

Note to Users

This User' s Guide & Technical Reference are for assisting system manufacturers and end users in setting up and installing the motherboard. Every effort has been made to ensure that the information in this manual is accurate. **Weal Union** Development Limited is not responsible for printing or clerical errors. Information in this document is subject to change without notice and does not represent a commitment on the part of **Weal Union**. For previous or updated manuals, BIOS, drivers, or product release information, please contact **Weal Union** Development Limited at <http://www.tigatech.com> or through any of the means indicated on the following pages.

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Chapter 1

Introduction

1.1 Product Features

The Intel 820 highest performance motherboard is based on the all new Intel 820 chipset with ATX form factor to support the latest Socket 370 including Intel Pentium III FCPGA, Celeron FCPGA / PPGA as well as Cyrix III processors with 100/133MHz Front-side Bus(FSB), please notice that Celeron processors with 66MHz Front-site Bus are not supported.

The Intel 820 chipset includes three chips: MCH(Memory Controller Hub, FW82820), ICH(I/O Controller Hub, FW82801) and FWH (Firmware Hub, N82802AB).

This chipset incorporates with AGP 3D Graphics Support and an optional AC97 Audio. The motherboard supports an ATX Power Supply.

1.2 Features Summary

This motherboard comes with following features:

- ★ Support Intel Pentium III FCPGA, Celeron PPGA or Cyrix III Processor on Socket 370
- ★ Intel 820 Chipset.
 - ★ Support 100/133MHz Processor Front-side Bus (FSB).
 - ★ 66MHz FSB Processor is not supported.
- ★ Two DIMM slots Supporting up to 1GB Memory Capacity
- ★ Support 100MHz PC100 SDRAM DIMM
- ★ 1 x AMR slot, 5 x PCI slots, 1 x AGP slot
- ★ 2 x USB ports, 1 x PS/2 mouse port, 1 x PS/2 Keyboard port, 1 x IrDA port
- ★ 1 x FDD port, 1 x LPT port, 2 x COM ports
- ★ Dual IDE Channels Supporting Four Ultra-DMA33/66 IDE Devices
- ★ Supports Universal AGP connector for 1X, 2X or 4X AGP Card.
- ★ Support PS/2 Keyboard / Mouse Wakeup
- ★ Modem Ring Wakeup with External Modem
- ★ Interface Header to Support Wake-On-LAN Enabled Ethernet Card
- ★ Advanced Configuration Power Interface (ACPI) Ready.
- ★ Integrated AC97 Audio Onboard (*Model +S option*)
 - ★ AC97 2.1 Compliant Codec with 3D Stereo Enhancement
 - ★ 1 x Line-out, 1 x Line-in, 1 x Mic-in
 - ★ 1 x CD-in, 1 x AUX-in, 1 x Telephony Port, 1 x Game Port
- ★ Award BIOS, PC99/ACPI/DMI Compliant
- ★ ATX format, 305mm x 194mm PCB

Chapter 2 Installation

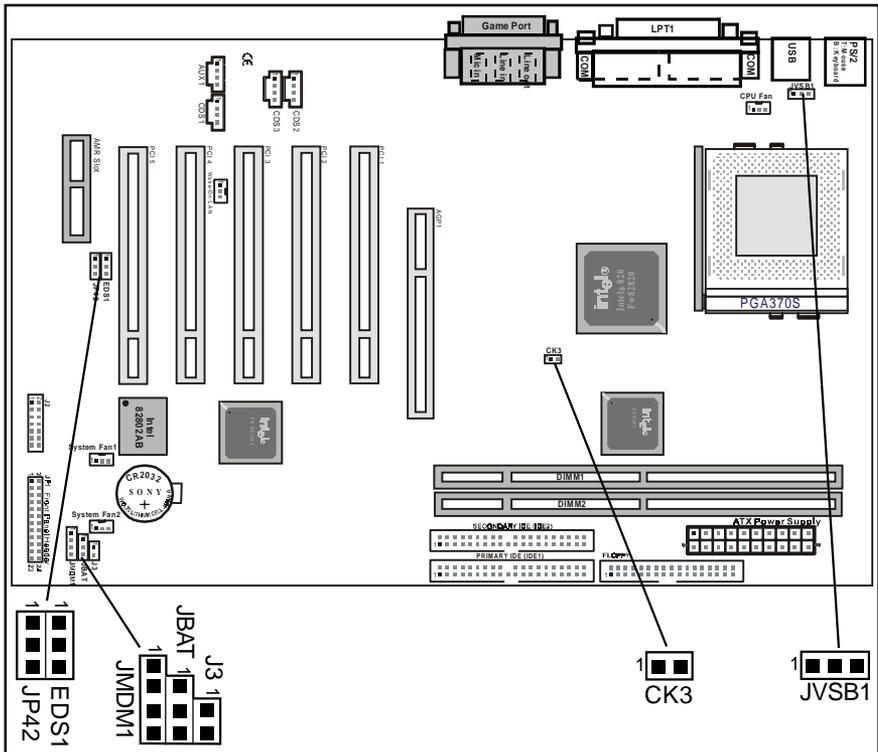
2.1 Installation Instructions

This section covers External Connectors and Memory Configuration. Please refer to the motherboard layout chart for external connectors, slots and I/O ports. Furthermore, this section lists all necessary connector pin assignments for your reference. The locations of the connectors and ports are illustrated in the following figures. Before inserting these connectors, please pay attention to the orientations.

NOTICE !!!

1. Make sure to unplug your power supply while adding or removing system components
2. Always work on an antistatic surface to avoid possible damage to the motherboard or other components from static discharge.

2.2 Motherboard Layout



2.3 Jumper Setting

JBAT - CMOS Clear

JBAT	Function
1  (1-2)	Normal (Default)
1  (2-3)	CMOS Clear

CK3 - CPU Front-side Bus Frequency

CK3	CPU Front-side Bus Frequency
1  (Close)	Auto (Default)
1  (Open)	Fix to 133MHz

JP42, ESD1 - Onboard Audio

JP42, ESD1	Onboard Audio
JP42 1  ESD1 1  (1-2)	Disable
JP42 1  ESD1 1  (2-3)	Enable (Default)

JVSB1 - PS/2 Keyboard/Mouse wakeup

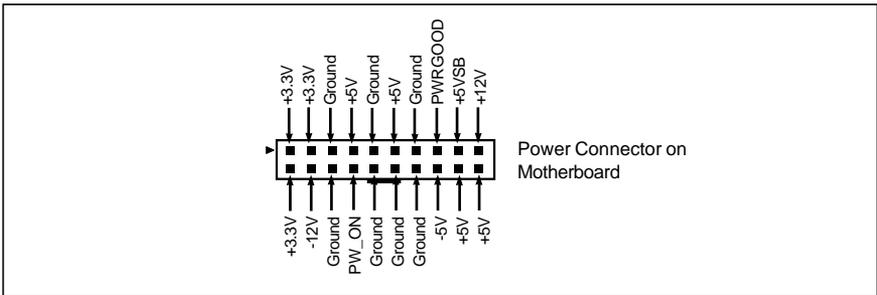
JVSB1	PS/2 Keyboard/Mouse wakeup
1  (1-2)	Disable (Default)
1  (2-3)	Enable

Remark:  Open  Close

2.4 Function & Installation Instructions

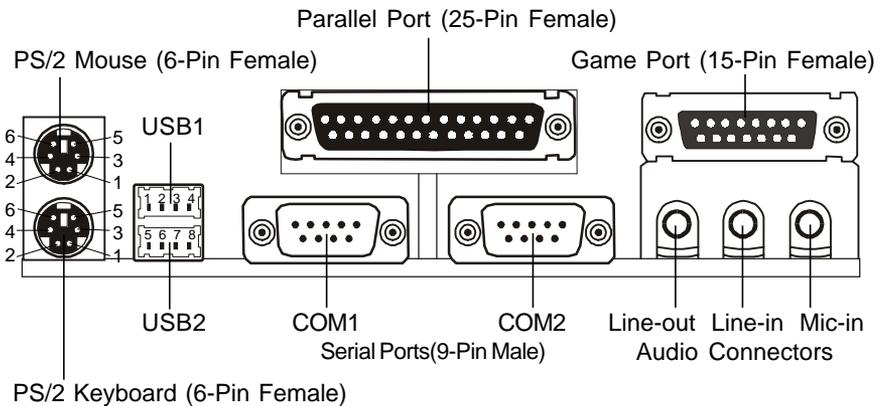
2.4.1 ATX Power Supply Connector (20-Pin)

This connector connects to an ATX power supply. The plug from ATX power supply will only insert in one orientation because of the different hole sizes. Find the proper orientation and push down firmly making sure that the pins are aligned. The system power can be turned off through software control, like the shut down in Windows 2000 / ME / 98 / 95 start menu. Power management must be enabled in the system BIOS in order to activate this soft-off feature. Once the system BIOS receives the power management command from the OS, it will switch the system power off.



ATX Power Connector

2.4.2 External Connectors



PS/2 Mouse / Keyboard Connector	
Pin No.	Description
1	Data
2	NC
3	GND
4	VCC(+5V)
5	Clock
6	NC

USB Connector	
Pin No.	Description
1	USB V0
2	USB D0-
3	USB D0+
4	GND
5	USB V1
6	USB D1-
7	USB D1+
8	GND

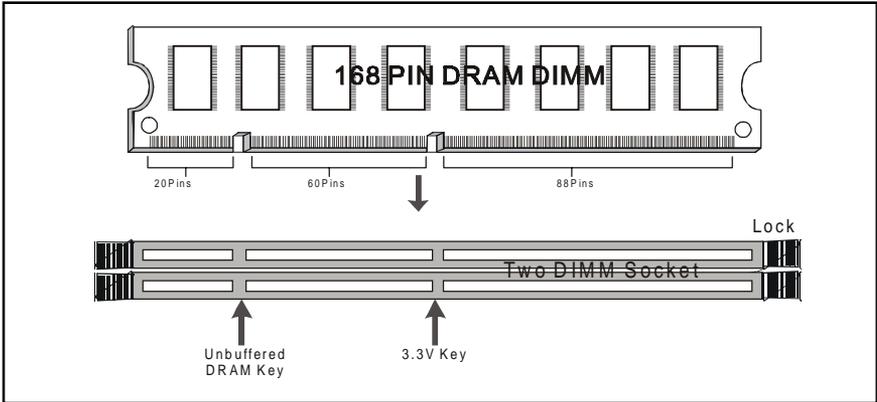
EXPANSION CARDS INSTALLATION

Before adding or removing any expansion cards or system components, confirm that you already unplugged your power supply. Otherwise, it may severely damage to your motherboard and expansion cards. Please follow the installation procedures as below:

1. Check carefully if those hardware or software settings for your expansion cards are in the proper position as shown in their User' s Manual.
2. Remove your computer case' s cover and unscrew the bracket plate for those slots needed to insert.
3. Those expansion cards must be aligned on the slots firmly with good connection.
4. Put on the computer case cover.
5. If needed, set up the BIOS configuration and install the required drivers for your expansion cards.

2.4.3 SDRAM Sockets

There are two SDRAM sockets on-board to provide more flexibility for your system memory upgrade. Because the number of pins are different on either side of the breaks, the DIMM module will only fit the 3.3V 168-pin unbuffered for this motherboard.



168-Pin SDRAM Module Installation Diagram

2.4.4 PCI Slots

This motherboard provides five full-length 32-bit PCI slots with up to 133MB/sec burst data transfer rate.

2.4.5 AGP Slot (Accelerated Graphics Port)

This motherboard provides the AGP 2.0 interface, The AGP Interface Specification revision 2.0 enhances the functionality of the original AGP Interface Specification (revision 1.0) by allowing 4X data transfers (4 data samples per clock) and 1.5 volt (power supply) operation.

2.4.6 AMR Slot (Audio Modem Riser)

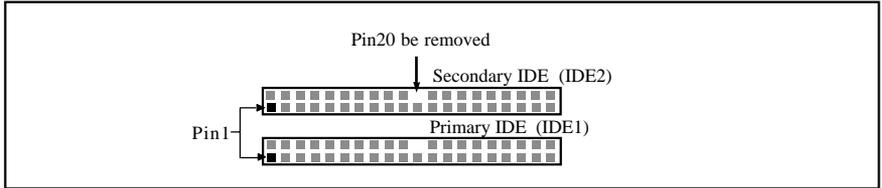
This connector supports a specially designed audio and/or modem card called an AMR.

2.4.7 Floppy Drive Connector (34-Pin)

This connector supports the provided floppy drive ribbon cable. After connecting the single end to the on-board "FLOPPY" connector, connect the remaining plugs on the other end to the floppy drives correspondingly.

2.4.8 IDE Connectors (40-Pin)

The IDE connectors support the provided IDE HDD ribbon cable. After connecting the single end to the board, connect the two plugs at the other end to your HDDs. If you install two IDE devices on the same cable, you must configure the second device to slave mode by setting its jumper accordingly. (Refer to your IDE device document for the jumper settings. Pin 20 is removed to prevent inserting in the wrong orientation when using ribbon cables with pin 20 plugged.)



IDE Connectors

2.4.9 BIOS

The motherboard flash BIOS provides users with more flexibility in upgrading their motherboards. The flash BIOS can be easily reprogrammed via software.

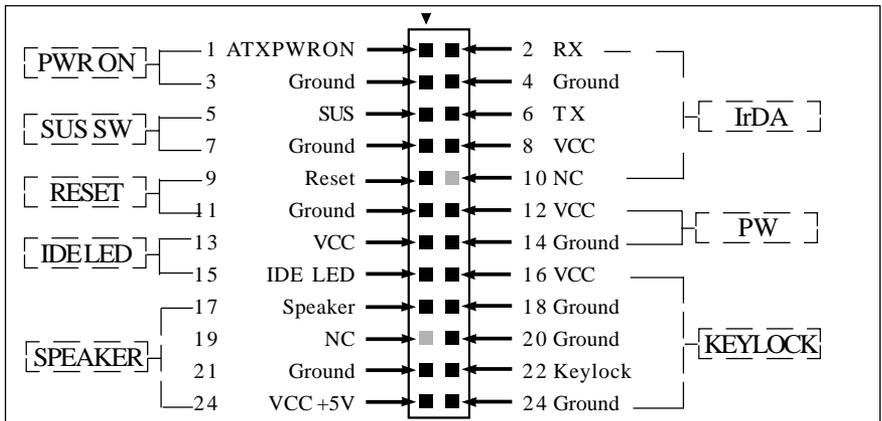
2.4.10 Wake-On-LAN Interface

This connector connects to a LAN card with a Wake-On-LAN output. The connector powers up the system when a wakeup signal is received from the network.

2.4.11 Front Panel Function Connector

The front panel integrates: 2-pin Power On, 2-pin SUS SW, 2-pin Reset Switch, 2-pin IDE LED, 4-pin Speaker, 5-pin IrDA, 2-pin PW, 5-pin Keylock.

The connector pin out are described as the figure below:



2.4.12 PGA370 CPU Socket

The motherboard provides a ZIF Socket 370. The CPU that comes with the motherboard should have a fan attached to it to prevent overheating. If it is not so, purchase a fan before you turn on your system.

Notice !!!

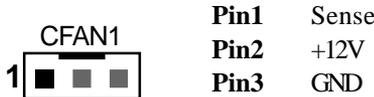
Be sure that there is a sufficient air circulation across the processor's heatsink by regularly checking that your CPU fan is working. Without sufficient circulation, the processor could be overheated and it may damage both the processor and the motherboard. You may install an auxiliary fan, if necessary.

Installation step:

1. Turn off the power of your system and remove its cover;
2. Locate the ZIF socket and open it by first pulling the lever sideways away from the socket then upwards to a 90-degree angle;
3. Insert the CPU with correct orientation
(The CPU has a corner pin for two of the four corners, that the CPU only fit in the orientation.)
4. Once completely inserted, pull down the socket's lever to horizontal and make sure the CPU is firmly locked in the socket.

2.4.13 CPU Fan Connector

CPU Fan cable plug in the 3-pin CPU Fan connector onboard.



2.4.14 Internal Audio Connectors(CD, AUX, 4-pin Modem)

These connectors allow you to receive stereo audio input from such sound sources as a CD-ROM, MPEG card. The Modem connector allows the onboard audio to interface with a voice modem card with a similar connector. It also allows the sharing of mono_in (such as a phone) and mono_out(such as a speaker) between the onboard audio and the voice modem card.

- CDS2 (CD Input) 1 (1: Right Audio Channel; 2,4: Ground; 3: Left Audio Channel)
- CDS3 (CD Input) 1 (1,3: Ground; 2: Left Audio Channel; 4: Right Audio Channel)
- AUX1(Auxiliary Input) 1 (1: Right Audio Channel; 2, 3: Ground; 4: Left Audio Channel)
- CDS1 (CD Input) 1 (1: Right Audio Channel; 2, 3: Ground; 4: Left Audio Channel)

Chapter 3 ***Software Installation***

Note:

Before installation, you must already have Windows 95/98/2000/ME or Windows NT4.0 install on your computer.

The installation procedure is as below:

1. Make sure that Auto-insert detection is enabled for your CDROM drive. It should be enabled by default.
2. Insert this CD disk into your CDROM drive.
3. The Explorer screen will then appear, that gives you instructions for installation.
4. There may require restarts of Windows during some software setup. In these cases, you can just eject then close the CD-tray in order to get back to the Explorer screen. You can then proceed with the next step.
You can get more information with open file: *readme.txt* in the CD disk.

Chapter 4

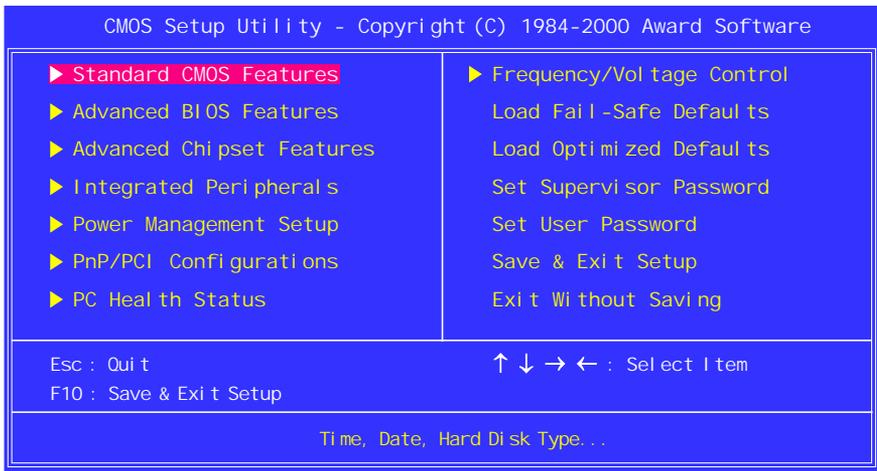
Award BIOS Setup

This T-820+ motherboard 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, ESC to skip memory test

2. Press the key and the main program screen will appear as follows.



Note:

That a right pointer symbol “▶” appears to the left of certain fields. This pointer indicates that a submenu can be launched from this field. A submenu contains additional options for a field parameter. To call up a submenu, simply move the highlight to the field and press <Enter>, The sub-menu will then immediately appear.

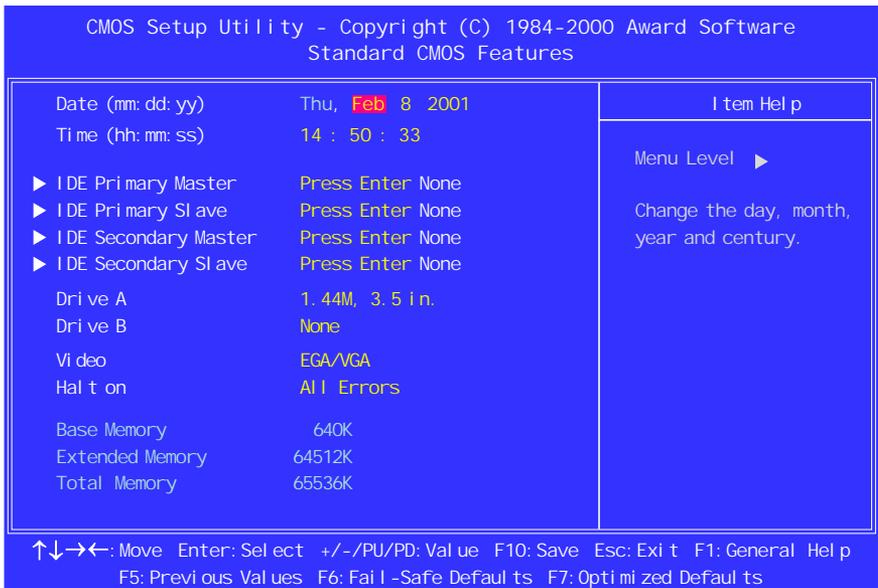
3. Using the arrows ↑↓←→ on your keyboard, select an option, and press <Enter>. Modify the system parameters to reflect the options installed in your system. Otherwise you may return to the Main Menu anytime by pressing <ESC> .

<i>Type of Setup</i>	<i>Description</i>
Standard CMOS Features	This setup page includes all the items in a standard, AT-compatible BIOS.
Award BIOS Features	This setup page includes all the items of Award BIOS special enhanced features.
Award Chipset Features	This setup page includes all the items of chipset special features.
Integrated Peripherals	This section page includes all the items of IDE hard drive and Programmed Input / Output features.
Power Management Setup	This entry only appears if your system supports Power Management "Green PC", standards.
PNP / PCI Configurations	This entry appears if your system supports PNP / PCI.
PC Health Status	This section provides to examine and management system statuses information, such as CPU and system voltage, temperature, and fan statuses, etc...
Load Fail-Safe Defaults	The BIOS defaults have been set by the manufacturer and represent settings which provide the minimum requirements for your system to operate.
Load Optimized Defaults	The chipset defaults are settings which provide for maximum system performance. While Award has designed the custom BIOS to maximize performance, the manufacturer has the right to change these defaults to meet their needs.
Set Supervisor / User Password	Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.
Save & Exit Setup	Save CMOS value changes to CMOS and exit setup.
Exit Without Saving	Abandon all CMOS value changes and exit setup.

4. In the Main Menu, "Save Settings and Exit" saves your changes and reboots the system, and "Exit Without Saving" ignores your changes and exits the CMOS Setup.

4.1 Standard CMOS Features

Select the Award BIOS Setup options by choosing Standard CMOS Features from the AwardBIOS Setup main menu. The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes one or more than one setup items. Use the arrows to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.



Date

The date format is <week>, <month>, <day>, <year>.

- Week The week, from Sun to Sat, determined by the BIOS and is display-only
- Month The month, Jan. through Dec.
- Day The day, from 1 to 31 (or the maximum allowed in the month)
- Year The year, from 1900 through 2099

Time

The times format in <hour> <minute> <second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

Primary & Secondary Master/Slave

Press Enter that the system can Auto-Detection the IDE Devices.

Drive A type / Drive B type

The category identifies the types of floppy disk drive A or drive B that have been installed in the computer.

Video

The category selects the type of adapter used for the primary system monitor. Although secondary monitors are supported, you do not have to select the type in setup.

Halt on

The category determines whether the computer will stop if an error is detected during power up.

Memory

The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

4.2 Advanced BIOS Features

The Award BIOS Setup options described in this section are selected by choosing Advanced BIOS Features Setup the Award BIOS Setup main menu.

4.3 Advanced Chipset Features

Choose Chipset Features Setup on the Award BIOS Setup main menu. All the items of chipset special features you can setup.

4.4 Integrated Peripherals

The Award BIOS Setup options described in this section are selected by choosing Integrated Peripherals from the Award BIOS Setup main menu. This setup page includes all onboard peripherals.

4.5 Power Management Setup

The Award BIOS Setup options described in this section are selected by choosing Power Management Setup from the Award BIOS Setup main menu. This setup page includes all the items of Green function features.

4.6 PnP/PCI Configurations

Choose PnP/PCI Configurations from the Award BIOS Setup main menu. This setup page includes all the configurations of PCI & PnP resources.

4.7 Save & Exit Setup

Choose Save & Exit Setup from the Award BIOS Setup main menu. Type “Y” to exit the BIOS Setup program and saving the values. Type “N” to return to the Setup program.

4.8 Exit Without Saving

Choose Exit Without Saving from the Award BIOS Setup main menu. Type “Y” to exit the BIOS Setup program without saving the values. Type “N” to return to the Setup program.

The End