S7SXB <u>Motherboard</u>

User's Manual

Product Name: S7SXB Manual Revision: English,1.4

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Chapter 1. Introduction

1.1 Product Overview

Thank you for purchasing the **S7SXB** motherboard. This motherboard utilizes **SiS**'s latest technology, namely **530 & 5595** chipset. We have conducted a motherboard compatibility test with a variety of hardware and software, such as CPUs, memory, display card, CD ROM, Novell, MS Office....etc and has passed NSTL Year 2000 certification test program.

We set high standards on our quality control, with absolute confidence, we believe this product is the wisest choice.

This manual is composed of four sections. The first section is the introduction of this motherboard, and the second section explains the proper procedure to setup the motherboard, and the third section provides information on how to setup the CMOS. The last section states the drivers and utilities.

Features :

- Support NCR SCSI BIOS.
- Support Ultra DMA 33/66.
- Support Hardware Monitor function.
- Support Advanced Configuration Power Interface (ACPI).
- Support Desktop Management Interface (DMI) through BIOS.
- BIOS Green feature function, and 2Mbits "Plug & Play" Flash ROM.
- RTC Wake Up Alarm: Program the date/time to wake up your system.

- AGP 3D-graphics & 3D-audio controller pre-installed on board.(sound is optional)

1.2 Content

The **S7SXB** motherboard contains the following items:

- The S7SXB Motherboard.
- A 40-pin or 80-pin IDE Ribbon Cable. (80-pin cable is optional)
- A Floppy Ribbon Cable.
- A Set of Serial Ribbon Cable.
- A Parallel Port and A PS/2 Mouse Port.
- A VGA cable.
- A Audio and Game/MIDI cable.
- One Driver CD.
- User's Manual & Quick Installation Chart.

1.3 Specifications

<u>CPU</u> :	-Supports all socket 7 processors. -Supports 66.8/75/83.3/95/100/112/124 MHz host bus frequency.
<u>Chipset</u> :	- SiS 530 & 5595 chipset.
<u>VGA</u> :	 AGP 3D-graphics controller integrated in the SIS 530 chipset. Built-in programmable 24-bit true-color RAMDAC up to 230MHz pixel clock. Supports loadable RAMDAC for gamma correction in high color and true color. Shared System Memory Area 2MB, 4MB and 8MB.
<u>DIMM</u> :	-Supports 66MHz or faster 3.3V in 3 168-pin banks, 3x168 -pin 64-bit DIMM sockets using 8/16/32/64/128/256/512 MB memory. -Supports up to a maximum of 1.5 GB main memory.
L2 Cache :	-On board 512KB Pipeline Burst Cache. (1MB optional)
<u>IDE</u> :	 Dual channel PIO and PCI Bus Master IDE ports support up to 4 EIDE devices for HDD or CD-ROM. Supports PIO Modes up to Mode 4 timing, and multiword DMA Mode 0, 1, 2. Supports Ultra DMA 33/66 (UDMA) with data transfer rate up to 33/66 MB/Sec. Supports 120MB Floppy Drive.
I/O Devices :	 -One FDD control port supports two of the 5.25" or 3.5" floppy drives up to 2.88 MB. -Two high-speed 16550 UART compatible serial ports -One parallel ports with ECP/ EPP compatibility. -One PS/2 mouse port -One AT Keyboard connector

<u>BIOS</u> :	 -2 Mbits Award BIOS V.4.51 with built-in Anti-Virus, DMI support, and green function. (Plug-and-Play BIOS) -Supports CD-ROM, SCSI, and LS120/ZIP boot up. - Supports NCR SCSI BIOS. -Supports ACPI function.
IR Port :	-One IrDA/ASKIR compatible Infrared interface port. (Cable optional)
<u>Sound</u> (optional)	 -ESS Solo-1 ES1938S PCI Sound Chip -Built-in 3D audio effects processor -Full native DOS games compatibility, via three technologies TDMA, DDMA & PC/PCI -High quality ESFM music synthesizer -Dynamic range (SNR) over 80db -Record, compress and playback voice, sound and music -Full-Duplex operation for simultaneous record and playback -Stereo inputs from line in, Auxiliary A (CD audio) and Auxiliary B and a mono input from microphone -MPU-401 interface for wavetable synthesizer and MIDI devices -Integrated dual game port -Support PC games and application for Sound Blaster And Sound Blaster pro -Support Microsoft Windows Sound System -Meet PC 97/98 and WHQL specifications -Sample record/playback rates up to 48KHz
<u>USB Ports</u> :	 Two Universal Serial Bus (USB) ports support up to 127 peripheral devices. Supports FSC (12MB/Sec) and LS (1.5MB/Sec) serial transfer. (Cable optional)
<u>Power</u> :	 -Supports AT and ATX power Connectors. -On-board PWM Switching Power. -Supports Modem remote Ring-On function when using ATX power supply. -Supports software power off function. -Supports RTC Wake-Un.

- Slots :-Three 32-bit PCI expansion slots.-Two 16-bit ISA expansion slots.
- O.S. : -Supports Windows 95/98, Windows NT, MS-DOS V. 6.22, OS/2, Novell, Unix, SCO UNIX.....
- **Dimension** : 22 cm x 22 cm BABY AT Form factor

1.4 MotherBoard Layout



Notice:

Please start inserting memory module from DIMM 1 (white) Socket

Chapter 2. Hardware Setup

2.1 Installation Procedure

- 1. Jumper settings
- 2. Installation of CPU
- **3. Installation of Memory**
- 4. I/O & Panel Connections

2.1.1 Jumper Settings

In this manual, (1-2) represents the first and second pins of the jumper. (2-3) represents the second and third pins of the jumper, and so on. "ON" means put on the jumper cap and "OFF" means remove the jumper cap. On the motherboard, you will see three sets of jumpers with different color jumper caps:

Yellow Jumper Caps : Sets the Function of Flash CMOS. JRTC

Green Jumper Caps : Sets the type and speed of CPU. JR0,JR1,JR2,JF0,JF1,JF2

Red Jumper Caps :	Sets the voltage of CPU	JV0,JV1,JV2,JV3,JV4
	Sets the Sound function	JSND (optional)

WARNING: Electronic parts are Static sensitive. To prevent damage to the computer and its parts please take the following measures.
Work on a surface such as concrete, linoleum or hard wood floor.
Ground yourself with either a properly installed grounding strap or by touching a major electrical appliance long enough to discharge the static.

2.1.2 Clearing the CMOS (Yellow Jumper Caps)

JRTC: CMOS Function Selection

- 1-2 : Clear data.
- 2-3 : Normal Operation. (Default Setting)



How to Clear the CMOS Setting

- (1) Turn off the power.
- (2) Remove power cable from power connector.
- (3) Remove Yellow Jumper Cap from JRTC (2-3) and put on JRTC (1-2) to remove the CMOS setting.
- (4) Remove Yellow Jumper Cap from JRTC (1-2) and put on JRTC (2-3).
- (5) Connect power cable back to power connector.
- (6) Turn on the power.
- (7) While the system reboots, press key to set the BIOS setup.

2.1.3 Enable/Disable Sound (JSND : Red Jumper Cap)(The sound function and jumper are optional)

This jumper let you to enable or disable the sound function.

- 1-2 : Enable Sound function (Default Setting)
- 2-3 : Disable Sound function

2.1.4 CPU Voltage Selection (Red Jumper Caps)

Before the use of this motherboard, make sure all jumpers are set correctly. The wrong setting might damage the CPU and the motherboard.

CPU	CPU TYPE	CPU	JV0	JV1	JV2	JV3	JV4
Brand		Voltage					
		1.3V	2-3	2-3	2-3	2-3	1-2
		1.4V	2-3	1-2	2-3	2-3	1-2
		1.5V	2-3	2-3	1-2	2-3	1-2
		1.6V	2-3	1-2	1-2	2-3	1-2
		1.7V	2-3	2-3	2-3	1-2	1-2
		1.8V	2-3	1-2	2-3	1-2	1-2
		1.9V	2-3	2-3	1-2	1-2	1-2
		2.0V	2-3	1-2	1-2	1-2	1-2
		2.1V	1-2	2-3	2-3	2-3	2-3
AMD	K6-2, K6-III AFx	2.2V	2-3	1-2	2-3	2-3	2-3
AMD	K6-2/550 AGR	2.3V	1-2	1-2	2-3	2-3	2-3
AMD	K6-2, K6-III AHx	2.4V	2-3	2-3	1-2	2-3	2-3
		2.5V	1-2	2-3	1-2	2-3	2-3
		2.6V	2-3	1-2	1-2	2-3	2-3
		2.7V	1-2	1-2	1-2	2-3	2-3
Intel/Cyrix	P55C-MMX/6x86L	2.8V	2-3	2-3	2-3	1-2	2-3
AMD/Cyrix	K6-166/200, 6x86MX, M II	2.9V	1-2	2-3	2-3	1-2	2-3
		3.0V	2-3	1-2	2-3	1-2	2-3
		3.1V	1-2	1-2	2-3	1-2	2-3
AMD	K6-233	3.2V	2-3	2-3	1-2	1-2	2-3
Intel	P54C	3.3V	1-2	2-3	1-2	1-2	2-3
		3.4V	2-3	1-2	1-2	1-2	2-3
AMD/Cyrix	K5/6x86	3.5V	1-2	1-2	1-2	1-2	2-3
		CPU V	oltag	ge Se	lectio	m	

CPU Voltage may vary. Check with CPU manufacturer for it's correct voltage.



2.1.5 CPU External Clock Selection (Green Jumper Caps)

CPU Clock	JF0	JF1	JF2
66.8 MHz	1-2	1-2	1-2
75 MHz	1-2	1-2	2-3
83.3 MHz	1-2	2-3	1-2
95 MHz	1-2	2-3	2-3
100 MHz	2-3	1-2	1-2
112 MHz	2-3	1-2	2-3
124 MHz	2-3	2-3	1-2



2.1.6 CPU BF Ratio Selection (Green Jumper Caps)

BUS/CORE	JR0	JR1	JR2
2.0X	1-2	2-3	2-3
2.5X	1-2	1-2	2-3
3.0X	2-3	1-2	2-3
1.5X / 3.5X	2-3	2-3	2-3
4.0X	1-2	2-3	1-2
4.5X	1-2	1-2	1-2
5.0X	2-3	1-2	1-2
5.5X	2-3	2-3	1-2



2.1.7 CPU Type and Speed Selection

СРИ ТҮРЕ	CLOCK	JF0	JF1	JF2	JR0	JR1	JR2
Pentium 133	66MHz*2.0	1-2	1-2	1-2	1-2	2-3	2-3
Pentium 166(MMX)	66MHz*2.5	1-2	1-2	1-2	1-2	1-2	2-3
Pentium 200(MMX)	66MHz*3.0	1-2	1-2	1-2	2-3	1-2	2-3
Pentium 233(MMX)	66MHz*3.5	1-2	1-2	1-2	2-3	2-3	2-3
AMD K5-PR133	66MHz*2.0	1-2	1-2	1-2	1-2	2-3	2-3
AMD K5-PR166	66MHz*2.5	1-2	1-2	1-2	1-2	1-2	2-3
AMD K6/166	66MHz*2.5	1-2	1-2	1-2	1-2	1-2	2-3
AMD K6/200	66MHz*3.0	1-2	1-2	1-2	2-3	1-2	2-3
AMD K6/233	66MHz*3.5	1-2	1-2	1-2	2-3	2-3	2-3
AMD K6/266, K6-2/266	66MHz*4.0	1-2	1-2	1-2	1-2	2-3	1-2
AMD K6/300, K6-2/300	66MHz*4.5	1-2	1-2	1-2	1-2	1-2	1-2
AMD K6-2/300	100MHz*3.0	2-3	1-2	1-2	2-3	1-2	2-3
AMD K6-2/333	66MHz*5.0	1-2	1-2	1-2	2-3	1-2	1-2
AMD K6-2/333	95MHz*3.5	1-2	2-3	2-3	2-3	2-3	2-3
AMD K6-2/350	100MHz*3.5	2-3	1-2	1-2	2-3	2-3	2-3
AMD K6-2/366	66MHz*5.5	1-2	1-2	1-2	2-3	2-3	1-2
AMD K6-2/380	95MHz*4.0	1-2	2-3	2-3	1-2	2-3	1-2
AMD K6-2/400	100MHz*4.0	2-3	1-2	1-2	1-2	2-3	1-2
AMD K6-2/450	100MHz*4.5	2-3	1-2	1-2	1-2	1-2	1-2
AMD K6-2/475	95MHz*5.0	1-2	2-3	2-3	2-3	1-2	1-2
AMD K6-2/500	100MHz*5.0	2-3	1-2	1-2	2-3	1-2	1-2
AMD K6-2/550	100MHz*5.5	2-3	1-2	1-2	2-3	2-3	1-2
AMD K6-III/400	100MHz*4.0	2-3	1-2	1-2	1-2	2-3	1-2
AMD K6-III/450	100MHz*4.5	2-3	1-2	1-2	1-2	1-2	1-2
AMD K6-III/475	95MHz*5.0	1-2	2-3	2-3	2-3	1-2	1-2
AMD K6-III/500	100MHz*5.0	2-3	1-2	1-2	2-3	1-2	1-2
Cyrix 6x86L-PR166+	66MHz*2.0	1-2	1-2	1-2	1-2	2-3	2-3
Cyrix 6x86L-PR200+	75MHz*2.0	1-2	1-2	2-3	1-2	2-3	2-3
CPU TYPE	CLOCK	JF0	JF1	JF2	JR0	JR1	JR2

Cyrix 6x86MX-PR166(66MHz) 66MHz*2.0 1-2 <th1-2< th=""> 1-2 1-2 1</th1-2<>								
Cyrix 6x86MX-PR200(66MHz) 66MHz*2.5 1-2 1-3 1-2	Cyrix 6x86MX-PR166(66MHz)	66MHz*2.0	1-2	1-2	1-2	1-2	2-3	2-3
Cyrix 6x86MX-PR200(75MHz) 75MHz*2.0 1-2 1-2 2-3 1-2 2-3 2-3 Cyrix 6x86MX-PR233(66MHz) 66MHz*3.0 1-2 1-2 1-2 2-3 1-2 2-3 Cyrix 6x86MX-PR233(75MHz) 75MHz*2.5 1-2 1-2 2-3 1-2 1-2 2-3 Cyrix 6x86MX-PR233(83MHz) 83MHz*2.0 1-2 2-3 1-2 1-2 2-3 2-3 2-3 Cyrix 6x86MX-PR266(66MHz) 66MHz*3.5 1-2 1-2 2-3 2-3 2-3 2-3 2-3 Cyrix 6x86MX-PR266(66MHz) 66MHz*3.5 1-2 1-2 2-3 2-3 1-2 2-2 Cyrix 6x86MX-PR266(63MHz) 83MHz*2.5 1-2 2-3 2-3 1-2 2-2 Cyrix 6x86MX-PR300(75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix M II-300 (66MHz) 66MHz*3.5 1-2 1-2 1-2 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 <th< th=""><th>Cyrix 6x86MX-PR200(66MHz)</th><th>66MHz*2.5</th><th>1-2</th><th>1-2</th><th>1-2</th><th>1-2</th><th>1-2</th><th>2-3</th></th<>	Cyrix 6x86MX-PR200(66MHz)	66MHz*2.5	1-2	1-2	1-2	1-2	1-2	2-3
Cyrix 6x86MX-PR233(66MHz) 66MHz*3.0 1-2 1-2 1-2 2-3 1-2 2-3 Cyrix 6x86MX-PR233(75MHz) 75MHz*2.5 1-2 1-2 2-3 1-2 1-2 2-3 Cyrix 6x86MX-PR233(83MHz) 83MHz*2.0 1-2 2-3 1-2 1-2 2-3 2-3 Cyrix 6x86MX-PR266(66MHz) 66MHz*3.5 1-2 1-2 2-3 2-3 2-3 2-3 Cyrix 6x86MX-PR266(63MHz) 83MHz*2.5 1-2 2-3 2-3 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix 6x86MX-PR266(83MHz) 83MHz*2.5 1-2 2-3 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix M II-300 (66MHz) 66MHz*3.5 1-2 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix M II-333 (66MHz) 66MHz*4.0 1-2 1-2 1-2 2-3 1-2 2-3 Cyrix M II-333 (63MHz) 83MHz*3.0 1-2 2-3 1-2 2-3 1-2 2-3 Cyrix M II-366 (75MHz) 75MHz*3.0 1-2 2-3 1-2 <td< th=""><th>Cyrix 6x86MX-PR200(75MHz)</th><th>75MHz*2.0</th><th>1-2</th><th>1-2</th><th>2-3</th><th>1-2</th><th>2-3</th><th>2-3</th></td<>	Cyrix 6x86MX-PR200(75MHz)	75MHz*2.0	1-2	1-2	2-3	1-2	2-3	2-3
Cyrix 6x86MX-PR233(75MHz) 75MHz*2.5 1-2 1-2 2-3 1-2 1-2 2-3 Cyrix 6x86MX-PR233(83MHz) 83MHz*2.0 1-2 2-3 1-2 1-2 2-3 2-3 Cyrix 6x86MX-PR266(66MHz) 66MHz*3.5 1-2 1-2 1-2 2-3 2-3 2-3 Cyrix 6x86MX-PR266(75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix 6x86MX-PR266(83MHz) 83MHz*2.5 1-2 2-3 1-2 1-2 2-3 Cyrix 6x86MX-PR300(75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix M II-300 (66MHz) 66MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix M II-300 (75MHz) 75MHz*3.0 1-2 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3	Cyrix 6x86MX-PR233(66MHz)	66MHz*3.0	1-2	1-2	1-2	2-3	1-2	2-3
Cyrix 6x86MX-PR233(83MHz) 83MHz*2.0 1-2 2-3 1-2 1-2 2-3 2-3 Cyrix 6x86MX-PR266(66MHz) 66MHz*3.5 1-2 1-2 1-2 2-3 2-3 2-3 Cyrix 6x86MX-PR266(75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix 6x86MX-PR266(83MHz) 83MHz*2.5 1-2 2-3 1-2 1-2 2-3 Cyrix 6x86MX-PR266(83MHz) 66MHz*3.5 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix 6x86MX-PR300(75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix M II-300 (66MHz) 66MHz*3.5 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix M II-333 (66MHz) 66MHz*3.0 1-2 1-2 2-3	Cyrix 6x86MX-PR233(75MHz)	75MHz*2.5	1-2	1-2	2-3	1-2	1-2	2-3
Cyrix 6x86MX-PR266(66MHz) 66MHz*3.5 1-2 1-2 1-2 2-3 2-3 2-3 Cyrix 6x86MX-PR266(75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix 6x86MX-PR266(83MHz) 83MHz*3.0 1-2 1-2 2-3 1-2 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix 6x86MX-PR266(83MHz) 66MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 1-3	Cyrix 6x86MX-PR233(83MHz)	83MHz*2.0	1-2	2-3	1-2	1-2	2-3	2-3
Cyrix 6x86MX-PR266(75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix 6x86MX-PR266(83MHz) 83MHz*2.5 1-2 2-3 1-2 1-2 1-2 2-3 Cyrix 6x86MX-PR300(75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix M II-300 (66MHz) 66MHz*3.5 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix M II-300 (75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix M II-333 (66MHz) 66MHz*4.0 1-2 1-2 2-3	Cyrix 6x86MX-PR266(66MHz)	66MHz*3.5	1-2	1-2	1-2	2-3	2-3	2-3
Cyrix 6x86MX-PR266(83MHz) 83MHz*2.5 1-2 2-3 1-2 1-2 1-2 2-3 Cyrix 6x86MX-PR300(75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix M II-300 (66MHz) 66MHz*3.5 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix M II-300 (75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix M II-333 (66MHz) 66MHz*4.0 1-2 1-2 1-2 2-3 2-3 2-3 2-3 Cyrix M II-333 (75MHz) 75MHz*3.5 1-2 1-2 2-3 <	Cyrix 6x86MX-PR266(75MHz)	75MHz*3.0	1-2	1-2	2-3	2-3	1-2	2-3
Cyrix 6x86MX-PR300(75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix M II-300 (66MHz) 66MHz*3.5 1-2 1-2 1-2 2-3 1-2 2-3 2-3 1-2 2-3 </th <th>Cyrix 6x86MX-PR266(83MHz)</th> <th>83MHz*2.5</th> <th>1-2</th> <th>2-3</th> <th>1-2</th> <th>1-2</th> <th>1-2</th> <th>2-3</th>	Cyrix 6x86MX-PR266(83MHz)	83MHz*2.5	1-2	2-3	1-2	1-2	1-2	2-3
Cyrix M II-300 (66MHz) 66MHz*3.5 1-2 1-2 1-2 2-3 2-3 2-3 Cyrix M II-300 (75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 1-2 1-2 1-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1	Cyrix 6x86MX-PR300(75MHz)	75MHz*3.0	1-2	1-2	2-3	2-3	1-2	2-3
Cyrix M II-300 (75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 Cyrix M II-333 (66MHz) 66MHz*4.0 1-2 1-2 1-2 1-2 2-3 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 1-3 1-2 1-2 1-3 1-2 1-2 1-3 1-2 1-2 1-3 1-2	Cyrix M II-300 (66MHz)	66MHz*3.5	1-2	1-2	1-2	2-3	2-3	2-3
Cyrix M II-333 (66MHz) 66MHz*4.0 1-2 1-2 1-2 1-2 2-3 1-2 Cyrix M II-333 (75MHz) 75MHz*3.5 1-2 1-2 2-3 1-2 2-3 1-2 1-2 1-2 1-2 1-2 1-2 2-3 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-3 1-2 1-2 1-3 1-2 1-2 1-3 1-2 1-2	Cyrix M II-300 (75MHz)	75MHz*3.0	1-2	1-2	2-3	2-3	1-2	2-3
Cyrix M II-333 (75MHz) 75MHz*3.5 1-2 1-2 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 1-2 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 1-2 2-3 1-2 2-3 1-2 2-3 1-2 1-2 2-3 1-2 1-2 2-3 1-2 1-2	Cyrix M II-333 (66MHz)	66MHz*4.0	1-2	1-2	1-2	1-2	2-3	1-2
Cyrix M II-333 (83MHz) 83MHz*3.0 1-2 2-3 1-2 2-3 1-2 2-3 Cyrix M II-350 (95MHz) 95MHz*3.0 1-2 2-3 2-3 2-3 1-2 2-3 Cyrix M II-366 (75MHz) 75MHz*4.0 1-2 1-2 2-3 1-2 2-3 1-2 2-3 Cyrix M II-366 (75MHz) 75MHz*4.0 1-2 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 1-2 1-2 2-3 1-2 2-3 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 1-2 1-3 1-2 1-2 1-3 1-2 1-3 1-2	Cyrix M II-333 (75MHz)	75MHz*3.5	1-2	1-2	2-3	2-3	2-3	2-3
Cyrix M II-350 (95MHz) 95MHz*3.0 1-2 2-3 2-3 1-2 2-3 Cyrix M II-366 (75MHz) 75MHz*4.0 1-2 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 2-3 2-3 1-2 2-3 2-3 1-2 2-3 1-2 2-3 2-3 1-2 2-3 1-2 1-2 2-3 1-2 1-2 1-3 1-2 1-2	Cyrix M II-333 (83MHz)	83MHz*3.0	1-2	2-3	1-2	2-3	1-2	2-3
Cyrix M II-366 (75MHz) 75MHz*4.0 1-2 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 1-2 1-2 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 1-2 2-3 1-2 1-2 2-3 1-2 1-2 1-3 1-2 1-2 1-3 1-2 1-2 1-3	Cyrix M II-350 (95MHz)	95MHz*3.0	1-2	2-3	2-3	2-3	1-2	2-3
Cyrix M II-366 (83MHz) 83MHz*3.5 1-2 2-3 1-2 2-3 2-3 2-3 Cyrix M II-366 (100MHz) 100MHz*2.5 2-3 1-2 1-2 1-2 1-2 2-3 2-3 Cyrix M II-366 (100MHz) 100MHz*3.0 2-3 1-2 1-2 1-2 1-2 2-3 Cyrix M II-400 (100MHz) 100MHz*3.0 2-3 1-2 1-2 2-3 1-2 2-3 Cyrix M II-400 (100MHz) 100MHz*3.5 2-3 1-2 1-2 2-3 2-3 2-3 IDT Winchip II-200 (66MHz) 66MHz*3.0 1-2 1-2 1-2 2-3 2-3 IDT Winchip II-200 (100MHz) 100MHz*2.0 2-3 1-2 1-2 2-3 2-3 IDT Winchip II-233 (66MHz) 66MHz*3.0 1-2 1-2 1-2 2-3 2-3 IDT Winchip II-233 (100MHz) 100MHz*2.33 2-3 1-2 1-2 2-3 1-2 IDT Winchip II-266 (66MHz) 66MHz*4.0 1-2 1-2 1-2 2-3 1-2 IDT Winchip II-266 (100MHz) 100MHz*2.5 2-3 1-2	Cyrix M II-366 (75MHz)	75MHz*4.0	1-2	1-2	2-3	1-2	2-3	1-2
Cyrix M II-366 (100MHz) 100MHz*2.5 2-3 1-2 1-2 1-2 1-2 2-3 Cyrix M II-366 (100MHz) 100MHz*3.0 2-3 1-2 1-2 2-3 1-2 2-3 Cyrix M II-400 (100MHz) 100MHz*3.5 2-3 1-2 1-2 2-3 2-3 2-3 IDT Winchip II-200 (66MHz) 66MHz*3.0 1-2 1-2 1-2 2-3 2-3 IDT Winchip II-200 (100MHz) 100MHz*2.0 2-3 1-2 1-2 2-3 2-3 IDT Winchip II-203 (66MHz) 66MHz*3.0 1-2 1-2 2-3 2-3 2-3 IDT Winchip II-233 (66MHz) 66MHz*3.5 1-2 1-2 2-3 2-3 2-3 IDT Winchip II-233 (100MHz) 100MHz*2.33 2-3 1-2 1-2 2-3 1-2 IDT Winchip II-266 (66MHz) 66MHz*4.0 1-2 1-2 1-2 1-3 1-2 IDT Winchip II-266 (100MHz) 100MHz*2.5 2-3 1-2 1-2 2-3 1-3 IDT Winchip II-300 (100MHz) 100MHz*2.5 2-3 1-2 1-2 1-2 2-	Cyrix M II-366 (83MHz)	83MHz*3.5	1-2	2-3	1-2	2-3	2-3	2-3
Cyrix M II-366 (100MHz) 100MHz*3.0 2-3 1-2 1-2 2-3 1-2 2-3 Cyrix M II-400 (100MHz) 100MHz*3.5 2-3 1-2 1-2 2-3 2-3 2-3 IDT Winchip II-200 (66MHz) 66MHz*3.0 1-2 1-2 1-2 2-3 1-2 2-3 IDT Winchip II-200 (66MHz) 66MHz*3.0 1-2 1-2 1-2 2-3 1-2 2-3 IDT Winchip II-200 (100MHz) 100MHz*2.0 2-3 1-2 1-2 2-3 2-3 2-3 IDT Winchip II-233 (66MHz) 66MHz*3.5 1-2 1-2 2-3 2-3 2-3 IDT Winchip II-233 (100MHz) 100MHz*2.33 2-3 1-2 1-2 2-3 1-2 IDT Winchip II-266 (66MHz) 66MHz*4.0 1-2 1-2 1-2 2-3 1-2 IDT Winchip II-266 (100MHz) 100MHz*2.66 2-3 1-2 1-2 2-3 1-2 IDT Winchip II-300 (100MHz) 100MHz*2.5 2-3 1-2 1-2 1-2 2-3 2-3 1-2	Cyrix M II-366 (100MHz)	100MHz*2.5	2-3	1-2	1-2	1-2	1-2	2-3
Cyrix M II-400 (100MHz) 100MHz*3.5 2-3 1-2 1-2 2-3 2-3 2-3 IDT Winchip II-200 (66MHz) 66MHz*3.0 1-2 1-2 1-2 2-3 1-2 2-3 2-3 2-3 1-2 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 1-2 2-3 2-3 1-2 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 1-2 1-3 2-3 1-2 1-2 1-3 1-2 1-2 1-3 1-2 1-2 1-3 1-2 1-3 1-2 1-3 1-3 1-3 1-3 1-3 1-3 1-3	Cyrix M II-366 (100MHz)	100MHz*3.0	2-3	1-2	1-2	2-3	1-2	2-3
IDT Winchip II-200 (66MHz) 66MHz*3.0 1-2 1-2 1-2 2-3 1-2 2-3 IDT Winchip II-200 (100MHz) 100MHz*2.0 2-3 1-2 1-2 1-2 2-3 2-3 IDT Winchip II-225 (75MHz) 75MHz*3.0 1-2 1-2 1-2 2-3 2-3 1-2 IDT Winchip II-233 (66MHz) 66MHz*3.5 1-2 1-2 1-2 2-3 2-3 2-3 IDT Winchip II-233 (100MHz) 100MHz*2.33 2-3 1-2 1-2 2-3 1-2 1-2 IDT Winchip II-266 (66MHz) 66MHz*4.0 1-2 1-2 1-2 2-3 1-2 IDT Winchip II-266 (100MHz) 100MHz*2.66 2-3 1-2 1-2 2-3 1-2 IDT Winchip II-300 (100MHz) 100MHz*2.5 2-3 1-2 1-2 2-3 2-3 1-2	Cyrix M II-400 (100MHz)	100MHz*3.5	2-3	1-2	1-2	2-3	2-3	2-3
IDT Winchip II-200 (100MHz) 100MHz*2.0 2-3 1-2 1-2 2-3 2-3 IDT Winchip II-225 (75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 1-2 2-3 2-3 2-3 2-3 1-2 1-2 2-3 2-3 2-3 2-3 2-3 2-3 2-3 2-3 1-2 1-2 2-3 2-3 2-3 1-2 1-2 2-3 1-2 1-2 1-3 1-2 1-2 1-3 1-3 1-2 1-2 1-3	IDT Winchip II-200 (66MHz)	66MHz*3.0	1-2	1-2	1-2	2-3	1-2	2-3
IDT Winchip II-225 (75MHz) 75MHz*3.0 1-2 1-2 2-3 2-3 1-2 2-3 IDT Winchip II-233 (66MHz) 66MHz*3.5 1-2 1-2 1-2 2-3 2-3 2-3 IDT Winchip II-233 (100MHz) 100MHz*2.33 2-3 1-2 1-2 2-3 1-2 1-2 IDT Winchip II-266 (66MHz) 66MHz*4.0 1-2 1-2 1-2 2-3 1-2 IDT Winchip II-266 (100MHz) 100MHz*2.66 2-3 1-2 1-2 2-3 1-2 IDT Winchip II-300 (100MHz) 100MHz*2.5 2-3 1-2 1-2 2-3 2-3 1-2	IDT Winchip II-200 (100MHz)	100MHz*2.0	2-3	1-2	1-2	1-2	2-3	2-3
IDT Winchip II-233 (66MHz) 66MHz*3.5 1-2 1-2 1-2 2-3 2-3 2-3 IDT Winchip II-233 (100MHz) 100MHz*2.33 2-3 1-2 1-2 2-3 1-2	IDT Winchip II-225 (75MHz)	75MHz*3.0	1-2	1-2	2-3	2-3	1-2	2-3
IDT Winchip II-233 (100MHz) 100MHz*2.33 2-3 1-2 1-2 2-3 1-2 1-2 IDT Winchip II-266 (66MHz) 66MHz*4.0 1-2 1-2 1-2 1-2 2-3 1-2 <th1-2< th=""> <th1-2< th=""> <th1-2< th=""></th1-2<></th1-2<></th1-2<>	IDT Winchip II-233 (66MHz)	66MHz*3.5	1-2	1-2	1-2	2-3	2-3	2-3
IDT Winchip II-266 (66MHz) 66MHz*4.0 1-2 1-2 1-2 1-2 2-3 1-2 IDT Winchip II-266 (100MHz) 100MHz*2.66 2-3 1-2 1-2 2-3 2-3 1-2 IDT Winchip II-300 (100MHz) 100MHz*2.5 2-3 1-2 1-2 1-2 1-2 2-3 2-3 1-2	IDT Winchip II-233 (100MHz)	100MHz*2.33	2-3	1-2	1-2	2-3	1-2	1-2
IDT Winchip II-266 (100MHz) 100MHz*2.66 2-3 1-2 1-2 2-3 1-2 IDT Winchip II-300 (100MHz) 100MHz*2.5 2-3 1-2 1-2 1-2 1-2 2-3 2-3 1-2	IDT Winchip II-266 (66MHz)	66MHz*4.0	1-2	1-2	1-2	1-2	2-3	1-2
IDT Winchip II-300 (100MHz) 100MHz*2.5 2-3 1-2 1-2 1-2 1-2 2-3	IDT Winchip II-266 (100MHz)	100MHz*2.66	2-3	1-2	1-2	2-3	2-3	1-2
	IDT Winchip II-300 (100MHz)	100MHz*2.5	2-3	1-2	1-2	1-2	1-2	2-3

The CPU setting table will be revised at every opportunity. If you have a new CPU which does not appear on the table, check with the manufacturer or vendor for the CPU setting information.

2.2 Installation of CPU

Before installing CPU, make sure the power is off. Locate the white color level bar on the ZIF socket. Push level bar away from the socket and pull upward 90 degrees. Insert the CPU into the socket. Make sure the notch of the CPU corresponds with the white dot on the ZIF socket (the corner without pin socket). Do not push in the CPU. Make sure all pins are aligned with the CPU socket. ON the level bar.

2.3 Installation of Memory

Please start inserting memory module from DIMM 1 (white) socket.

S7SXB motherboard has 3x168-pin 64-bit DIMM sockets divided into 3 banks. Make sure you fill up each bank and use the same brand and same capacity memory in the same bank. This will increase the system reliability.



2.4 I/O & Panel Connections

2.4.1 I/O Connections

AT PWR AT Power Con

- ATX_PWR ATX Power Connector
- AT_KB AT Keyboard Connector
- IDE1 & 2 Primary/ Secondary IDE Connectors
- Floppy Floppy Disk Drive Connector
- Print Printer Port
- COM1 & 2 Serial Ports 1 & 2
- PS2 PS/2 Mouse Port Pin 1 : MS_DATA Pin 4 : Vcc Pin 2 : NC Pin 5 : MS_CLK Pin 3 : GND
- USB USB Connector (Cable optional) Pin 1, 6 : Vcc Pin 3, 8 : DATA+ Pin 2, 7 : DATA- Pin 4, 9 : GND The Vcc pin is commonly red wire and the Ground pin is black wire on most USB cable. Please install USB cable to appropriate pin connector of the USB.
- SIR IR Connector (Cable optional) Pin 1 : Vcc Pin 4 : GND Pin 2 : Reserved Pin 5 : IRTX Pin 3 : IRRX Pin 6 : Reserved

CPUFAN CPU Fan Connector

+12V		
Ground	Rotation	
6.0	5 8	

2.4.2 GAME/MIDI Port (optional)

The Game/MIDI Port connector is used to attach a joystick for game interaction or to attach an external MIDI device for playback, mixing, or recording.



2.4.3 VGA Port

This motherboard features a built-in 3D-graphics controller integrated in the SIS 530 chipset. The graphics controller uses a shared memory architecture that allows it use either 2MB, 4MB or 8MB of the system's main memory. The graphics controller has hardware accelerators for both 3D and 2D graphics. The graphics system will support extended high resolution displays up to 1600 x 1200. At an XGA resolution of 1024 x 768, the graphics system supports a color depth of 16 million colors.

2.4.4 Mitsumi CD-ROM Audio (optional)

The Mitsumi CD-ROM Audio connector is used to connect the audio cable from a Mitsumi CD-ROM drive for playback, mixing, or recording. Only one of the two CD-ROM audio connectors may be used at a time.



2.4.5 SONY/ATAPI IDE CD-ROM Audio (optional)

The ATAPI IDE/Sony CD-ROM Audio connector is used to connect the audio cable from either an ATAPI IDE or Sony CD-ROM drive for playback, mixing, and recording.

2.4.6 Audio Connector (Line out/ Line in/ Microphone in Connector) (optional)

The Line Out phonejack provides the audio outputs for the left and right stereo channels.

The Line In phonejack is used to attach monaural or stereo devices such as a cassette, Digital Audio Tape, or Minidisc players for playback, mixing, or recording.

The Microphone In phonejack is used to attach a monaural microphone for live audio input for playback, mixing, or recording.



2.4.7 Panel Connection (24-pin JFRONT)

JFRONT	Function
GREENLED	Suspend Mode LED
PWRLED	Power LED
KEYLK	Keylock Switch
SPKR	Speaker
RESET	Reset Switch
IDELED	HardDisk Active LED
PWRBNT	ATX Power Button Connector

WARNING: To avoid the system from failing, turn off the power before connecting any devices to the system.



Chapter 3. BIOS Setup

3.1 CMOS Setup Utility

To activate CMOS Setup, press < DEL > key immediately after you turn on the system. The following message "Press DEL to enter SETUP" should appear in the lower left hand corner of your screen.

When you enter the CMOS Setup Utility, the Main Menu will be displayed (Figure 3-1). You can use arrow keys to select your function, press < Enter > key to accept the selection and enter the sub-menu.

Figure 3-1. CMOS Setup Utility Main Screen

ROM PCI/ISA BIOS (XXXXXXXX) CMOS SETUP UTILITY AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	HDD LOW LEVEL FORMAT
LOAD BIOS DEFAULTS	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
Esc : Quit	$\uparrow \downarrow \rightarrow \leftarrow : \text{Select Item}$
F10 : Save & Exit Setup	(Shift) F2 : Change Color
Time, Date,	Hard Disk Type

3.2 Standard CMOS Setup

With the sub-menu (**Figure 3-2**), you can setup the; system date, system time, hard and floppy drive type, and display adapter type. Please refer to your equipment specification when changing the setup. Use arrow keys to highlight items, and use $\langle PageUp \rangle$, $\langle PageDown \rangle$, $\langle + \rangle$, or $\langle - \rangle$ keys to scroll through the available options.

Figure 3-2. Standard CMOS Setup Screen

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

Date (mm:dd:yy) : Wed, Dec 10 1997					
Time(hh:mm:ss) : 17 : 52 : 00					
HARD DISKS TYPE SIZ	ZE CYLS	S HEAD	PRECOMP	LANDZ	SECTOR
MODE	0 0	0	0	0	
Primary Master : Auto	0 0	0	0	0	0 AUIO
AUTO AUTO	0 0	0	0	0	0
Secondary Master : Auto	0 0	0	0	0	0
Secondary Slave : Auto AUTO	0 0	0	0	0	0
Drive A : 1.44M , 3.5in.					
Drive B : None					(401Z
Floppy 3 Mode Support : Disable	ea		Entre	Sase Memo	ory: 040K
Video : EGA / VGA		I	O	ther Memor	ry : 31/44K ry : 384K
Halt On : All Errors			То	otal Memor	ry : 32768K
ESC : Quit F1 : Help	$\begin{array}{c} \uparrow \downarrow \rightarrow \\ \text{(Shift) F} \end{array}$	– : Select I 2 : Change	tem Color	PU / PD	0 / + / - : Modify

3.2.1 Date

To assign the system date, the format is "mm.dd.yy". The input range for the Month is 1-12. Range for Date is 1-31. Range for Year is 1994-2079. System BIOS will calculate the day of the week automatically.

3.2.2 Time

To assign the system time, the format is "hh:mm:ss". The setting is in military time. When entering 2:34pm enter "14:34:00".

3.2.3 Hard Disks Setting

The BIOS supports Dual-Channel PIO and PCI Bus Master IDE ports. Each port supports one master and one slave hard drive. You can use < PageUp > or < PageDown > key to change hard drive type. Incorrect setting may result in boot up error or system hang.

If your hard disk drive is not listed, you can select Type "USER" to define your own drive manually. We recommend that you select Type "AUTO" for all drives. The BIOS will auto-detect the hard disk drive and CD-ROM drive at the POST stage.

If your hard disk drive is a SCSI device, please select "None" for your hard drive setting.

3.2.4 Floppy Drives A&B Setting

Select your floppy disk drive type. Options are 360KB (5.25°) , 720KB (3.5°) , 1.2MB (5.25°) , 1.44MB (3.5°) , 2.88MB (3.5°) .

3.2.5 Video Display Adapter Setting

Select the display adapter type for your system. Options are EGA/VGA, MONO, CGA40 and CGA80.

3.2.6 Halt On

This function allows the system to halt when an error is detected during Power-On Self-Test.

3.3 BIOS Features Setup

The sub-menu (**Figure 3-3**) includes all AWARD enhanced functions. The correct setting can enhance boot up efficiency. You can assign system speed, setup sequence, typematic and system password setting. You can enter < F1 > key for help on highlighted topics. If you want to restore values before the changes you just made, press < F5 > key. If you want to restore default value, press < F6 > or < F7 > key.

	BIOS FE	ATURES SETUP	
	AWARD	SOFTWARE, INC.	
Virus Warning	: Disabled	Video BIOS Shadow	: Enabled
CPU Internal Cache	: Enabled	C8000-CBFFF Shadow	: Disabled
External Cache	: Enabled	CC000-CFFFF Shadow	: Disabled
Quick Power On Self Test	: Disabled	D0000-D3FFF Shadow	: Disabled
Boot Sequence	: A ,C, SCSI	D4000-D7FFF Shadow	: Disabled
Swap Floppy Drive	: Disabled	D8000-DBFFF Shadow	: Disabled
Boot Up Floppy Seek	: Enabled	DC000-DFFFF Shadow	: Disabled
Boot Up Numlock Status	: On	Cyrix 6x86/M II CPUID	: Enabled
Memory Parity Check	: Disabled	-	
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250		
Security Option	: Setup	ESC : Quit $\uparrow \downarrow$ –	→ ←: Select Item
PCI/VGA Palette Snoop	: Disabled	F1 : Help PU/PE	D/+/-: Modify
OS Select For DRAM>64MB	: Non-OS2	F5 : Old Values (Shift)	F2 : Color
Report No FDD For WIN 95	: Yes	F6 : Load BIOS Defaults	
-		F7 : Load Setup Defaults	

Figure 3-3. BIOS FEATURES SETUP SCREEN

ROM PCI / ISA BIOS (XXXXXXXX)

3.3.1 Virus Warning

When enabled, the BIOS will monitor the boot sector and the partition table on the hard drive for any attempt to modify. If an attempt is detected, the BIOS will halt the system and prompt the warning message. Select "Disabled" if you are installing a new operating system.

3.3.2 CPU Internal/External Cache

These options are to enable or disable CPU Internal (L1) Cache, or External (L2) Cache.

3.3.3 Quick Power On Self Test

Select "Enabled" to speed up time required to complete Power-On Self-Test.

3.3.4 Boot Sequence

This option allows user to assign boot sequence of the system. Available options are A, C, D, E, F, CD-ROM, SCSI and LS120/ZIP.

3.3.5 Swap Floppy Drive

When enabled, physical drive A will be assigned to logical drive B, and physical drive B will be assigned to logical drive A.

3.3.6 Boot Up Floppy Seek

The system will detect and verify operation of the floppy drive type .

3.3.7 Boot Up Numlock Status

The option allows the < NumLock > key to be activated after system boot up.

3.3.8 Memory Parity Check

When Disabled, there will be no memory errors shown on the monitor for Memory parity SERR# (NMI). When parity DRAM modules are used.

3.3.9 Typematic Rate Setting

Select "Enabled" to configure "Typematic Rate" and "Typematic Delay" functions.

3.3.10 Typematic Rate

Use this option to set the rate at which a character keeps repeating while you hold down a key.

3.3.11 Typematic Delay

Select "Enabled" to set the length of delay before key strokes to repeat. Available options are "250", "500", "750", and "1000".

3.3.12 Security Option

You can select whether the password is required every time the system boots or only when you enter the Setup. You can assign "Supervisor Password" and "User Password" in the main CMOS Setup Utility Screen.

3.3.13 PCI/VGA Palette Snoop

Enable this option to correct screen color shifts, when there is a combination of VGA cards, accelerator cards, or MPEG cards present.

3.3.14 OS Select for DRAM > 64MB

If you are using OS/2 operating system and installed memory is larger than 64MB. You need to have the setting in the enable mode.

3.3.15 Report No FDD For WIN 95

While the FDD in "STANDARD CMOS SETUP" is set to NONE, set this option to No to release IRQ6 for passing Win95 logo. This option is irrelevant under normal operation.

3.3.16 Video BIOS Shadow

Video shadow copies BIOS code from slower ROM to faster RAM. BIOS can then execute from RAM.

3.3.17 C8000-CBFFF /DC000-DFFFF Shadow

Optional firmware will be copied from ROM to RAM. When this option is enabled.

3.4 Chipset Features Setup

These settings are intended for the Chipset function on the motherboard. Fine tuning these options, enhances the performance of the system.

Figure 3.4 CHIPSET FEATURES SETUP SCREEN

	AWAF	D SOFTWARE, INC.
Refresh Rate Control Ref/Act Command Delay Refresh Queue Depth RAS Precharge Time RAS to CAS Delay ISA Bus Clock Frequency Starting Point of Paging NA# Enable L2 Cache Burst RD Cycle	: 15.6 us : 6T : 12 : 3T : 3T : PCICLK/4 : 1T : Enabled : Delay 1	Video BIOS Cacheable : Enabled Memory Hole at 15M-16M : Disabled PCI Post Write Buffer : Disabled PCI Delayed Transaction : Disabled
Asyn/Sync Mode CPU/DRAM SDRAM CAS Latency SDRAM WR Retire Rate DRAM Opt RAS Precharge PCI Peer Concurrency Read Prefetch Memory RD	T :Asynchronous : 3T : X-1-1-1 : Enabled : Enabled : Enabled	
Assert TRDY After Prefet CPU to PCI Burst Mem. WR CPU to PCI Post Write AGP Aperture Size System BIOS Cacheable	: 2 QWs : Enabled : Enabled : 64 MB : Enabled	ESC : Quit $\uparrow \downarrow \rightarrow \leftarrow$: Select ItemF1 : HelpPU/PD/+/- : ModifyF5 : Old Values(Shift) F2 : ColorF6 : Load BIOS DefaultsF7 : Load Setup Defaults

ROM PCI / ISA BIOS (XXXXXXX) CHIPSET FEATURES SETUP

3.4.1 Refresh Rate Control, Ref/Act Command Delay, Refresh Quese Depth

These items define the timing and method that the system uses to refresh the DRAM memory. We recommend that you leave these items at the default setting .

3.4.2 RAS Precharge Time

The precharge time defines the number of clock cycles used by the Row Address Strobe (RAS) to accumulate charge for a refresh. If insufficient time is allowed, the refresh may be incomplete and data can be lost.

3.4.3 RAS to CAS Delay

This item defines the delay between the Row Address Strobe (RAS) and Colume Address Strobe (CAS) signals. A shorter delay gives better performance and a longer delay improves stability..

3.4.4 ISA Bus Clock Frequency

This item sets the timing for the ISA bus by dividing the frequency of the PCI bus. The PCI bus is usually set to 33 MHz .

3.4.5 Starting Point of Paging

This item controls the start timing of memory paging operations.

3.4.6 NA# Enable

This item enables pipelining so that the chipset can signal the CPU for new memory addresses before all the data transfers for the current cycle are complete.

3.4.7 L2 Cache Burst RD Cycle

This item determines the burst mode timing for the level 2 cache.

3.4.8 Asyn/Sync Mode CPU/DRAM

This item determines if asynchronous or synchronous timing is used between the CPU and memory.

3.4.9 SDRAM CAS Latency, SDRAM WR Retire Rate

These items define the timing for SDRAM memory.

3.4.10 DRAM Opt RAS Precharge

This item define the timing for SDRAM memory.

3.4.11 PCI Peer Concurrency

Leave this item at the default value Enabled.

3.4.12 Read Prefetch Memory RD

When this item is enabled, the system is allowed to prefetch the next read instruction and initiate the next process.

3.4.13 Assert TRDY After Prefet

Leave this item at the default value.

3.4.14 CPU to PCI Burst Mem. WR

When this item is enabled, the system can assemble long PCI bursts from data held in buffers.

3.4.15 AGP Aperture Size

This item defines the size of the aperture if you use an AGP graphics adapter. It refers to a section of the PCI memory address range dedicated for graphics memory.

3.4.16 System BIOS Cacheable & Video BIOS Cacheable

These two items allow the system and video BIOS to be cached for faster performance.

3.4.17 Memory Hole at 15M-16M

Enabling this feature reserves 15MB to 16MB memory address space to ISA expansion cards that specifically require this setting. This makes the memory from 15MB and up unavailable to the system. Expansion cards can only access memory up to 16MB.

3.4.17 PCI Post Write Buffer & PCI Delayed Transaction

These items define if the chipset can use a buffer for posted writes, and if delayed transaction cycles are supported.

3.5 Power Management Setup

Power management decreases power usage under the pre-defined standby time range.

	AWARD SOFT	WARE, INC.
ACPI Function Power Management Video Off Option Video Off Method Switch Function	: Disabled : User Define : Susp, Stby -> off : V/H SYNC+Blank : Break/Wake	VGA Activity : Enabled IRQ [3-7, 9-15], NMI : Enabled IRQ 8 Break Suspend : Disabled Power Button Over : Instant Off Ride Ring Power Up Control : Disabled
Doze Speed (div by) Stdby Speed (div by) MODEM Use IRQ Hot Key Function As ** PM Timers **	:2/8 :1/8 : 3 : Power off	Power Up by Alarm : Disabled
HDD off After Doze Mode Standby Mode	: Disabled : Disabled : Disabled	
Suspend Mode	: Disabled	ESC: Quit $\uparrow \downarrow \rightarrow \leftarrow$: Select Item
** PM Events **		F1 : Help PU/PD/+/- : Modify
HDD Ports Activity COM Ports Activity LPT Ports Activity	: Enabled : Enabled : Enabled	F5: Old Values(Shift) F2: ColorF6: Load BIOS DefaultsF7: Load Setup Defaults

Figure 3-5. POWER MANAGEMENT SETUP SCREEN

ROM PCI / ISA BIOS (XXXXXXXX)

3.5.1 ACPI Function

This item allows you to enable or disable the function of Advanced Configuration and Power Interface which offers improved power management when ATX power supply is installed. Please disable this function if your power supply is AT type.

3.5.2 Power Management

Mini Saving	System starts power saving function when the inactivity period exceeds 1 hour.
Max Saving	System starts power saving function when the inactivity period exceeds 1 min.
User Defined	Allows user to define the inactivity period before power saving function activates,

3.5.3 Video Off Option

Always On	Monitor will remain on during power saving
	modes.
Suspend> Off	Monitor blanked when the systems enters the
	Suspend mode.
Susp,Stby> Off	Monitor blanked when the system enters either
	Suspend or Standby modes.
All Modes>	Monitor blanked when the system enters any
Off	power saving mode.

When enabled, this feature allows the VGA adapter to operate in a power saving mode.

3.5.4 Video Off Method

This field defines the video off features. The following options are available: DPMS Supported, Blank Screen, V/H SYNC+Blank. The DPMS (Display Power Management System) features allow the BIOS to control the video display card if it supports the DPMS feature.

3.5.5 Doze Speed (div by)

This item defines the clock speed of the CPU when the system is in the Doze power saving mode. As a default, the CPU will run at a quarter of its rated speed.

3.5.6 Stdby Speed (div by)

This item defines the clock speed of the CPU when the system is in the Standby power saving mode. As a default, the CPU will run at a 1/8 of its rated speed.

3.5.7 MODEM Use IRQ

This determines the IRQ in which the MODEM can use.

3.5.8 HDD Off After

When enabled and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.

3.5.9 Doze Mode

When system is inactive after the predefined time limit, system performance will drop down. This is the first level of Power Management.

3.5.10 Standby Mode

System turns off the video signal and the fixed drives. This is the second level of Power Management.

3.5.11 Suspend Mode

System further shuts down all devices except for CPU itself. This is the third level of Power Management.

3.5.12 PM Events

When Enabled, an event occurring on each device listed below restarts the global time for Standby mode.

3.5.13 HDD Ports Activity

When this item is enabled, any activity on the disk drives connected to the system can reset power-saving mode timeouts to zero, or resume the system from a power saving mode.

3.5.14 COM Ports Activity

When this item is enabled, any transmission through the serial ports connected to the system can reset power-saving mode timeouts to zero, or resume the system from a power-saving mode.

3.5.15 LPT Ports Activity

When this item is enabled, any transmission through the parallel ports connected to the system can reset power-saving mode timeouts to zero, or resume the system from a power-saving mode. When this item is enabled, any activity on the graphics system can reset power-saving mode timeouts to zero, or resume the system from a power-saving mode.

3.5.17 IRQ [3-7,9-15], NMI

When this item is enabled, any activity through the system interrupt request lines 3-7, 9-15 and the non-masked interrupt can reset power-saving mode timeouts to zero, or resume the system from a power-saving mode.

3.5.18 IRQ 8 Break Suspend

When this item is enabled, any activity through the system interrupt request lines 8 can reset power-saving mode timeouts to zero, or resume the system from a power-saving mode. IRQ 8 is normally used by the system real time clock.

3.5.19 Power Button Over Ride (for ATX Power supply)

Under ACPI (advanced configuration and power interface) the system can be turned off mechanically (by the power button) or it can undergo a software power off. If the system has been turned off by software, the system can be resumed by a Alarm wake up signal. This item allows you to define a software power off using the power button. If the value is set to Instant-Off, the power button will automatically cause a software power off. If the value is set to Delay 4 Sec. The power button must be held down for a full four seconds to cause a software power off.

3.5.20 Ring Power Up Control (for ATX Power supply)

This option lets you specify enable or disable external Modem Wake Up function. The function of power on through modem when system is off. To select "Enabled". To let the system to enter the environment of DOS or Windows 95/98 OS before system is power off. As long as there are any massage through the Modem to enter the System during system is power off. The system will enable power on function.

3.5.21 Power Up by Alarm (for ATX Power supply)

If you enable this item, new fields appear which let you set a date and time for an alarm that can resume the system from a power saving mode or a software power off.

3.6 PNP/PCI Configuration Setup

Figure 3.6 PNP/PCI CONFIGURATION SETUP

	AWARD SOF	WARE, INC.
Resources Controlled By Reset Configuration Data	: Auto : Disabled	PCI IRQ Actived By : Level
		$\begin{array}{c c} ESC: \mbox{ Quit } & \uparrow \downarrow \rightarrow \leftarrow: \mbox{Select}\\ \mbox{Item}\\ F1 & : \mbox{ Help } & \mbox{PU/PD/+/-}: \mbox{ Modify}\\ F5 & : \mbox{ Old Values } (\mbox{Shift}) \mbox{ F2 } : \mbox{ Color}\\ F6 & : \mbox{ Load BIOS Defaults}\\ F7 & : \mbox{ Load Setup Defaults} \end{array}$

ROM PCI / ISA BIOS (XXXXXXXX) PNP/PCI CONFIGURATION AWARD SOFTWARE, INC.

3.6.1 Resources Controlled By

Default setting is "Auto". This setting allows the BIOS to self detect setting and Plug-and-Play devices during start up. The user can select and configure IRQs under "Manual" mode.

3.6.2 Reset Configuration Data

In case a conflict occurs after you assign the IRQs or after you configure your system, you can enable this function to allow your system to automatically reset your configuration and reassign the IRQs, DMAs, and I/O address.

3.6.3 IRQ-xx assigned to

If your ISA card is not PnP compatible and requires a special IRQ to support its function, set the selected IRQ to "Legacy ISA". This setting informs the PnP BIOS to reserve the selected IRQ for the installed legacy ISA card.

3.6.4 DMA-x assigned to

If your ISA card is not PnP compatible and requires a special DMA channel to support its function, set the selected DMA channel to "Legacy ISA". This setting informs the PnP BIOS to reserve the selected DMA channel for the installed legacy ISA card.

3.6.5 PCI IRQ Actived By

This sets the method by which the PCI bus recognizes that an IRQ service is being requested by a device. Under all circumstances, you should retain the default configuration unless advised otherwise by your system's manufacturer.

3.7 Integrated Peripherals

You can control Input and Output functions from this screen.

	AWARD	SOFTWARE, INC.	
Internal PCI/IDE	: Both	Parallel Port Mode	: SPP
IDE Primary Master PIO	: Auto		
IDE Primary Slave PIO	: Auto	PS/2 mouse function	: Enabled
IDE Secondary Master PIO	: Auto	USB Controller	: Disabled
IDE Secondary Slave PIO	: Auto		
Primary Master UltraDMA	: Enabled	Init Display First	: PCI Slot
Primary Slave UltraDMA	: Auto	VGA Shared Memory Size	: 4 MB
Secondary Master UltraDMA	: Auto		
Secondary Slave UltraDMA	: Auto	Current CPU Temperature	: 36°C/96°F
IDE Burst Mode	: Auto	Current CPUFAN Speed	: 4017 RPM
IDE Data Port Post Write	: Enabled	+12(V) : 11.71V	Vcc(V):
			4.92V
IDE HDD Block Mode	: Disabled	Vio(V) : 3.68V	Vcore
			3.43V
Onboard FDC Controller	: Enabled		
Onboard Serial Port 1	: 3F8/IRQ4	ESC : Quit $\uparrow \downarrow \rightarrow$	←: Select Item
Onboard Serial Port 2	: 2F8/IRQ3	F1 : Help PU/PD	/+/-: Modify
IR Address Select	: Disabled	F5 : Old Values (Shift) I	F2 : Color
Onboard Parallel Port	: 378/IRQ7	F6 : Load BIOS Defaults F7 : Load Setup Defaults	

Figure 3-7 Integrated Peripherals

ROM PCI / ISA BIOS (XXXXXXXX) INTEGRATED PERIPHERALS

3.7.1 Internal PCI/IDE

This item lets you enable or disable the primary and secondary PCI/IDE channels that are integrated into this motherboard. Leave this item at the default unless you intend using other IDE channels installed on an expansion card .

3.7.2 IDE Primary Master PIO, IDE Primary Slave PIO IDE Secondary Master PIO, IDE Secondary Slave PIO

Each IDE channel supports a master device and a slave device. These four items let you assign which kind of PIO (Programmed Input/Output) is used by IDE DEVICES. You can choose Auto, to let the system auto detect which PIO mode is best, or you can install a PIO mode from 0-4.

3.7.3 Primary Master UltraDMA, Primary Slave UltraDMA

Secondary Master UltraDMA, Secondary Slave UltraDMA

Each IDE channel supports a master device and a slave device. This motherboard supports UltraDMA. UltraDMA technology provides faster access to IDE devices. If you install a device which supports UltraDMA, change the appropriate item on this list to Auto. You may have to install the UltraDMA driver supplied with this motherboard in order to use an UltraDMA device.

3.7.4 IDE Burst Mode

Burst mode transfers can improve the access to IDE devices. Enable this item for improved performance. If your IDE drives cannot support high performance, or if you feel that too many disk errors are being generated, disable this item.

3.7.5 IDE Data Port Post Write

If this item is enabled, it speeds up the processing of drive reads and writes, but it can cause instability in IDE subsystems that cannot support such fast performance. If you are getting disk drive errors, set this item to disabled.

3.7.6 IDE HDD Block Mode

Block mode transfers can improve the access to IDE devices. Enable this item if your IDE devices support block mode transfers.

3.7.7 Onboard FDC Controller

Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install and-in FDC or the system has no floppy drive, select Disabled in this field.

3.7.8 Onboard Serial Port 1 & 2

Select an address and corresponding interrupt for the first/second serial port. The default value for the first serial port is "3F8/IRQ4" and the second serial port is "2F8/IRQ3".

3.7.9 Onboard Parallel Port 1

This item lets you disable the built-in parallel port, or enable it by assigning an I/O address and an Interrupt Request Line (IRQ).

3.7.10 Parallel Port Mode

Select an operating mode for the parallel port. Mode options are SPP, EPP, ECP and ECP+EPP.

3.7.11 PS/2 mouse function

This item lets you disable the PS/2 mouse connector on this system. You should disable this item if you are using a mouse or pointing device which connects through a serial port.

3.7.12 USB Controller

This item lets you enable or disable the USB ports that are integrated into this motherboard.

3.7.13 USB Keyboard Support

Enable this item if you are using a keyboard connected through the SUB interface.

3.7.14 Init Display First

This item lets the system to detect AGP or PCI-Slot first when boot-up.

3.7.15 VGA Shared Memory Size

This item lets you share 2MB, 4MB or 8MB frame buffer size in system memory for VGA.

3.4.16 Current CPU Temperature (xx°C/xx°F)

The onboard hardware monitor is able to detect the temperatures of CPU. The values refresh upon any key entry.

3.4.17 Current CPU FAN Speed (xxxxRPM)

The onboard hardware monitor is able to detect the CPU fan speed in Rotations Per Minute (RPM). The values refresh upon any key entry in the BIOS setup screen.

3.4.18 Vcc, Vio, 12V, Vcore (xx.xxV)

The onboard hardware monitor is able to detect the voltage output by the voltage regulators. These values refresh upon any key entry. The function is optional.

3.8 Load BIOS Defaults

This loads the standard BIOS default values. To select, highlight it and press the < Enter > key. Then press the < Y > and < Enter > keys to confirm. Otherwise, press the < N > key to cancel.

3.9 Load Setup Defaults

This feature loads the setup default values from BIOS default table. To select, highlight it and press the \langle Enter \rangle key. Then press the \langle Y \rangle and \langle Enter \rangle keys to confirm. Otherwise, press the \langle N \rangle key to cancel.

3.10 Supervisor/User Password

You can assign, modify, or cancel password settings. To modify, highlight "Supervisor Password" or "User Password" and press the < Enter > key. The screen will prompt you ("Enter Password : "). Enter your password. The maximum size of the password is 8 characters. System will prompt you to reenter the password to verify. Remember the passwords are case sensitive.

If you want to remove the passwords, either delete passwords or press < Enter > when prompting for new password.

If you want it to require password upon initial system startup and upon entering the CMOS Setup Utility, you will need to change the selection of the (Security Option) under (BIOS FEATURES SETUP) to "System". If the setting is "Setup", the system will only require the password you activate CMOS Setup Utility.

3.11 IDE HDD Auto Detection

If your system has an IDE hard drive, you can use this function to detect its parameters and enter them into the "Standard CMOS Setup" automatically. This routine only detects one set of parameters. If your hard disk is formatted using different parameters than those detected, you have to enter the parameters manually. If the parameters listed do not match the ones used to format the disk, the information on that disk will not be accessible. If the auto-detected parameters displayed do not match those that are used for your drive, ignore them. Type N to reject the values and enter the correct ones manually from the Standard CMOS Setup screen.

3.12 Exit CMOS Setup Utility

Press the < F10 > key to save the setup and exit. Press < ESC > key to exit without saving. Either saving or not saving modifications, screen will prompt user to confirm, and system will reboot on exit.

Chapter 4. Drivers & Utilities Setup

Please refer to the readme.txt file that in \S7SXB directory in the CD Driver Disk first then follow the instruction to setup VGA, Sound & IDE driver.



<u>NSTL</u>

NSTL "Year 2000 Test "Certification Letter

February 3, 1999

Testing Date : February 2, 1999 Certification Date : February 3, 1999 Certification Number : NCY2000-990203-003

S7SXB system has passed NSTL Year 2000 certification test program. The Year 2000 test program tests a personal computer for its ability to support the year 2000.

The Year 2000 certification test has been done under the following system configuration:

System Model Name	: S7SXB
Hardware Revision	: REV 1.0
CPU Model	: AMD K6-233/66MHz
On Board Memory / L2 C	ache : SDRAM DIMM 32MBx1 / 512KB
System BIOS	: Award Modular BIOS v4.51PG S7SXE
-	VER:1.00
	01/04/1999-SiS-530-2A5IMTP9C-00

Quick Installation Chart

For your convenience, this chart lists quick installation for memory & CPU on S7SXB

Please start inserting memory module from DIMM 1 (white) socket.

