management Controls (Continued)

Power Management Controls	Setting	Description	Note
MODEM Use IRQ	3 3-11, NA	Assigns an IRQ# to the modem device.	Default
Soft-Off by PWR-BTTN	Instant-off Delay 4 Sec.	Turns off the system power 4 seconds after pushing the power button.	Default
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, COM	system peripheral devices or IRQs wakes up the system.	
HDD & FDD	OFF		
	ON ON	When <i>On of HDD</i> & FDD, any activity from one of the listed system peripheral devices wakes up the system.	Default
PCI Master	OFF	-	Default
	ON	When <i>On of PCI Master</i> , any activity from one of the listed system peripheral devices wakes up the system	Denuit





Wake Up Events	Setting	Description	Note
Wake up On LAN/Ring	Disabled Enabled	An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem/LAN) 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)	Enabled	IRQ3(COM2), IRQ4(COM1), IRQ5(LPT2), IRQ6(Floppy Disk), IRQ7(LPT1), IRQ12(PS/2 mouse), IRQ13(Coprocessor), IRQ14(HardDsik) IRQ9(IRQ2 Redir), IRQ9(IRQ2 Redir), IRQ10(Reserved), IRQ11(Reserved) IRQ8 (RTC Alarm), IRQ15 (Reserved)	



3-6 PNP/PCI CONFIGURATION SETUP

This option sets the Motherboard's PCI Slots.

CMOS Setup Utility – Copyright (C) 1984-2001Award Software PnP/PCI Configurations							
PNP OS Instal Reset Configu	led ration Data	NO Disabled			Item Help		
Resources Controlled By x IRQ Resources x DMA Resources		Auto (ESCD) Press Enter Press Enter		Menu	Level 🕨		
PCI/VGA Pale	tte Snoop	Disabled					
Assign IRQ For VGA Assign IRQ For USB		Enabled Enabled					
$\wedge \psi \rightarrow \leftarrow$:Move	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				

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.



3-6.1 PNP/PCI Configuration Controls

PNP/PCI Controls	Setting	Des	scription		Note
PnP OS Installed	Yes	Set are wh	this field to [Yes] if you running Windows 95, ich is PnP compatible.	1	-
	No	If the OS you are running does not support PnP configuration.		Default (If there is any doubt, set this field to [No])	
Reset Configuration	Disabled	Ret dat	a in BIOS.		Default
Data	Enabled	Res in I	set PnP configuration da BIOS.		
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 (ESCD)	The auto care auto	e Plug-and-Play BIOS o manages PCI/ISA PnF d IRQ assignment omatically.	Recommended	
If [Resources Con	ntrolled By] is :	set to [Manual]		
IRQ/DMA Resource (Press Enter)	PCI/ISA PnP Choose IRQ-# DMA-# assign PCI/ISA PnP of		Choose IRQ-# and DMA-# assigned to PCI/ISA PnP card.	IR 11 D	Q-3,4,5,7,9,10, ,12,14,15 MA-0,1,3,5,6,7
	Legacy ISA		Choose IRQ-# andIRDMA-# assigned to11Legacy ISA card.D		Q-3,4,5,7,9,10, ,12,14,15 MA-0,1,3,5,6,7
Under this item the some conditions the	user can ass e IRQ will no	ign a ot be	an IRQ to a PCI slot. Howe assigned as selected unde	eve r th	r, there under his 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
- 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/PC Setup	'I	Setting	Dese	cription	Note
Interrupt	How t	o set the BIO	S to rele	ease the IRQ to the PnP I	nterrupt pool:
Line	PnP/l	PCI configura	ation	Integrated Peripherals	
IRQ 15	IRQ 1	5: PCI / IS	A PnP	On-Chip Secondary PC	IDE: disabled
IRQ 14	IRQ 1	4: PCI / IS	A PnP	On-Chip Primary PCI II	DE: disabled
				Interrupt 12 will be rele	ased by the PnP
IRQ 12	IRQ 1	2: PCI / IS	A PnP	BIOS automatically if th	e 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
4. Your (OS may	reassign and	other int	errupt to a PCI slot after	BIOS passes control
to the	OS, esj	pecially if yo	u use W	indows 95, 98 or NT.	_
PCI/VG	A	Disabled	Leave	this field at <i>Disabled</i>	Default
Palette		Enabled			
Snoop					
Assign I	RQ	Disabled	BIOS	will assign IRQ for	
For			VGA/l	JSB port.	
VGA/US	SB	Enabled	BIOS	won't assign IRQ for	Default
			VGA/U	JSB port.	



3-6.2 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)

3-7 PC HEALTH STATUS

This option sets the Motherboard's PC Health Status.

CMOS Setup Utility – Copyright (C) 1984-2001 Award Software PC Health Status							
Vcore 5V			1.56 4.78	V V	-	I	tem Help
12V Current CPU Current Syste		11.58 35 ° C / 95 ° 31 ° C / 87 ° 4681 PPM	8V_ F F_	-	Menu L	evel 🕨	
Current CPUFAN1 Speed Current CHAFAN1 Speed			4681 RPM				
					-		
					-		
ALZ C'Move	Enter:Select			E10.Save		SUFrit	E1:Conoral Holn
F5:Previous	F6:Fail-Safe Defaults				F7: Optimized Defaults		



3-7.1 CPU Device Monitoring

CPU Device Monitoring	Setting	Description	Note
Vcore, 5V, 12V	V	Show the current voltage status.	
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 CPUFAN1 Speed	RPM	Show the current status of CPU Fan	
Current CHAFAN1 Speed	RPM	Show the current status of Classis Fan	



3-8 LOAD FAIL-SAFE DEFAULTS

Select the [Load Fail-Safe 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.



3-9 LOAD OPTIMIZED DEFAULTS

Select the [Load Optimized 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.

3-10 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:



3-11 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).


3-12 BOOT MENU

Boot Menu enables user to boot-up on different boot device without going into the BIOS setup.

To enable boot Menu, press **"ESC"** after memory initialization, user will see a device menu, in which user can choose on which device they wish to boot from.





Chapter 4

DRIVERS INSTALLATION

The SOYO-CD will NOT autorun under Win 2k

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

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

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

If you use Windows NT, 2000 or XP 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.

Please Select Your Board			
	7VEM PRO		
	OK	Cancel	

(SOYO CD Start Up Program Menu)

If you use Windows 95/98/98SE/ME, 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

Drivers needed to install for the system to operate properly:

- 1. VIA 4 in 1 driver
- 2. 8361 VGA driver
- 3. Avance audio driver
- 4. Realtek LAN driver. Need to be installed manually. See Chapter 5 for installation procedure.

Installing VIA hardware monitor utility is optional.

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	revision:			
VIA 4 in 1 Driver Package for Win 9x/ME/NT/2k/XP VIA 8361 Onboard Display Driver for Win 98 VIA 8361 Onboard Display Driver for Win ME VIA 8361 Onboard Display Driver for Win 2000 VIA 8361 Onboard Display Driver for Win NT4.0 VIA 8361 Onboard Display Driver for Win XP Avance Onboard Audio Driver and Applications for Win 9x/ME/2000/NT/XP VIA hardware monitor(R) for Win 9x/ME/NT/2000/XP				
Cancel				

(Driver Installation Menu)

A short description of all available drivers follows:

> VIA 4in1 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 follows:

-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.

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 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.

> VIA8361 Onboard Display Driver for Win 98

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

> VIA8361 Onboard Display Driver for Win ME

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

> VIA8361 Onboard Display Driver for Win 2000

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

> VIA8361 Onboard Display Driver for Win NT4.0

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

> VIA8361 Onboard Display Driver for Win XP

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

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

This Onboard Audio drivers for Windows 9x/ME/2000/NT/XP.

VIA hardware monitor(R) 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.

(* Internet Explorer is a Microsoft Trademark)



Chapter 5

REALTEK LAN DRIVER INSTALLATION

Install the Realtek LAN Drivers under windows 98

- 1. Move the mouse cursor to my computer icon, then press mouse right button press properties.
- 2. Open Device Manager.
- 3. Under Network Adapters there will be a yellow marker the first time the operating system is installed.
- 4. Select the "Driver" tab.
- 5. Click on update Driver.
- 6. The LAN Driver path is in SOYO CD "d:\driv-all\Realtek8100\Win98." (where D :is your CDROM drive)
- 7. You will need windows 98 to complete the installation.
- 8. After informing windows of the directory the driver will be installed. Restart your system after installation.

Install the Realtek LAN Drivers under windows NT4.0

- 1. Double click the Network icon in the control panel. The Network properties windows will appear. Click on the Devices tab and press the Add button.
- 2. Select "Unlisted or Updated Drivers" from the list of drivers in the Add window by placing the mouse pointer over it and clicking the left mouse button. Press the OK button.
- 3. The Install Driver dialog box will appear and request the path of the location of the drivers to be installed. Enter

"D:\driv-all\Realtek8100\WinNT4" (where D:is your CDROM drive)

4. After installation, Windows NT will display a dialog box asking you to restart your system.

Install the Realtek LAN Drivers under windows ME

SY-7VEM PRO

(Because windows ME can detect LAN driver automatic, so this installation is for update driver)

- 1. Move the mouse cursor to my computer icon, then press mouse right button press properties.
- 2. Open Device Manager.
- 3. Under Network Adapters there will be a LAN driver which Me detect is installed.
- 4. Select the "Driver" tab.
- 5. Click on update Driver.
- 6. The LAN driver path is in SOYO CD "d:\driv-all\Realtek8100\WinME". (where D :is your CDROM drive)

Install the Realtek LAN Drivers under windows XP

(Because windows XP can detect LAN driver automatic, so this

installation is for update driver)

- 1. Move the mouse cursor to my computer icon, then press mouse right button press properties.
- 2. Click hardware, then click Device manager.
- 3. Under Network Adapters there will be a LAN driver which XP detect is installed, click it.
- 4. Select Driver, then click update driver.
- 5. Select install from a list or specific location, then click next.
- 6. The LAN driver path is in SOYO CD "d:\driv-all\Realtek8100\WinXP". (where D :is your CDROM drive)
- 7. After installation. Restart your system.

Install the Realtek LAN Drivers under windows 2000

(Because windows 2000 can detect LAN driver automatic, so this installation is for update Driver)



- 1. Press mouse right button then press properties.
- 2. Select hardware, then click Device manager.
- 3. Under Network Adapters there will be a LAN driver which 2000 detect is installed, Double click it.
- 4. Select driver then click update driver.
- 5. Click next then select search for a suitable driver for my device.
- 6. Click next.
- 7. The LAN driver path is in SOYO CD

"d:\driv-all\Realtek8100\Win2000." (where D :is your CDROM drive) 8.Restart.

