

SL-56H5 / H1 USER MANUAL

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This User's Guide & Technical Reference is for assisting system manufacturers and end-users in setting up and installing the mainboard.

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CHAPTER 1 INTRODUCTION

1-1 ITEM LIST CHECKUP

- Soltek Motherboard
- Soltek Support CD
- Soltek User's Manual
- Soltek 2-in-1 Bonus Pack CD
- Soltek 2-in-1 Bonus Pack Manual
- 1.44MB floppy ribbon cable
- Ribbon cable for master and slave UltraDMA/33&UltraDMA/66 IDE devices

1-2 CPU

- Supports Intel Pentium MMX CPUs at 166 ~ 233MHz.
- Supports Cyrix 6x86(L) CPUs at PR133+ ~ PR200+.
- Supports Cyrix 6x86(MII) CPUs at 300 ~ 466.
- Supports AMD K6-2 CPUs at 300 ~ 550MHz.
- Supports AMD K6-III CPUs at 400 ~ 550MHz.
- Supports IDT C6 CPUs at 200 ~ 300MHz.
- Supports 66/ 75/ 83/ 95/ 97/ 100/ 112/ 133 MHz CPU clock.

1-3 CHIPSET

- VIA Apollo MVP3 chipset.
- VIA 686A south bridge chip that supports UATA33/66, Hardware Monitor function.
- PCI Rev 2.1 and APM 1.1/1.2 compliant.
- AGP v2.0(1x, 2x transfer mode) compliant.

1-4 MEMORY CAPABILITY

- Memory range from 4MB(minimum) to 768MB(maximum) with DRAM Table Free configuration.
- · Supports SDRAM with 8ns / 10ns.

• Provides 3 pcs of 168pin DIMM sockets(3.3V unbuffered 4 clock type).

1-5 BIOS DESCRIPTION

- · Award BIOS.
- Supports Plug & Play (PnP).
- FLASH MEMORY for easy upgrade.
- Supports Advanced Power Management (APM) Rev 1.2 function.
- Supports Advanced Configuration Power Management Interface (ACPI) Rev 1.0 function.
- Year 2000 compliant.

1-6 MOTHERBOARD DESCRIPTION

- Built-in onboard **512K(56H5)** / **1MB(56H1)** write back cache with Piplelined Burst SRAMs.
- ATX form factor with 18.5cm x 30.5cm.
- 4 PCI Master slots, 2 ISA slots, 1 AGP slot, 1 AMR slot.
- One floppy port supports up to 2.88MB.
- 4x Built-in USB(Universal Serial Bus) controller.
- Ultra ATA33/66 bus master IDE supports up to 4 IDE devices. (Including ZIP / LS-120 floppy devices)
- 2x 16550A Built-in fast UART compatible serial port connectors.
- Built-in SPP / EPP / ECP parallel port connectors.
- Built-in standard IrDA TX / RX header.
- Peripherals boot function with ATX power.
- Supports WOL(Wake On LAN) function. (To support WOL function, the ATX power supply must support at least 5V standby voltage and 720mA current.)
- Supports Modem Ring Up function.
- Supports SCSI CD-ROM boot up function.
- Supports Power Lost Resume function.
- Integrated Hardware Monitor function.

1-7 MOTHERBOARD LAYOUT

Motherboard Default Setting: AMD K6-2 350/100MHz



WATCH OUT !!!

- 1. Please refer to your processor installation or other documentation attached with your CPU for detailed installing instruction.
- 2. Installing a heat sink and cooling fan is necessary for proper heat dissipation from your CPU. Uncorrected installation may result in overheating and damage of your CPU.
- 3. Before changing the setting of CPU Vcore from BIOS program, user SHOULD make sure of correct specification both of CPU CLOCK and RATIO. Uncorrected setting may cause damage to your CPU.

CHAPTER 2 HARDWARE SETUP

2-1 VOLTAGE ADJUSTMENT

CPU Vcore Setting

Vcore Voltage	JP3	Vcore Voltage	JP3	Vcore Voltage	JP3	Vcore Voltage	JP3
2.0V	0000	2.4V ке-III		2.8V MMX, 6x86L	0 000 0 000 1	3.2V к6-2 233	00 00 UU 00 1
2.1V	000 0 000 0	2.5V		2.9V K6 166/200 6x86MX(MII)		3.3V IDT C6	0000 000 1
2.2V K6-2 400 (or below)		2.6V		3.0V	0000 000	3.4V	000 000 1
2.3V		2.7V		3.1V		3.5V Pentium (P54C), 6x86, K5	0000 0000 1

• CPU Bus Clock Setting

CPU CLOCK SELECT			
66MHz	75MHz	83MHz	
ON 22 1 2 3 4 5 6 1 2 3 4 5 6			
95MHz	97MHz	100MHz	
		ON 0000 123456 123456 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 000	
112MHz	133MHz		
ON 222 1 2 3 4 5 6 1 2 3 4 5 6			

NOTE: Only new clock generator(W83194R-58A) supports 95MHz/ 97MHz. Please check with your dealer before using this clock.

CPU Bus Ratio Setting



2-2 JUMPERS SETTING

• FAN#: Onboard FAN(12V) Connector

JFAN#	FUNCTION
JFAN1	CPU FAN
JFAN2	SYSTEM FAN

• JP5 / JP6: CPU Single / Dual Voltage Select

Voltage Type	JP5 / JP6
Single Voltage (Intel Pentium P54C, Cyrix 6x86, AMD K5, IDT C6)	
Dual Voltage (Intel Pentium-MMX, Cyrix MII / 6x86L, AMD K6-2 / K6-2+ / K6-III)	

• JP10 / JP11: USB Port Select

USB Port	JP10 / JP11
Redirect USB port2 to USB connector (default)	JP10 JP10 JP11 JP11 JP11 JP11 JP11 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 JP10 J
Redirect USB port2 to AGP	JP10 000 JP11 000 JP11 000

• JP12: Clear CMOS Data

CMOS Status	JP12
Clear CMOS Data	
Retain Data (default)	

• JP15: Power Lost Resume

This jumper allows user to use the switch of ATX power supply to control ON/OFF switch directly instead of using the power switch on the motherboard.

Power Lost Resume	JP15
Normal (default)	
Enabled	

NOTE: This feature must work with BIOS. Please refer to the BIOS "Power On After PWR-Fail" sector.

• JWOL1: Wake On LAN(WOL) Connector

This jumper is designed to use LAN to boot up the system. Connect the wake on signal from LAN card to this connector.

NOTE: For support WOL function, the ATX power supply must support at least 5V standby voltage / 720mA current.

2-3 CONNECTORS

• In this sector we list all external connectors that user may use.

2-3.1 J2/J3



- A : HDD LED
- B : INFRARED (IR)
- C : POWER SWITCH
- D : SUSPEND CONNECTOR
- E : SPEAKER
- F : RESET SWITCH
- G : POWER LED
- H : NONE
- I : TURBO LED

2-3.2 EXTERNAL CONNECTOR



2-3.3 2nd USB CONNECTOR

 This motherboard provides 4 sets of USB connector. Besides 2 sets of them can be connected directly by USB device, the others are built onboard for user to extend the use.





PIN	SIGNAL	PIN	SIGNAL
PIN 1	Vcc (Red)	PIN 2	GND (Black)
PIN 3	DO- (White)	PIN 4	N/A
PIN 5	DO+ (Green)	PIN 6	N/A
PIN 7	GND (Black)	PIN 8	N/A
PIN 9	Vcc (Red)	PIN 10	GND (Black)
PIN 11	D1- (White)	PIN 12	N/A
PIN 13	D1+ (Green)	PIN 14	N/A
PIN 15	GND (Black)	PIN 16	N/A



Soltek 2nd USB Connector (Optional)

• When plugs the 2nd USB connector to USB2 port, user can see every color of wires to determine which is the first pin.

2-3.4 ATX POWER SUPPLY CONNECTOR

- This connector connects to an ATX power supply. The plug from the power supply only inserts in an orientation because of the different hole sizes. Find the proper orientation and push down firmly making sure that all pins are aligned.
- Remindering that your power supply should support at least 10mA on the 5V standby voltage. It may cause an difficulty to power on the system if the power supply can't support the load.
- For Wake On LAN function, the power supply should support at least 720mA current.



CHAPTER 3 SOFTWARE SETUP

3-1 ABOUT SOLTEK SUPPORT CD

 In Soltek support CD, it contains most informations for user's requirement, such as Acrobat Reader, BIOS, User's Manual, Driver, Hardware Monitor, Patch and Utility etc,. User can browse the CD and get further details in regard of your motherboard. Of course, if you want to receive the newest message about your motherboard, you can browse our web site to get it.

3-2 HARDWARE MONITOR INSTALLATION





- Please put the CD attached to motherboard into the CD-ROM.
- There appears a welcome window as left screen.
- Click on "INSTALL DRIVER " item.

Click on the "INSTALL VIA CHIPSET DRIVER ".



 Click on the "INSTALL Hardware Monitor Utility ".

Press Next to continue.

 The default setup destination is C:\VIAhm, press Next to continue.

 Press Next to finish the VIA Hardware Monitor setup process.

3-3 VIA CHIPSET DRIVER INSTALLATION (4-in1 Driver)



- Please put the CD attached to motherboard into the CD-ROM.
- There appears a welcome window as left screen.
- Click on "INSTALL DRIVER " item.



Click on the "INSTALL VIA CHIPSET DRIVER ".



Click on the "INSTALL 4-in-1 Driver ".

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Select "Install VIA AGP VxD in turbo mode".

After all the setup process is finished, please restart your computer by clicking on Finish.

About Hard Disk DMA Function

Last but not least, user has to enable the Hard Disk DMA function. The process is below:

- 1. [Start] ⇒ [Setting] ⇒ [Control Panel] ⇒ [System] ⇒ [Device Manager]
- 2. In Device Manager, select [Disk Drivers] ⇒ [GENERIC IDE TYPEXX]
- 3. Select [Properties] for GENERIC IDE TYPEXX
- 4. In Properties, select [Settings]
- 5. In Options item, select the DMA checkbox
- 6. Restart your computer

CHAPTER 4 BIOS SETUP

4-1 INTRODUCE THE BIOS

- BIOS stands for Basic Input Output System. It is sometimes call ROM BIOS because it is stored in a Read-Only Memory (ROM) chip on the motherboard. BISO is the first program to run when you turn on your computer.
- · BIOS performs the followin functions:
 - 1. Initializing and testing hardware in your computer (a process called "POST", for Power On Self Test)
 - 2. Loading and running your operating system.
 - 3. Managing SETUP for making changes in your computer.
 - 4. Helping your operating system and application programs to manage your PC hardware by means of a set of routiness called BIOS Run-Time Services.

4-2 WHAT IS BIOS SETUP

- Setup is an interactive BIOS program that you need to run when:
 - 1. Changing the hardware on your system. (for example: installing a new Hard Disk, etc.)
 - Modifying the behavior of your computer. (for example: changing the system time or date, or turning special features on or off, etc.)
 - 3. Enhancing your computer's behavior. (for example: speeding up performance by turning on shadowing or caching.)

4-3 HOW TO RUN BIOS SETUP

 One way of running SETUP is to press a special function key or key combination during POST, before the operating system is loaded During POST, the BIOS usually displays a prompt such as:

```
Press DEL to enter SETUP
```

4-4 WHAT IS CMOS

• CMOS is a special kind of memory maintained by a battery after you turn your computer off. The BIOS uses CMOS to store the settings you selected in SETUP. The CMOS also maintains the intermal clock. Every time you turn on your computer, the BIOS looks in CMOS for the settings you selected and configures your computer accordingly. If the battery charge runs too low, the CMOS content will be lost and POST will issue a "CMOS invalid" or "CMOS checksum invalid" message. If this happens, you may have to replace the battery. After the battery is replaced, the proper settings will need to be stored in SETUP.

4-5 WHAT IS POST

 POST is an acronym for Power On Self Test. It is a traditional name for the routines that the BIOS uses to test and initializes the devices on your system when the PC is powered on. Its meanings has grown to include anything the BIOS does before the operating system is started.
 Each of POST routines is assigned a POST code, an unique number which is sent to I/O port 080h before the routine is executed.

4-6 UPDATE THE BIOS

• **AWDFLASH.EXE** is a Flash EPROM Programming utility that updates the BIOS by uploading a new BIOS file to the programmable flash ROM on the motherboard. This file only works in DOS mode. To determine the BIOS version, check the release date displayed on the top of your screen during bootup. Newer dates represents a newer BIOS file.

4-6.1 BEFORE UPDATE THE BIOS

• It is recommended that you save a copy of the original motherboard BIOS along with a Flash EPROM Programming Utility (AWDFLASH. EXE) to a bootable floppy disk in case you need to reinstall the BIOS later.

4-6.2 UPDATE YOUR BIOS

- 1. Specify **FLOPPY** as the first device in the bootup sequence from the BIOS setup.
- 2. Put a empty 1.44" floppy disk into the floppy drive A:\.
- 3. Type *FORMAT A*:\/*S* at the DOS prompt to create a bootable system floppy disk.
- 4. Put the Supplier CD into the CD-ROM drive, assuming that D:\ is

your CD-ROM drive.

- 5. Type *COPY D:\UTILITY\AWDFLASH.EXE A:*\ to copy the file *AWDFLASH.EXE* from CD-ROM to floppy disk,
- 6. Reboot your system from the floppy disk.
- In the DOS mode, type *awdflash xxx.bin /sn/py/cc/r* and then press <Enter> to run flash program. (xxx.bin is depended on your motherboard model)



8. Then appears a program window as below:

FLASH MEMORY WRITER V7.07 (C)Award Software 1999 All Rights Reserved
For 694X-686A-2A6LJSN9C-0 DATE: 11/18/1999 Flash Type -
File Name to Program :
Error Message:

9. After updated, the system will reboot automatically.

 Attention! You will see a message " CMOS checksum error -Defaults loaded " during booting. Please press to run BIOS program, then reload "LOAD SETUP DEFAULTS" and save it.

4-6.3 COMMON ERRORS

· Insufficient memory:

It means that there may be one or more memory managers have been loaded from floppy disk during booting. For solving this error, please prefer the former page step 2. to format a pure bootable floppy disk.

• BIOS part number doesn't match:

When the BIOS chip is damaged, it will trigger this error. The only way to solve it is to change a new BIOS chip.

4-7 CMOS SETUP UTILITY

This VIA82C693A chipset Apollo Pro-Plus comes with the AWARD BIOS from AWARD Software Inc. Enter the AWARD BIOS program Main Menu by:

1. Turn on or reboot the system. After a series of diagnostic checks, the following message will appear:

PRESS TO ENTER SETUP

- 2. Press the key and the main program screen will appear as follows:
- 3. Using the arrows on your keyboard, select an option, and press <Enter>. Modify the system parameter to reflect the options installed in your system.
- 4. You may return to the Main Menu anytime be pressing <ESC>.
- 5. In the Main Menu, "SAVE AND EXIT SETUP" saves your changes and reboots the system, and "EXIT WITHOUT SAVING" ignores your changes and exits the program.

ROM PCI / ISA BIOS (2A6LGSN9) 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	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
Esc:Quit F10:Save & Exit Setup	↑ ↓ → ← : Select Item (Shift) F2 : Change Color

4-7.1 STANDARD CMOS SETUP

Standard CMOS Setup allows you to record some basic system hardware configuration and set the system clock and error handling. You only need to modify the configuration values of this option when you change your system hardware configuration or the configuration stored in the CMOS memory gets lost or damaged.

Run the Standard CMOS Setup as follows:

- 1. Choose "STANDARD CMOS SETUP" from the Main Menu and a screen with a list of options will appear.
- 2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

ROM PCI/ISA BIOS (2A6LGSNC)	
STANDARD CMOS SETUP	
AWARD SOFTWARE, INC.	

Date (mm:dd:yy) : ⁻ Time (hh:mm:ss) : ·	Tue, Oct 19 15 : 6 : 26	9 1999					
HARD DISK TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master : Auto Primary Slave : Auto Secondary Master : Auto Secondary Slave : Auto	0M 0M 0M 0M	0 0 0 0	0 0 0	0 0 0	0 0 0 0	0 0 0	AUTO AUTO AUTO AUTO
Video : EGA/VGA Halt On : All Errors				Base Extended Other Total	Memory Memory Memory Memory	: 640K : 64512K : 384K : 65536K	_
Esc : Quit F1 : Help	↑↓→ (Shift) F	← : Sel 2 : Ch	lect Item ange Co) blor	PU/P	'D/+/- : Mc	odify

Date (mm:dd:yy) Time (hh:mm:ss)	Set the current date and time.
Primary (Secondary)	This field records the specification for all non-SCSI Hard Disk Drives installed in your system. Refer to the respec- tive documentation on how to install the drives.
Drive A / B	Set the field to the type(s) of Floppy Disk drive(s) installed in your system. The choice: 360KB, 5.25in. 1.2MB, 5.25in. 720KB, 3.5in. 1.44MB, 3.5in. 2.88MB, 3.5in.
Video	Set the field to the type of video display card installed in your system. The choice: Monochrome, Color 40x25, EGA / VGA, (default) Color 80x25
Halt On	Set this warning feature for the type of errors that will cause the system to halt. The choice: All Errors, (defaults) No Errors, All But Keyboard, All But Diskette, All But Disk / Key

3. Press <ESC> and follow the screen instructions to save or disregard your setting.

4-7.2 BIOS FEATURES SETUP

BIOS Features Setup allows you to improve your system performance or set up system features according to your preference.

Run the BIOS Features Setup as follows:

1. Choose "BIOS FEATURES SETUP" from the Main Menu and a screen with a list of options will appear.

ROM PCI/ISA BIOS (2A6LGSNC) BIOS FEATURES SETUP AWARD SOFTWARE, INC.

Virus Warning CPU Internal Cache External Cache CPU L2 Cache ECC Checking Quick Power On Self Test Boot Sequence Swap Floppy Drive Boot Up Floppy Seek Boot Up NumLock Status IDE HDD Block MODE Gate A20 Option Memory Parity/ECC Check Typematic Rate Setting Typematic Rate (Chars/Sec)	: Disabled : Enabled : Enabled : Enabled : Enabled : A,C,SCSI : Disabled : Disabled : On : Enabled : Fast : Disabled : Disabled : Disabled : Disabled : 250	Video BIOS Shadow : Enabled C8000-CBFFF Shadow : Disabled CC000-CFFFF Shadow : Disabled D0000-D3FFF Shadow : Disabled D4000-D7FFF Shadow : Disabled D8000-DBFFF Shadow : Disabled C000-DFFFF Shadow : Disabled Cyrix 6x86/MII CPU ID : Enabled
Security Option PCI/VGA Palette Snoop OS Select For DRAM > 64MB Report No FDD For WIN 95	: Setup : Disabled : Non-OS2 : No	ESC : Quitt ↓ → ← : Select ItemF1 : HelpPU/PD/+/- : ModifyF5 : Old Value(Shift)F2 : ColorF7 : Load Setup Defaults

 Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys. An explanation of the <F>keys follows:

<F1>: "Help" gives options available for each item. <Shift> + <F2>: Change BIOS screen color. <F5>: Get the previous values. These values are the values with the user started in the current session. <F6>: Load all options with the BIOS default values.

<F7>: Load all options with the Setup default values.

Virus Warning	Enabled: Activates automatically when the system boots up causing a warning message to appear if there is anything attempting to access the boot sec- tor or Hard Disk partition table. Disabled: No warning message will appear when there is something attempting to access the boot sec- tor or Hard Disk partition table.
	Note: Many diagnostic (or boot manager) programs which attempt to access the boot sector table can cause the above warning message. If you will be running such a program, we recommend that you disable the virus protection first.
CPU Internal Cache	Choose Enabled (default) or Disabled. This option allows user to enable or disable the CPU internal cache.
External Cache	Choose Enabled (default) or Disabled. This option allows user to enable or disable the external cache memory.
CPU L2 Cache ECC Checking	Choose Enabled (default) or Disabled.
Quick Power On Self	Choose Enabled (default) or Disabled. This option allows user to speed up the Power-On-Self-Test routine.
Boot Sequence	Default is "A , C, SCSI". This option determines which drive to boot at first for an operating system.
Swap Floppy Drive	This option swaps floppy driver assignments when it's enabled. The choice: Enabled, Disabled (default).
Boot Up Floppy Seek	Enabled (default): During POST, BIOS checks the track number for Floppy Disk drive to see whether it's 40 or 80 tracks. Disabled: During POST, BIOS will not check the track num- ber for Floppy Disk drive.

Boot Up NumLock Status	On (default): Activate the NumLock function at boot up. Off: Close the NumLock function at boot up.
IDE HDD Block Mode	Choose Enabled (default) or Disabled. If your Hard Disk size is larger than 540MB, choose Enabled, and if you are using the IDE HDD Auto Detection option, the BIOS will choose this option automatically.
	Note: Some older model Hard Disk drives do not provide this function.
Gate A20 Option	Choose Normal or Fast (default): This option allows the RAM to access the memory above 1MB by using the fast gate A20 line.
Memory Parity / ECC	Choose Enabled or Disabled.
Typematic Rate Setting	Choose Enabled or Disabled (default): Enable this option to adjust the deystroke repeat rate.
Typematic Rate (Char / Sec)	Range between 6 (default) and 30 characters per second. This option controls the speed of repeating keystrokes.
Typematic Delay (Msec)	Choose 250 (default), 500, 750 and 1000. This option sets the time interval for displaying the first and the second characters.
Security Option	Choose System or Setup (default). This option prevents unauthorized system boot up or use of BIOS Setup.
PCI / VGA Palette	Choose Enabled or Disabled (default). It determines whether or not the MPEG ISA cards can work with PCI / AGP.
OS Select for DRAM >	Non-OS2 (default): For Non-OS/2 operating system. OS: For OS/2 operating system.

Video BIOS	Enabled (default): Map the VGA BIOS to system RAM.
Shadow	Disabled: Don't map the VGA BIOS to system RAM.
C8000-CBFFF to DC000-	These options are used to shadow other expansion card ROMs.
Cyrix 6x86 / MII	Enabled: Default setting.
CPU ID	Disabled: Disable this option under Novell 5.0.

3. Press <ESC> and follow the screen instructions to save or disregard your setting.

4-7.3 CHIPSET FEATURES SETUP

Chipset Features Setup changes the values of the chipset registers. These registers control the system options.

Run the Chipset Features Setup as follows:

- 1. Choose "CHIPSET FEATURES SETUP" from the Main Menu and a screen with a list of options will appear.
- 2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

ROM PCI/ISA BIOS (2A6LGSNC) CHIPSET FEATURES SETUP AWARD SOFTWARE, INC.

Bank 0/1 DRAM Timing Bank 2/3 DRAM Timing Bank 4/5 DRAM Timing	: FP/EDO 70ns : FP/EDO 70ns : SDRAM 10ns	OnChip USB USB Keyboard Support	: Enabled : Disabled
SDRAM Cycle Length DRAM Read Pipeline	: 2 :Enabled	CPU Host Clock(CPU/PCI) Current CPU Temp. Current System Temp.	:Default : 0C/32F : 0C/32F
Cache Pd+CPU Wt Pipeline Cache Timing Video BIOS Cacheable System BIOS Cacheable Video Hole At 15Mb Addr. AGP Aperture Size OnChip Sound OnChip Modem	: Enabled : Fast : Enabled : Enabled : Disabled : 64M : Enabled : Disabled	Current CPUFAN1 Speed Current CPUFAN2 Speed Vcore : 2.44V 2.5V : 3.3V : 3.44V 5V : 12V : 12.30V	: RPM : RPM 3.10V 5.10V
		ESC : Quit $\uparrow \downarrow \rightarrow \leftarrow$: SF1 : HelpPU/PD/-F5 : Old Value(Shift)F2F7 : Load Setup Defaults	Select Item +/- : Modify 2 : Color

Bank 0/1 2/3 4/5 DRAM	This item allows you to select the value in this field, de- pending on whether the board has paged DRAMs or EDO (extended data output) DRAMs. The choice: EDO 50ns, EDO 60ns, Slow, Medium, Fast, Turbo
SDRAM Cycle Length	You can select CAS latency time in HCLKs of 2/2 or 3/3. The system board designer should have set the values in this field, depending on the DRAM installed. Do not change the values in this field unless you change specifications of the installed DRAM or the installed CPU.
DRAM Read Pipeline	DRAM optimization feature: If a memory read is addressed to a location whose latest write is being held in a buffer before being written to memory, the read is satisfied through the buffer contents, and the read is not sent to the DRAM. The Choice: Enabled(default), Disabled
Cache Pd+CPU Wt Pipeline	Use default setting.
Cache Timing	Use default setting.
System BIOS Cacheable	Choose Enabled or Disabled (default). When Enabled, the access to the system BIOS ROM addressed at F0000H-FFFFFH is cached.
Video RAM Cacheable	Choose Enabled or Disabled (default). When enabled, the access to the VGA RAM addressed is cached.
AGP Aperture Size (MB)	Choose 4, 8, 16, 32, 64 (default), 128 or 256MB. Memory map and graphics data structures can reside in a Graph- ics Aperture. This area is like a linear buffer. BIOS will automatically report the starting address of this buffer to the O.S.
OnChip Sound	Enabled (default): Turn on AC'97 Codec chip controller. Disabled: Turn off AC'97 Codec chip controller. If user wants to use external sound card, this function must be disabled.

OnChip Modem	Enabled (default): Use MC99 feature. Disabled: Turn off MC99 feature. If user wants to use ex- ternal modem, this function must be disabled.
OnChip USB	This should be enabled if your system has a USB installed on the system board and you wish to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature. The choice: Enabled, Disabled
USB Keyboard Support	Enabled: Enables function when the USB keyboard is be- ing used. Disabled (default): When the AT keboard is being used.
CPU Host Clock (CPU/PCI)	Choose 66/ 75/ 83/ 95/ 97/ 100/ 112/ 133 MHz.

3. Press <ESC> and follow the screen instructions to save or disregard your setting.

4-7.4 POWER MANAGEMENT SETUP

Power Management Setup changes the system power savings function.

Run the Power Management Setup as follows:

- 1. Choose "POWER MANAGEMENT SETUP" from the Main Menu and a screen with a list of options will appear.
- 2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

ROM PCI/ISA BIOS (2A6LGSNC) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.

ACPI function Power Management PM Control by APM Video Off After Video Off Method MODEM Use IRQ	: Disabled : User Define : Yes : Suspend : V/H SYNC+Blank : 3	Primary INTR IRQ3 (COM 2) IRQ4 (COM 1) IRQ5 (LPT 2) IRQ6 (Floppy Disk) IRQ7 (LTP 1)	: ON : Primary : Primary : Primary : Primary : Primary
Soft-Off by PWRBTN	: Instant-Off	IRQ8 (RTC Alarm)	: Disabled
HDD Power Down	: Disabled	IRQ9 (IRQ2 Redir)	: Secondary
Doze Mode	: Disabled	IRQ10 (Reserved)	: Secondary
Suspend Mode	: Disabled	IRQ11 (Reserved)	: Secondary
** PM Events	**	IRQ12 (PS/2 Mouse)	: Primary
VGA	: OFF	IRQ13 (Coprpcessor)	: Primary
LPT & COM	: LPT/COM	IRQ14 (Hard Disk)	: Primary
HDD & FDD	: ON	IRQ15 (Reserved)	: Disabled
DMA Master	: OFF		
Modem Ring Resume RTC Alarm Resume Date(of Month) Timer(hh:mm:ss)	: Disabled : Disabled : 0 : 0: 0: 0	ESC : Quit ↑↓- F1 : Help PU/I F5 : Old Value (Shit F7 : Load Setup Def	 ← : Select Item PD/+/- : Modify it)F2 : Color aults
· · · · ·			

ACPI Function	Enabled: Turn on ACPI function. Disabled (default): Turn off ACPI function.
Power Manage- ment	Choose Max. Saving, User Define (default), Disabled, or Min. Saving.
PM Control By APM	Choose Yes (default) or No. You need to choose Yes when the operating system has the APM functions, otherwise choose No.
Video Off After	Choose NA, Suspend, Standby (default) or Doze.
Video Off Method	Choose Blank, DPMS or V/H Sync+Blank (default). You can choose either DPMS or V/H Sync+Blank when ther monitor has the Green function. You need to choose Blank when the monitor has neither the Green function.
Modem Use IRQ	Assign the IRQ number to the modem which is being used so that the ring signal can wake up the system. The de- fault setting is 3 (COM2).
Soft-Off By PWR- BTTN	Instant-Off (default): Turn off the system power at once after pushing the power button. Delay 4 Sec: Turn off the system power 4 seconds after pushing the power button (to meet PC97/98 spec)
HDD Power Down	Time is adjustable from 1 to 15 minutes. When the set time has elapsed, the BIOS sends a command to the HDD to power down which turns off the motor.
Doze Mode	This mode sets the CPU speed down to 33MHz.
Suspend Mode	The option allows you to choose the mode for the differ- ent timer. The Suspend mode turns off the CPU and saves the energy of the system.

VGA	When On of VGA, any activity from one of the listed sys- tem peripheral devices or IRQs wakes up the system. Choice: On(default), Off.
LPT & COM	When On of LPT&COM, any activity from one of the listed system peripheral devices or IRQs wakes up the system. Choice: LPT/COM(default), NONE, LPT or COM.
HDD & FDD	When On of HDD&FDD, any activity from one of the listed system peripheral devices wakes up the system. Choice: On(default), Off.
DMA / master	When On, any activity from one of the listed system pe- ripheral devices wakes up the system. Choice: On, Off(default).
Modem Ring Resume	An input signal on the serial Ring Indicator (RI) Line (in other words, an incoming call on the modem) awakens the system from a soft off state.
RTC Alarm Rescume	When Enabled, you can set the date and time at the which the RTC(Real Time Clock) alarm awakens the system from suspend mode. Choice: Disabled(default), Enabled.
Primary INTR	When set to On, any event occurring at will awaken a sys- tem which has been powered down. On(default): The system can not enter the power saving mode when I/O ports or IRQ# is activated. Off: The system still can enter the power saving mode when I/O ports or IRQ# is activated.

The following is a list of IRQ's(Interrupt ReQuests), which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service. When set On, activity will neither prevent the system from going into a power management mode nor awaken it.

IRQ3 (COM2) IRQ4 (COM1) IRQ5 (LPT2) IRQ6 (Floppy Disk) IRQ7 (LPT1) IRQ8 (RTC Alarm)

3. Press <ESC> and follow the screen instructions to save or disregard your setting.

4-7.5 PnP/PCI CONFIGURATION

PnP/PCI Configuration Setup defines PCI bus slots.

Run the PnP/PCI Configuration Setup as follows:

1. Choose "PnP/PCI CONFIGURATION SETUP" from the Main Menu and a screen with a list of options will appear.

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

PNP OS Installed: NoCPU to PCI Write Buffer: EnabledResources Controlled By: ManualPCI Dynamic Bursting: EnabledReset Configuration Data: DisabledPCI Master 0 WS Write: EnabledIRQ 3 assigned to: PCI/ISA PnPPCI Delay Transaction: EnabledIRQ 5 assigned to: PCI/ISA PnPPCI#2 Access #1 Retry: DisabledIRQ 7 assigned to: PCI/ISA PnPAGP Master 1 WS Write: DisabledIRQ 9 assigned to: PCI/ISA PnPAGP Master 1 WS Read: DisabledIRQ 10 assigned to: PCI/ISA PnPAssign IRQ For USB: EnabledIRQ 11 assigned to: PCI/ISA PnPAssign IRQ For VGA: EnabledIRQ 12 assigned to: PCI/ISA PnPAssign IRQ For VGA: EnabledIRQ 14 assigned to: PCI/ISA PnPAssign IRQ For VGA: EnabledIRQ 15 assigned to: PCI/ISA PnPPCI/ISA PnPEnabledIRQ 15 assigned to: PCI/ISA PnPEnabledAssign IRQ For VGAIRQ 14 assigned to: PCI/ISA PnPPCI/ISA PnPPCI/ISA PnPDMA 0 assigned to: PCI/ISA PnPPCI/ISA PnPPCI/ISA PnPDMA 1 assi	,	PNP/PCT CONFI AWARD SOFT	GURATION WARE, INC.	
DIVIA 3 assigned to : PCI/ISA PnP ESC: Curr f1 - Select item DMA 5 assigned to : PCI/ISA PnP F1 : Help PU/PD/+-: Modify DMA 6 assigned to : PCI/ISA PnP F5 : Old Value (Shift)F2: Color DMA 7 assigned to : PCI/ISA PnP F7 : Load Setup Defaults	PNP OS Installed Resources Controlled By Reset Configuration Data IRQ 3 assigned to IRQ 4 assigned to IRQ 7 assigned to IRQ 7 assigned to IRQ 10 assigned to IRQ 11 assigned to IRQ 12 assigned to IRQ 14 assigned to IRQ 15 assigned to DMA 0 assigned to DMA 1 assigned to DMA 3 assigned to DMA 5 assigned to DMA 6 assigned to DMA 7 assigned to	: No : Manual : Disabled : PCI/ISA PnP : PCI/ISA PnP	CPU to PCI Write Buffer PCI Dynamic Bursting PCI Master 0 WS Write PCI Delay Transaction PCI#2 Access #1 Retry AGP Master 1 WS Write AGP Master 1 WS Read Assign IRQ For USB Assign IRQ For USB Assign IRQ For VGA $ESC: Quit \qquad \uparrow \downarrow \rightarrow & & & & & & & & & & & & & & & & & &$: Enabled : Enabled : Enabled : Disabled : Disabled : Disabled : Disabled : Enabled : Enabled : Enabled : Enabled

ROM PCI/ISA BIOS (2A6LGSNC)

PNP OS Installed	Yes: OS supportsss Plug and Play function. No (default): OS doesn't support Plug and Play function.
	Note: BIOS will automatically diable all PnP resources except the boot device card when you select Yes on Non-PnP O.S.
Resources Controlled	Choose Manual (default) or Auto. The BIOS checks the IRQ/DMA channel number on the ISA and PCI card manu- ally if you choose Manual. And the IRQ/DMA channel num- ber will be checked automatically if you choose Auto.
Reset Configura- tion	Choose Enabled or Disabled (default). Disable retains En- abled PnP configuration data in BIOS and resets the PnP configuration data in the BIOS.
CPU to PCI Write Buffer	Choose Enabled(default) or Disabled.
PCI Dynamic Bursting	Choose Enabled(default) or Disabled .
PCI Master 0 WS Write	Choose Enabled(default) or Disabled .
PCI Delay Transac- tion	Choose Enabled(default) or Disabled .
PCI #2 Access #1 Retry	Choose Enabled or Disabled(default).
AGP Master 1 WS Write	Choose Enabled(default) or Disabled.
AGP Master 1 WS Read	Choose Enabled or Disabled(default).

Assign IRQ for USB	Enabled (default): Add one IRQ to USB controller. Disabled: Remove IRQ from USB controller. The system will have extra IRQ for other devices but the USB controller will still not be diabled (only IRQ was removed)
Assign IRQ for VGA	Enabled (default): Add one IRQ to VGA controller. Disabled: Remove IRQ from VGA controller. The system will have extra IRQ for other devices but the VGA controller will still not be disabled (only IRQ will be removed)

3. Press <ESC> and follow the screen instructions to save or disregard your setting.

4-7.6 LOAD SETUP DEFAULTS

Load Setup Defaults option loads the default system values to the system configuration fields. If the CMOS is corrupted the defaults are loaded automatically.

Choose this option and the following message will appear:

"Load Setup Defaults (Y/N)? N"

To use the Setup Defaults, change the prompt to "Y" and press <Enter>.

4-7.7 INTEGRATEDPERIPHERALS

Integrated Peripherals option changes the values of the chipset registers. These registers control system options in the computer.

Run the Integrated Peripherals as follows:

- 1. Choose "INTEGRATED PERIPHERALS" from the Main Menu and a screen with a list of options will appear.
- 2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

ROM PCI/ISA BIOS (2A6LGSNC) INTEGRATED PERPHERALS AWARD SOFTWARE, INC.

OnChip IDE Channel0 OnChip IDE Channel1 IDE Prefetch Mode Primary Master PIO Primary Slave PIO Secondary Slave PIO Primary Master UDMA Primary Slave UDMA Secondary MasterUDMA Secondary Slave UDMA Init Display First	: Enabled : Enabled : Auto : Auto	Onboard Parallel Port: 378/IRQ7Onboard Parallel Mode: ECP/EPPECP Mode Use DMA: 3Onboard Legacy Audio: EnabledSound Blaster: DisabledSB I/O base Address: 220HSB IRQ Select: IRQ 5SB DMA Select: DMA 1MPU-401: DisabledMPU-401 I/O Address: 330H - 333HGame Port(200H - 207H): Enabled
Onboard FDD Controller Onboard Serial Port 1 Onboard Serial Port 2 UART 2 Mode IR Function Duplex TX, RX inverting enable	: Enabled : 3F8/IRQ4 : 2F8/IRQ3 : Standard : Half : No, Yes	ESC : Quit ↑↓→← : Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Value (Shift)F2 : Color F7 : Load Setup Defaults

OnChip IDE Channel	The chipset contains a PCI IDE interface with support from two IDE channels. Select Enabled to activate the first and/ or the second IDE interface. Select Disabled to deactivate an interface, if you install a primary and/or second add- on IDE interface. The choice: Enabled(default), Disabled.
IDE Prefetch Mode	Choose Enable(default), Disabled.
Primary Master/Slave PIO Secondary Master/Slave PIO	Choose Auto (default) or Mode 0~4. The BIOS will detect the HDD mode type automatically when you choose Auto. You need to set to a lower mode than Auto when your hard disk becomes unstable.
Primary Master/ Slave UDMA Secondary Master/ Slave	Enabled (default): Turn on the onboard IDE function. Disabled: Turn off the onboard IDE function.
Init Display First	This option allows you to decide to activate PCI Slot or AGP first. Choose PCI Slot(default), AGP.
Onboard FDC Controller	Choose Enabled (default) or Disabled. Choose Disabled when you use an ISA card with FDD function, or choose Enabled to use the onboard FDD connector.
Onboard Serial Port1	Choose Auto (default), 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/ IRQ3 or Disabled. Don't set port 1 & 2 to the same value, except when setting at Disabled.
Onboard Serial Port2	Choose Auto (default), 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/ IRQ3 or Disabled.

UART 2 Mode	Choose Standard (default), HPSIR or ASKIR.
IR Function Duplex	The choice: Half (default), Full
TX, RX inverting enabled	Choose No, Yes (default) / No, No / Yes, No / Yes, Yes.
	Note: The above 2 options won't work unless UART2 Mode HPSIR/ASKIR is
Onboard Paralle Port	Choose the printer I/O address: 378H/IRQ7 (default), 3BCH/ IRQ7, 278H/IRQ5 or Disabled.
Onboard Parallel Mode	Choose Normal (default), ECP/EPP, SPP mode. The mode depends on the external device connected to this port.
ECP Mode Use DMA	Choose DMA3 (default) or DMA1. Most sound cards use DMA1. Check with your sound card configuration to make sure that there is no conflict with this function.
	Note: This option will not be displayed
EPP Mode Select	Choose EPP1.7 (default) or EPP1.9. EPP1.9 supports hard- ware handshake. This setting is dependent upon your EPP device.
	Note: The above 2 options will not be displayed unless the EPP/ECP is
Onboard Legacy Audio	The choice: Enabled (default), Disabled.

Sound Blaster	Choose Enabled or Disabled (default). For DOS mode compatibility, this option must be enabled. In Windows system, this option must be disabled.
SB I/O Base Address	Use default setting.
SB IRQ Select	Use default setting.
SB DMA Select	Use default setting.
MPU-401	Choose Enabled or Disabled (default). Some feedback type joystick must enable this option (ex: Sidewinder joystick).
MPU-401 I/O Address	Use default setting.
Game Port (200- 207H)	Use default setting.

3. Press <ESC> and follow the screen instructions to save or disregard your setting.

4-7.8 SUPERVISOR/USER PASSWORD

These two options allow you to set your system passwords. Normally, the supervisor has a higher ability to change the CMOS setup option than the user. The way to set up the passwords for both supervisor and user are as follows:

1. Choose "CHANGE PASSWORD" from the Main Menu and press <Enter>. The following message appears:

"Enter Password:"

- 2. The first time you run this option, enter your own password up to 8 characters and press <Enter>. The screen doesn't display the entered characters.
- 3. After you entered the password, the following message appears prompting you to confirm the password:

"Confirm Password:"

- 4. Enter the same password "exactly" as you just typed again to confirm the password and press <Enter>.
- 5. Move the cursor to Save & Exit Setup to save the password.
- If you need to delete the password you entered before, choose the Supervisor Password and press <Enter>. It will delete the password that you had before.
- Move the cursor to Save & Exit Setup to save the option you did, otherwise the old password will still be there the next time you turn your machine on.
- 8. Press <ESC> to exit to the Main Menu.

Note: If you forget or lose the password, the only way to access the system is to clear the CMOS RAM by setting JBAT1. All setup information will be lost and back to default seting. You need to run the BIOS setup program and re-define all settings again.

4-7.9 IDE HDD AUTO DETECTION

IDE HDD Auto Detection detects the parameters of an IDE Hard Disk drive and automatically enters them to the Standard CMOS Setup screen.

The screen will ask you to select a specific Hard Disk for Primary Master after you selected this option. If you accept a Hard Disk detected by the BIOS, you can enter "Y" to confirm and then press <Enter> to check next Hard Disk. This function allows you to check four Hard Disks and you may press the <ESC> after the <Enter> to skip this function and go back to the Main Menu.

4-7.10 SAVE & EXIT SETUP

Save & Exit Setup allows you to save all modifications you have specified into the CMOS memory. Highlight this option on the Main Menu and the following message appears:

SAVE to CMOS and EXIT (Y/N)? Y

Press <Enter> key to save the configuration changes.

4-7.11 EXIT WITHOUT SAVING

Exit Without Saving allows you to exit the Setup utility without saving the modifications that you have specified. Highlight this option on the Main Menu and following message appears:

Quit Without Saving (Y/N)? N

You may change the prompt to "Y" and press the <Enter> key to leave this option.