

## HOW TO USE THIS MANUAL

This manual is written in a user-friendly style. It would be advisable for users to read it in an orderly sequence :

### **1. For Hardware Information:**

Read **COMPONENT LOCATION DIAGRAM, Page B : QUICK JUMPER & CONNECTOR SETTING, Page C & D : CONNECTORS AND JUMPERS DESCRIPTION and Page E:List of Packaging.**

### **2. For Mainboard and System Features:**

Read “**Chapter 1 System Features**” , and you will find helpful information on mainboard and system features. Especially, when you want to do some feature setup, detailed instructions are provided therein to help you through.

### **3. For CPU, Memory and Drivers Installation:**

Read “**Chapter 2 Installation**” for your CPU, memory and application drivers installation. Detailed instructions are provided to guide all kinds of users.

### **4. For BIOS Update and Setup:**

Read “**Chapter 3 Award BIOS Setup**” for updating your mainboard BIOS and setting up your BIOS Configuration.

### **5. For other Technical Support:**

See “**Appendix A**” , fill and send the Request Form to your dealer for other technical support.

The default settings on a mainboard is not necessarily what user expects. A user-friendly manual would be the handiest assistant to help change the on-board configuration or default setting. In case this manual cannot solve all your problems, please ask your dealer for help and be sure the warranty on your system is still valid.

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# CONTENTS

**PICTURE OF THE MAINBOARD .....A**  
**QUICK JUMPER & CONNECTOR SETTING.....B**  
**CONNECTORS AND JUMPERS DESCRIPTION.....C,D**  
**CHECKLIST OF PACKAGING.....E**

## HOW TO USE THIS MANUAL

### TABLE OF CONTENTS:

#### Chapter 1 System Description

1-1 ATC5200M Mainboard Specification ..... 1  
1-2 Features Highlight ..... 2  
1-2-1 Software Power Off Control ..... 2  
1-2-2 AGP Interface ..... 2

#### Chapter 2 Installation

2-1 Mainboard Installation ..... 3  
2-2 CPU Configuration ..... 4  
2-3 System Memory Installation ..... 20  
2-4 VIA IDE Driver Setup ..... 21  
2-4-1 Setup for Windows 9X..... 21  
2-4-2 Setup for Windows NT4.0 ..... 22

#### Chapter 3 AWARD BIOS Setup

3-1 Update BIOS Procedure ..... 24  
3-2 System BIOS Configuration ..... 25  
3-2-1 Standard CMOS Setup ..... 26  
3-2-2 BIOS Features Setup ..... 29  
3-2-3 Chipset Features Setup ..... 33  
3-2-4 Power Management Setup ..... 35  
3-2-5 PNP/PCI Configuration ..... 38

<b><i>Contents</i></b>	<b><i>ATC5200M Mainboard</i></b>	
3-2-6 Integrated Peripherals .....		40
3-2-7 IDE HDD Autodetection .....		42
3-2-8 Save & Exit Setup .....		43
3-2-9 Load BIOS Defaults .....		43
3-2-10 Load Setup Defaults .....		43
3-2-11 Supervisor/User Password .....		43
3-2-12 Exit without Saving .....		43

**Control Keys Description for BIOS Setup ..... 44**

**Appendix A Technical Support Request Form**

# CHAPTER 1

## System Description

**ATC5200M Mainboard with Socket 7 on board supports 66~100MHz host clock, and is intended to run Intel Pentium CPUs up to 233MHz, AMD K5/K6/K6-2 CPUs, and Cyrix 6x86/6x86MX / M II CPUs. With VIA MVP3 chipset on board, it also supports AGP and Ultra DMA performance for fast VGA display and data transfer. Below are detailed description of its system specifications and features.**

### 1-1 SYSTEM SPECIFICATION

- ☐ Supports Intel Pentium® (P54C) CPUS up to 200MHz, Intel Pentium MMX 166~233MHz (P55C), AMD K5, AMD K6, AMD K6-2, Cyrix 6x86MX, MII, 6x86L, IDT Win Chip C6 CPUs.
- ☐ Supports CPU Bus Clock from 66MHz to 100MHz and Ratio from 1.5x to 5.5x
- ☐ VIA @ VT82C598MVP & VT82C586B (with keyboard control) chipset.
- ☐ Built-in Switching Voltage Regulator.(VRM 8.2 SPEC.)
- ☐ CPU core voltage support: 2.2V~3.5V; CPU/IO Voltage:3.40V
- ☐ Three 168-pin DIMM sockets on board, supporting three banks of 64-bit wide path up to 384MB SDRAM or 768 EDO DRAM (with parity chip ECC support).
- ☐ L2 Cache: 512KB, 3.3V
- ☐ AGP slot on board; three PCI slots with revision 2.1 interface compliance and two 16-bit ISA slots.
- ☐ Dual Master IDE connectors support Ultra DMA/33, up to four devices in two channels for connecting high capacity hard drive, CD-ROM, tape backup etc.
- ☐ One USB (Universal Serial Bus) header supporting up to 127 devices.
- ☐ AT style keyboard connector and PS/2 mouse header.

- 🖥️ WINBOND W83877TF high-speed Super Multi-I/O chipset.
- 🖥️ Infrared transfer (IrDA TX/RX) Support.
- 🖥️ One FDD port supports following 2 floppy drives: 1.2MB/1.44MB/ 2.88MB.
- 🖥️ Two 16550A fast UARTs compatible serial ports; One DIN connector for KB
- 🖥️ AT & ATX power connectors on board.
- 🖥️ Hardware Dimension :220mm x 230mm (8.66" x 9.0"); BabyAT Form Factor.

## **1-2 FEATURES HIGHLIGHT**

### **1-2-1 Software Power Off Control (under ATX power supply)**

This mainboard supports Software Power Off Control feature through the SMM code in the BIOS under Windows 95/98, and MS-DOS operation system environment. It needs ATX power supply to support this performance.

First, you should connect the power switch cable to the connector “PS-ON” on the mainboard. In the BIOS screen of POWER MANAGEMENT SETUP’, choose “User Defined” (or “Min. Power Saving” or “Max. Power Saving”) in ‘Power Manager’ and choose “Yes” in ‘PM Control by APM’.


In Windows 95/98, if you want to power off the system, you just choose “shutdown the computer ?” in the “Shut Down Windows“ from Windows 95/98, then the system power will be off directly and stay at the stand-by status. If you want to restart the system, just press the power switch button, and the system will be powered on.

**In case you leave your system idle for several days, you better use “Hardware Power Off” to shut down your system.**

### **1-2-2 AGP (Accelerated Graphics Port) Interface**

AGP gives graphics accelerators fast, high throughput direct access to system memory. This allows a graphics accelerator access to more memory than available locally on the graphics card. For example, to display a scene that contains 16MB of textures, a 4MB AGP graphics card could access the PC system memory for the additional 12MB required.

- 🖥️ **AGP delivers a peak bandwidth that is 4 times higher than the PCI bus using pipelining, sideband addressing, and more data transfers per clock.**

 **The current PCI bus supports a data transfer rate up to 132 MB/s, while AGP (at 66MHz) supports up to 533 MB/s!**

# **CHAPTER 2 INSTALLATION**

## **2-1 MAINBOARD INSTALLATION**

Before installing the computer, please get ready all components such as CPU, DRAM; peripherals(such as hard drive, keyboard, CD-ROM) and accessories(such as cables, jumper caps, cooling fans, screw driver)etc. Then, install the system as below:

1. Plug CPU, heat sink, cooling fan and DRAM modules onto the 5200M mainboard.
2. Set DIP switch based on your CPU configuration.
3. Set jumpers based on your CPU and BIOS configuration.
4. Plug add-on cards into PCI/ISA slots, if needed.
5. Connect the power supply.
6. Connect I/O and other cables to the system.
7. Make sure all components and devices are well connected, turn on the power and setup System BIOS based on your configuration.
8. Install peripheral devices, add-on card drivers and test them.

If all of above procedures are running successfully, turn it off and screw the chassis cover to the system, and then connect external devices which are cabled to the system.

## 2-2 CPU CONFIGURATION

5200M Mainboard supports Pentium level CPUs.

To install CPU, please notice CPU pin 1 must align with the ZIF socket 7 pin 1 location. To configure your CPU, please follow the CPU Guide provided by CPU manufacturer to configure the CPU voltage setting and then set up DIP Switch & Jumpers on 5200M Mainboard to suit your CPU type.

It is very important you must set up **DIP switch SW1, Jumpers JP2, JP3, JP4, JP5** accurately for a normal and stable CPU operation.

To locate these jumpers and SW1, please turn to **Page A “Component Location Diagram”**.

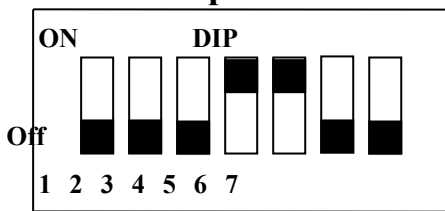
The following are illustrations of SW1 setting, as well as JP2,3,4, 5 settings.

### SW1 setting: for CPU base frequency and CPU Frequency Ratio

CPU Frequency Ratio Settings      CPU Base Frequency Settings

SW1	SW1-1	SW1-2	SW1-3	SW1	SW1-4	SW1-5	SW1-6
2.0X	OFF	OFF	ON	66.6MHz	ON	ON	OFF
2.5X	OFF	ON	ON	75MHz	OFF	ON	ON
3.0X	OFF	ON	OFF	83.5MHz	OFF	ON	OFF
1.5X;3.5X	OFF	OFF	OFF	95.25MHz	OFF	OFF	ON
4.0X	ON	OFF	ON	100MHz	OFF	OFF	OFF
4.5X	ON	ON	ON				
5.0X	ON	ON	OFF				
5.5X	ON	OFF	OFF				

### How to set up DIP switch SW1:



### SW1 Settings Illustration:

DIP switch, (i.e. : OFF, OFF, OFF, ON, ON, OFF, OFF)

### JP2 & JP3 Setting:

(The setting for frequency-ratio comparing with the PCI clock and the CPU host clock.)

CPU CLK/PCI CLK	JP 2	JP 3
66.6MHz/33.3MHz	Pin 2-3	Pin 2-3
75MHz/30MHz	Pin 1-2	Pin 1-2
83.3MHz/33.3MHz	Pin 1-2	Pin 1-2
95.25MHz/31.7MHz	Pin 1-2	Pin 2-3
100MHz/33.3MHz	Pin 1-2	Pin 2-3



**JP4 Setting: For CPU Core voltage**

**The setting for CPU Ccore Voltage Selection**

Vcore	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
2.2V	Open	Closed	Open	Open
2.3V	Closed	Closed	Open	Open
2.7V	Closed	Closed	Closed	Open
2.8V	Open	Open	Open	Closed
2.9V	Closed	Open	Open	Closed
3.2V	Open	Open	Closed	Closed
3.3V	Closed	Open	Closed	Closed
3.5V	Closed	Closed	Closed	Closed

**JP5 setting**

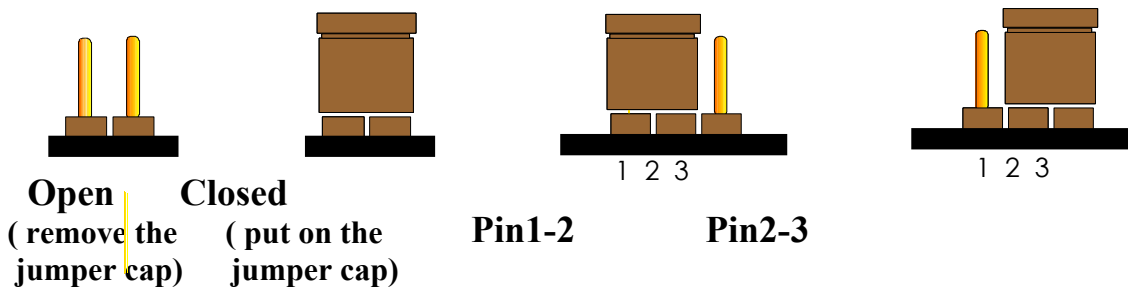
(The setting for Single/Dual Voltage supporting for Pentium level Processor)

Mode	JP5 (Pin1-2,3-4,5-6)
Single Voltage Mode(Vcore = Vi/o)*	Open
Dual Voltage Mode(Vcore ≠Vi/o)**	Closed

\* P54C mode (Single Voltage Mode) : supports for Intel Pentium, AMD-K5, Cyrix 6X86, IDT Win Chip C6.

\*\* P55C mode (Dual Voltage Mode) : supports for Intel Pentium MMX, AMD-K6, AMD-K6-2, Cyrix 6X86L, Cyrix 6X86MX, Cyrix M II.

**\*how to set up jumpers:**



2-2-1 CPU TYPE vs Jumper Setting Illustrations:

A. INTEL PENTIUM® CPU (P54C)

※ **P54C VRE : 3.400V~3.600V** (CPU Voltage is marked on the back side of the CPU itself. V = VRE, S = standard. )

JP4(3.5V)

<b>JP4</b>	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
<b>Vcore</b>				
3.5V	Closed	Closed	Closed	Closed

※ ※ **P54C STD : 3.135V ~ 3.600V** (CPU Voltage is marked on the back side of the CPU itself. V = VRE, S = standard. )

JP4 (3.3V)

<b>JP4</b>	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
<b>Vcore</b>				
3.3V	Closed	Open	Closed	Closed

JP5 Setting (Single)

Mode	JP5 (Pin1-2, 3-4, 5-6)
Single Voltage Mode(Vcore = Vi/o)*	Open

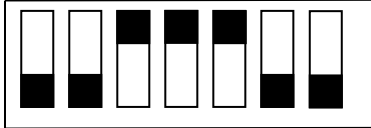
JP1, JP2 & JP3 Settings

CPU host clock/DRAM/PCI clock	JP 1	JP 2	JP3
66MHz/66MHz/33MHz	Pin 2-3	Pin 2-3	Pin 2-3

A-1. Intel Pentium 100MHz

<b>CPU Clock</b>	<b>SW1</b>	<b>Base x Ratio.</b>
100MHz	<p>ON</p>  <p>OFF</p> <p>1 2 3 4 5 6 7</p>	66 x 1.5

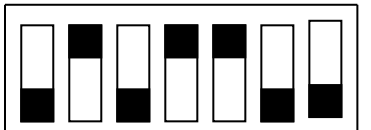
**A-2. Intel Pentium 133MHz**

CPU CLOCK	SW1	Base x Ratio
133MHz	ON  OFF 1 2 3 4 5 6 7	66 x 2.0

**A-3. Intel Pentium 166MHz**

CPU CLOCK	SW1	Base x Ratio
166MHz	ON  OFF 1 2 3 4 5 6 7	66 x 2.5

**A-4. Intel Pentium 200MHz**

CPU CLOCK	SW1	Base x Ratio
200MHz	ON  OFF 1 2 3 4 5 6 7	66 x 3.0

**B. INTEL PENTIUM MMX™ CPU (P55C)**

JP4 (2.8V)

<b>JP4</b>	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
<b>Vcore</b>				
2.8V	Open	Open	Open	Closed

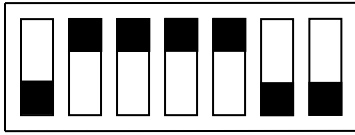
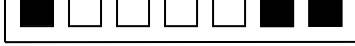
**JP5 Setting (Dual)**

Mode	JP5 (Pin1-2, 3-4, 5-6)
Dual Voltage Mode(Vcore ≠Vi/o)**	Closed

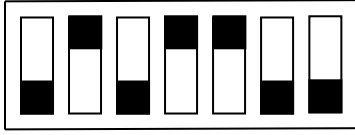
JP1, JP2 & JP3 Settings

CPU host clock/DRAM/PCI clock	JP1	JP2	JP3
66MHz/66MHz/33MHz	Pin 2-3	Pin 2-3	Pin 2-3

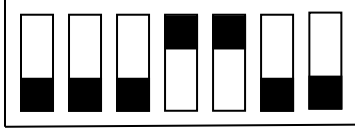
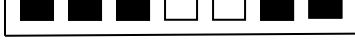
**B-1. Intel Pentium MMX™ 166MHz**

CPU CLOCK	SW1	Base x Ratio
166MHz	ON  OFF  1 2 3 4 5 6 7	66 x 2.5

**B-2. Intel Pentium MMX™ 200MHz**

CPU CLOCK	SW1	Base x Ratio
200MHz	ON  OFF  1 2 3 4 5 6 7	66 x 3.0

**B-3. Intel Pentium MMX™ 233MHz**

CPU CLOCK	SW1	Base x Ratio
233MHz	ON  OFF  1 2 3 4 5 6 7	66 x 3.5

**C. Cyrix 6x86MX CPU**

JP4 (2.9V)

<b>JP4</b>	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
<b>Vcore</b>				
2.9V	Closed	Open	Open	Closed

**JP5 Setting (Dual)**

Mode	JP5 (Pin1-2, 3-4, 5-6)
Dual Voltage Mode(Vcore ≠Vi/o)**	Closed

JP1, JP2 & JP3 Settings

CPU host clock/DRAM/PCI clock	JP1	JP2	JP3
66MHz/66MHz/33MHz	Pin 2-3	Pin 2-3	Pin 2-3

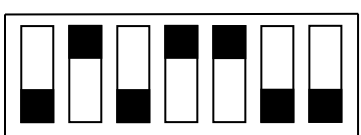
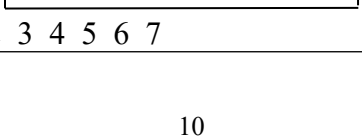
**C-1. Cyrix 6x86MX PR166 @ 66MHz Bus 2x**

<b>CPU Clock</b>	<b>SW1</b>	<b>Base x Ratio</b>
PR166	<p>ON </p> <p>OFF </p> <p>1 2 3 4 5 6 7</p>	66 x 2.0

**C-2. Cyrix 6x86MX PR200 @ 66MHz Bus 2.5x**

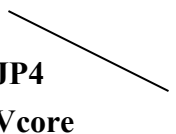
<b>CPU Clock</b>	<b>SW1</b>	<b>Base x Ratio</b>
PR200	<p>ON </p> <p>OFF </p> <p>1 2 3 4 5 6 7</p>	66 x 2.5

**C-3. Cyrix 6x86MX PR233 @ 66MHz Bus 3x**

<b>CPU Clock</b>	<b>SW1</b>	<b>Base x Ratio</b>
PR233	<p>ON </p> <p>OFF </p> <p>1 2 3 4 5 6 7</p>	66 x 3.0

**C-4. Cyrix 6x86MX PR233 @ 75MHz Bus 2.5x**

JP4 (2.9V)

 <b>JP4</b> <b>Vcore</b>	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
2.9V	Closed	Open	Open	Closed

**JP5 Setting (Dual)**

Mode	JP5 (Pin1-2, 3-4, 5-6)
Dual Voltage Mode(Vcore ≠Vi/o)**	Closed

JP1, JP2 & JP3 Settings

CPU host clock/DRAM/PCI clock	JP1	JP2	JP3
75MHz/75MHz/30MHz	Pin 2-3	Pin 1-2	Pin 1-2

CPU Clock	SW1	Base x Ratio
PR233	ON  OFF	75 x 2.5
	1 2 3 4 5 6 7	

**D. Cyrix MII CPU**

**D-1 Cyrix MII 300MHz @ 66MHz Bus 3.5x**

JP4(2.9V)

<b>JP4</b> Vcore	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
2.9V	Closed	Open	Open	Closed

**JP5 Setting (Dual)**

Mode	JP5 (Pin1-2, 3-4, 5-6)
Dual Voltage Mode(Vcore ≠Vi/o)**	Closed

**JP1, JP2 & JP3 Settings**

CPU host clock/DRAM/PCI clock	JP1	JP2	JP3
66MHz/66MHz/33MHz	Pin 2-3	Pin 2-3	Pin 2-3

CPU Clock	SW1	Base x Ratio
MII 300MHz	ON  OFF	66 x 3.5

**D-2 Cyrix MII 300MHz @ 75MHz Bus 3x**

JP4(2.9V)

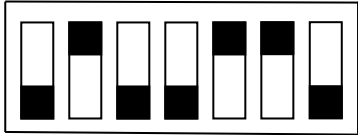
<b>JP4</b> Vcore	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
2.9V	Closed	Open	Open	Closed

**JP5 Setting (Dual)**

Mode	JP5 (Pin1-2, 3-4, 5-6)
Dual Voltage Mode(Vcore ≠Vi/o)**	Closed

**JP1, JP2 & JP3 Settings**

CPU host clock/DRAM/PCI clock	JP1	JP2	JP3
75MHz/75MHz/30MHz	Pin 2-3	Pin 1-2	Pin 1-2

CPU Clock	SW1	Base x Ratio
MII 300MHz	<p>ON</p>  <p>OFF</p> <p>1 2 3 4 5 6 7</p>	75 x 3.0



**E. Cyrix 6x86L CPU (dual voltage)**

JP4 (2.8V)

<b>JP4</b>	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
<b>Vcore</b>				
2.8V	Open	Open	Open	Closed

**JP5 Setting (Dual)**

Mode	JP5 (Pin1-2, 3-4, 5-6)
Dual Voltage Mode(Vcore ≠Vi/o)**	Closed

JP1, JP2 & JP3 Settings

CPU host clock/DRAM/PCI clock	JP1	JP2	JP3
66MHz/66MHz/33MHz*	Pin 2-3	Pin 2-3	Pin 2-3

**Cyrix 6x86L PR166+**

<b>CPU Clock</b>	<b>SW1</b>	<b>Base x Ratio</b>
PR166+	<p>ON</p>  <p>OFF</p> <p>1 2 3 4 5 6 7</p>	66 x 2.0

**F. AMD-K5 CPU Series**

JP4(3.5V)

<b>JP4</b>	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
<b>Vcore</b>				
3.5V	Closed	Closed	Closed	Closed

**JP5 Setting (Single)**

Mode	JP5 (Pin1-2, 3-4, 5-6)
Single Voltage Mode(Vcore = Vi/o)*	Open

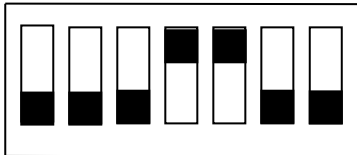
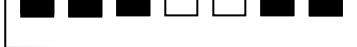
JP1, JP2 & JP3 Settings

CPU host clock/DRAM/PCI clock	JP1	JP2	JP3
66MHz/66MHz/33MHz*	Pin 2-3	Pin 2-3	Pin 2-3

**F-1. AMD-K5 PR100**

CPU Clock	SW1	Base x Ratio
PR100	ON  OFF  1 2 3 4 5 6 7	66 x 1.5

**F-2. AMD-K5 PR133**

CPU Clock	SW1	Base x Ratio
PR133	ON  OFF  1 2 3 4 5 6 7	66 x 1.5

**F-3. AMD-K5 PR166**

CPU Clock	SW1	Base x Ratio
PR166	ON  OFF  1 2 3 4 5 6 7	66 x 2.5

**G. AMD-K6 CPU**

JP1, JP2 & JP3 Settings

CPU host clock/DRAM/PCI clock	JP1	JP2	JP3
66MHz/66MHz/33MHz	Pin 2-3	Pin 2-3	Pin 2-3

**JP5 Setting (Dual)**

Mode	JP5 (Pin1-2, 3-4, 5-6)
Dual Voltage Mode(Vcore ≠Vi/o)**	Closed

**G-1. AMD-K6 166MHz**

JP4(2.9V)

<b>JP4</b> Vcore	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
2.9V	Closed	Open	Open	Closed

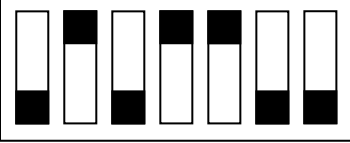
CPU Clock	SW1	Base x Ratio
166MHz	ON  OFF  1 2 3 4 5 6 7	66 x 2.5

**G-2. AMD-K6 200MHz**

JP4(2.9V)

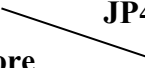
<b>JP4</b> Vcore	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
Vcore	Closed	Open	Open	Closed

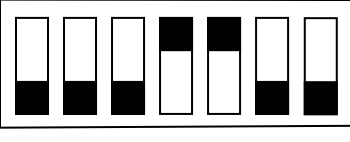
CPU Clock	SW1	Base x Ratio
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200MHz	<p>ON</p>  <p>OFF</p> <p>1 2 3 4 5 6 7</p>	66 x 3.0
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**G-3a. AMD-K6 233MHz**

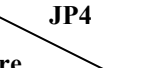
JP4(3.2V)

 <p><b>JP4</b></p> <p><b>Vcore</b></p>	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
3.2V	Open	Open	Closed	Closed

<b>CPU CLOCK</b>	<b>SW1</b>	<b>Base x Ratio</b>
233MHz	<p>ON</p>  <p>OFF</p> <p>1 2 3 4 5 6 7</p>	66 x 3.5

**G-3b. AMD-K6-2 233MHz**

JP4(2.2V)

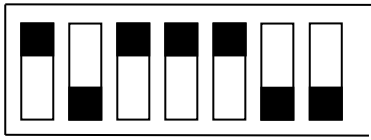
 <p><b>JP4</b></p> <p><b>Vcore</b></p>	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
2.2V	Open	Closed	Open	Open

<b>CPU CLOCK</b>	<b>SW1</b>	<b>Base x Ratio</b>
233MHz	<p>ON</p>  <p>OFF</p> <p>1 2 3 4 5 6 7</p>	66 x 3.5

**G-4a. AMD-K6 266 MHz**

**JP4(2.2V)**

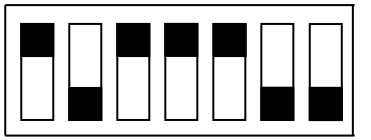
<b>JP4</b>	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
<b>Vcore</b>				
2.2V	Open	Closed	Open	Open

<b>CPU Clock</b>	<b>SW1</b>	<b>Base x Ratio</b>
266MHz	<p>ON</p>  <p>OFF</p> <p>1 2 3 4 5 6 7</p>	66 x 4.0

**G-4b. AMD-K6-2 266 MHz**

**JP4(2.2V)**

<b>JP4</b>	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
<b>Vcore</b>				
2.2V	Open	Closed	Open	Open

<b>CPU Clock</b>	<b>SW1</b>	<b>Base x Ratio</b>
266MHz	<p>ON</p>  <p>OFF</p> <p>1 2 3 4 5 6 7</p>	66 x 4.0

**G-5a. AMD-K6 300MHz**

**JP4(2.2V)**


<b>JP4</b>	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
<b>Vcore</b>				
2.2V	Open	Closed	Open	Open

**JP5 Setting (Dual)**

<b>Mode</b>	<b>JP5 (Pin1-2, 3-4, 5-6)</b>
Dual Voltage Mode(Vcore ≠Vi/o)**	Closed

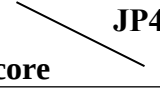
JP1, JP2 & JP3 Settings

CPU host clock/DRAM/PCI clock	JP1	JP2	JP3
66MHz/66MHz/33MHz	Pin 2-3	Pin 2-3	Pin 2-3

CPU CLOCK	SW1	Base x Ratio
300MHz	<p>ON</p>  <p>OFF</p> <p>1 2 3 4 5 6 7</p>	66 x 4.5

**G-5b. AMD-K6-2 300MHz**

**JP4(2.2V)**

 <b>JP4</b> <b>Vcore</b>	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
Vcore	Open	Closed	Open	Open

**JP5 Setting (Dual)**



Mode	JP5 (Pin1-2, 3-4, 5-6)
Dual Voltage Mode(Vcore ≠Vi/o)	Closed

SW1 (Pin7), JP1, JP2 & JP3 Settings

CPU host clock/DRAM/PCI clock	SW1-pin7	JP1	JP2	JP3
100MHz/100MHz/33MHz*	OFF	Pin 2-3	Pin 1-2	Pin 2-3
100MHz/66MHz/33MHz**	ON	Pin 1-2	Pin 1-2	Pin 2-3

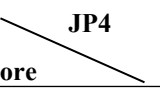
\* Please use PC-100 SDRAM module (SYNC.)

\*\* Please use non PC-100 SDRAM module or EDO DIMM module (ASYNC.)

CPU CLOCK	SW1	Base x Ratio
300MHz	ON  OFF  1 2 3 4 5 6 7	100 x 3.0

**G-5c. AMD-K6-2 333MHz**

**JP4(2.2V)**

 <b>JP4</b> <b>Vcore</b>	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
2.2V	Open	Closed	Open	Open

**JP5 Setting (Dual)**

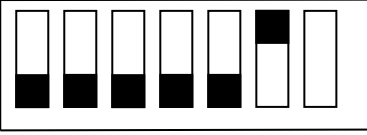

Mode	JP5 (Pin1-2, 3-4, 5-6)
Dual Voltage Mode(Vcore ≠Vi/o)	Closed

SW1 (Pin7), JP1, JP2 & JP3 Settings

CPU host clock/DRAM/PCI clock	SW1-pin7	JP1	JP2	JP3
95MHz/95MHz/31.7MHz*	OFF	Pin 2-3	Pin 1-2	Pin 2-3
95MHz/66MHz/31.7MHz**	ON	Pin 1-2	Pin 1-2	Pin 2-3

\* Please use for PC-100 SDRAM module (SYNC.)

\*\* Please use non PC-100 SDRAM module or EDO DIMM module (ASYNC.)

CPU CLOCK	SW1	Base x Ratio
333MHz	ON  OFF  1 2 3 4 5 6 7	95 x 3.5

**G-6. AMD-K6-2 350MHz**

JP4(2.2V)

<b>JP4</b>	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
<b>Vcore</b>				
2.2V	Open	Closed	Open	Open

**JP5 Setting (Dual)**



Mode	JP5 (Pin1-2, 3-4, 5-6)
Dual Voltage Mode(Vcore ≠Vi/o)**	Closed

SW1 (Pin7), JP1 & JP2 Settings

CPU host clock/DRAM/PCI clock	SW1-pin7	JP1	JP2	JP3
100MHz/100MHz/33MHz*	OFF	Pin 2-3	Pin 1-2	Pin 2-3
100MHz/66MHz/33MHz**	ON	Pin 1-2	Pin 1-2	Pin 2-3

\* Please use PC-100 SDRAM module (SYNC.)

\*\* Please use non PC-100 SDRAM module or EDO DIMM module (ASYNC.)

CPU CLOCK	SW1	Base x Ratio
350MHz	ON  OFF  1 2 3 4 5 6 7	100 x 3.5



**H. IDT Win Chip C6**

JP4(3.5V)

<b>JP4</b> Vcore	Pin1 & Pin5	Pin2 & Pin6	Pin3 & Pin7	Pin4 & Pin8
3.5V	Closed	Closed	Closed	Closed

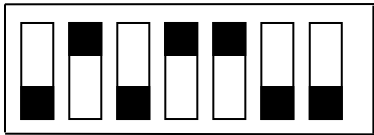

**JP5 Setting (Single)**

Mode	JP5 (Pin1-2, 3-4, 5-6)
Single Voltage Mode(Vcore = Vi/o)*	Open

**H-1. IDT Win Chip C6 200MHz**

JP1, JP2 & JP3 Settings

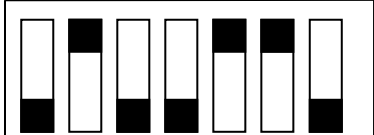
CPU host clock/DRAM/PCI clock	JP1	JP2	JP3
66MHz/66MHz/33MHz	Pin 2-3	Pin 2-3	Pin 2-3

CPU CLOCK	SW1	Base x Ratio
200MHz	ON  OFF  1 2 3 4 5 6 7	66 x 3.0

**H-2 IDT Win Chip C6 225MHz**

JP1, JP2 & JP3 Settings

CPU host clock/DRAM/PCI clock	JP1	JP2	JP3
75MHz/75MHz/30MHz	Pin 2-3	Pin 1-2	Pin 1-2

CPU CLOCK	SW1	Base x Ratio
225MHz	ON  OFF  1 2 3 4 5 6 7	75 x 3.0

## 2-3 SYSTEM MEMORY INSTALLATION

The 5200M provides three 168-pin DIMM sockets for system memory expansion from 8MB to 768MB. These three DIMMs are arranged to three banks, please refer to page A. Each bank provides 64-bit wide data path.

### ※ Samples of System Memory Combinations Options ※

BANK0 DIMM 1	BANK1 DIMM 2	BANK2 DIMM 3	Total Memory DIMM 1-3
32MBx1	-	-	32MB
-	-	32MBx1	32MB
8MBx1	16MBx1	16MBx1	40MB
32MBx1	32MBx1	-	64MB
-	32MBx1	32MBx1	64MB
64MBx1	-	-	64MB
:	:	:	:
-	64MBx1	64MBx1	128MB
128MBx1	-	-	128MB
-	128MBx1	-	128MB
-	-	128MBx1	128MB
128MBx1	128MBx1	-	256MB
128MBx1	-	128MBx1	256MB
-	128MBx1	128MBx1	256MB
256MBx1	-	-	256MB
:	:	:	:
256MBx1	256MBx1	-	512MB
256MBx1	-	256MBx1	512MB
-	256MBx1	256MBx1	512MB
256MBx1	256MBx1	256MBx1	768MB

## **2-4 VIA IDE DRIVER SETUP**

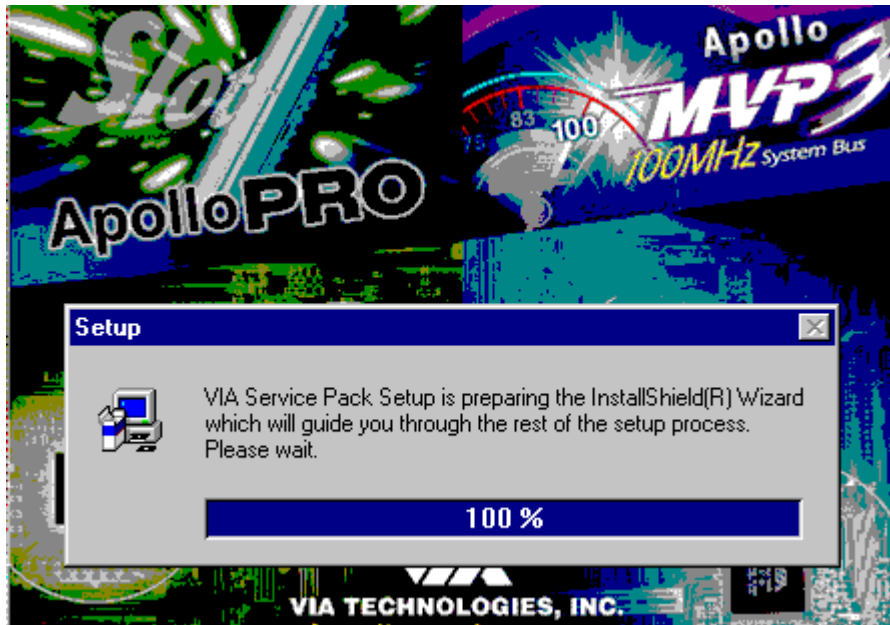
The VIA IDE drivers are enclosed into the VIA Utility CD. Use this CD ROM for installation of the VIA drivers.

### **2-4-1 Setup for Windows 9x :**

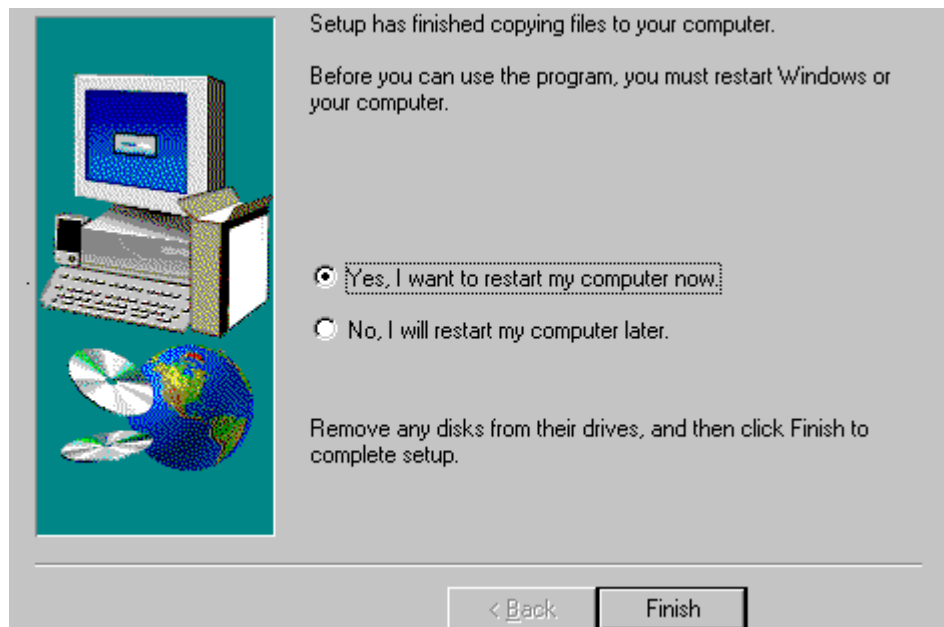
1. Starting Windows system.
2. Insert the VIA Utility CD ROM into your CD-ROM Drive. If the VIA Driver Setup Main Menu does not appear automatically, just point to “My Computer” and click the CD ROM icon to open the VIA Utility CD ROM directly.
3. In a second, the “VIA Drivers Installation Main Menu” shows up as below:



- 4. To start VIA drivers setup, point to the “VIA Integrated Setup” and click on it.
- 5. User-friendly Setup screens will appear one by one, guiding you to finish the complete setup.



- 6. When the “Setup complete” screen appears, click “Finish” to restart your computer so as to put the just installed drivers into effect.



### **2-4-2 Setup for Windows NT 4.0**

The VIA IDE drivers for WinNT are also enclosed into the VIA Utility CD. Use this CD ROM for installation of the VIA drivers for WinNT. And the installation procedures are the same as those for Windows 9x. Please refer to “Setup for windows 9x for your Windows NT installation.

# CHAPTER 3

## Award BIOS SETUP

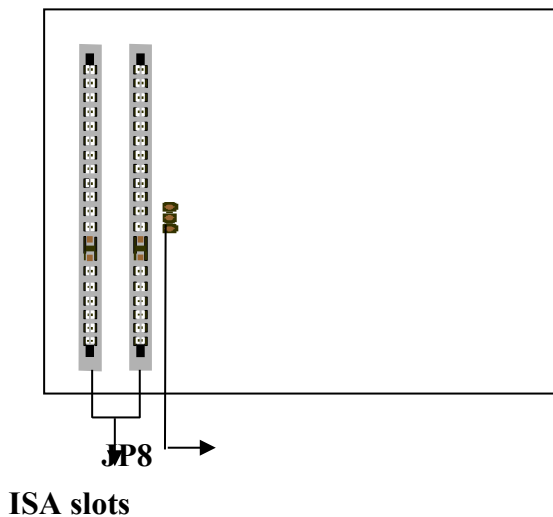
Award BIOS manufacturer provides access to the system BIOS through the hardware and software on each 5200M mainboard. The hardware consists of a Flash ROM and the software is a group of programs that are installed in the ROMBIOS along with all the other data the BIOS must contain.

The 5200M mainboard will require special driver supplied by the manufacturer to update the BIOS SETUP program. It is a good idea to read the next page for details for update BIOS driver installation or you can ask your system dealer to do it for you.

When the driver has been successfully updated, it is very important to contact your system dealer to change the CMOS settings for your computer. The CMOS settings are shown in the following pages.

**NOTE :** To clear CMOS you should unplug the power cord, then set 2-3 to clear, put it back to normal position and plug the power cord again.

	JP8
Normal	1-2
Clear	2-3



## 3-1 UPDATE BIOS PROCEDURE

### 3-1-1 Updating BIOS

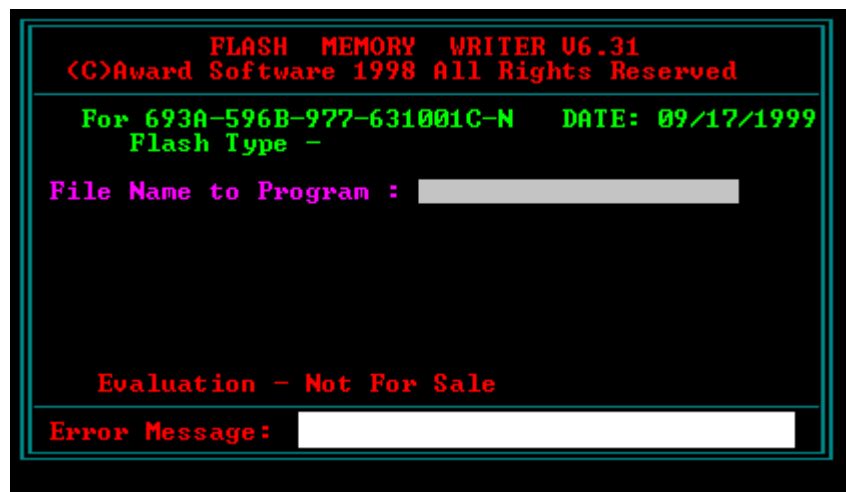
If the BIOS needs to be updated, you can get a CD or diskette with the updated BIOS utility in the package. The BIOS-update diskette or All-In-One CD includes two files:

“awdfash.exe” -- and “awdfash.doc”.

And the new or updated Award BIOS file should be obtained from your system manufacturer or dealer.

The updating procedure is as the following:

1. Before updating your BIOS, please load the above-mentioned files to root directory “C” or a floppy drive diskette.
2. Boot the system to DOS mode in a normal manner.
3. Under “C” or Drive “A” (where your BIOS update files should be), type awdfash.exe and press “Enter”
4. A window similar to the following dialog box will instantly appear, on which you should enter the file name of the new or updated BIOS.



**(Sample of BIOS Update Dialog Box)**

5. After you have entered the file name, press “Enter”. And on the “Error Message” row shows “Do you want to save BIOS (Y/N)”.
6. Type “N” but do not press “Enter”. And the message : " Are you sure to program (Y/N) ?" will appear at once.
7. Type “Y” but do not press “Enter”.
8. BIOS updating process will start at once until you see the message “Reset System or power off to accomplish update process”.

Press “F1” button to restart your system, and the updating process is complete.

## **3-2 SYSTEM BIOS CONFIGURATION SETUP**

The following pages explain how to set up the system configuration (CMOS) under the Award BIOS. The SETUP program is stored in the Read-Only-Memory (ROM) on the mainboard. To do the SETUP procedure, press the <Del> key when the system is booting up. The following main menu will appear. Please select " STANDARD CMOS SETUP" to enter the next screen.

ROM PCI/ISA BIOS (5200M)  
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 BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
ESC: Quit	↓→←:Select Item
F10: Save & Exit Setup	(Shift) F2 : Change Color
Time, Date, Hard Disk Type .....	

The section on the bottom of the main menu explains how to control this screen. The other section displays the items highlighted in the list.

3-2-1 Standard CMOS Setup

This screen records some basic hardware information, and sets the system clock and error handling. These records can be lost or corrupted if the on-board battery has failed or is weak.

ROM PCI/ISA BIOS (5200M)  
STANDARD CMOS SETUP  
AWARD SOFTWARE, INC.

Date (mm:dd:yy) : Wed, June 05 1998	
Time(hh:mm:ss) : 13 : 37 : 14	
HARD DISKS TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE	
Primary Master : Auto	0 0 0 0 0 0 Auto
Primary Slave : Auto	0 0 0 0 0 0 Auto
Secondary Master : Auto	0 0 0 0 0 0 Auto
Secondary Slave : Auto	0 0 0 0 0 0 Auto
Drive A : 1.44M, 3.5 in.	
Drive B : None	Base Memory : 640K
Floppy 3 Mode Support : Disabled	Extended memory : 7168K
Video : EGA/VGA	Other Memory : 384K
Halt On: All Errors	-----
	Total Memory : 8192K
ESC : Quit            ↑↓→←:Select Item    PU/PD/+/- : Modify	
F1 : Help            (Shift) F2 : Change Color	

**Date** Date format is <day>,<date>,<month>,<year>. Press<F3> to show calendar.

day	The day, from Sun to Sat, determined by the BIOS and is displayed-only
date	The date, from 1 to 31
month	The month, Jan. through Dec.
year	The year, from 1900 to 2099

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

**Primary Master Primary; Slave Secondary Master Secondary Slave**

These categories identify the types of the 2 channels that have been installed in the computer. There are 45 predefined types and 4 user definable types for Enhanced IDE BIOS. Type 1 to 45 which are predefined. Type ‘user’ which is user-definable. Press PgUp/PgDn to select a numbered hard disk type or type the number and press



<Enter>. If **'Auto'** selected, the BIOS will detect the HDD & CD-ROM Drive automatically at the POST stage and show the IDE for HDD & CD-ROM Drive. If **'user'** selected, you will need to know the information listed below. This information should be from your hard disk vender or dealer. Then enter the figure directly and press <Enter>. If the controller of the HDD interface is ESDI, the selection shall be **'Type 1'**; if SCSI, the selection is **'None'**. If no device is installed, select **'NONE'** and press <Enter>.

Type	drive type
SIZE	automatically adjusts
CYLS	number of cylinders
HEAD	number of heads
PRECOMP	write precom
LANDZ	landing zone
SECTOR	number of sectors
MODE	mode type

**Drive A, Drive B** This category identifies the types of floppy disk drive A or drive B that have been installed in the computer.

None	No floppy drive installed
360K, 5.25 in	5.25" PC-type 360KB capacity
1.2M, 5.25 in	5.25" AT-type 1.2MB capacity
720K, 3.5 in	3.5" double-side 720KB capacity
1.44M, 3.5 in	3.5" double-side 1.44MB capacity
2.88M, 3.5 in	3.5" double-side 2.88MB capacity

**Floppy 3 Mode Support** This is the Japanese standard floppy drive. This standard stores 1.2MB in a 3.5" diskette.

**Video** This category selects the type of video adapter used for the primary system monitor. Although secondary monitors are supported, you do not have to select the type in Setup.

EGA/VGA	Enhanced Graphics Adapter/Video Graphics Array. For EGA, VGA, SEGA, SVGA or PGA monitor adapters.
CGA 40	Color Graphics Adapters, power up in 40 column mode.
CGA 80	Color Graphics Adapters, power up in 80 column mode.
MONO	Monochrome adapter, includes high resolution monochrome adapters.

**Halt On** This category determines whether the computer will stop if an error is detected during power up.

No errors	The system boot will not be stopped for any error that may be detected
All errors	When the BIOS detects a non-fatal error the system will be stopped and you will be prompted
All, But Keyboard	The system boot will not stop for a keyboard error, it will stop for all other errors
All, But Diskette	The system boot will not stop for a disk error, it will stop for all other errors
All, But Disk/Key	The system boot will not stop for a disk or keyboard error, it will stop for all other errors

**Memory** This category is displayed only which is determined by POST (Power On Self Test) of the BIOS.

**Base Memory** The POST will determine the amount of base (or conventional) memory installed in the system. The value of the base memory is typically 512K or 640K based on the memory installed on the mainboard.

**Extended Memory** How much extended memory is present during the POST. This is the amount of memory located above 1MB in the CPU's memory address map.

**Other Memory** This refers to the memory located in the 640K to 1024K address space. This is memory that can be used for different applications. DOS uses this area to load device drivers in an effort to keep as much base memory free for application programs. The BIOS is the most frequent user of this RAM area since this is where it shadows RAM.

3-2-2 BIOS Features Setup

This screen is a list of system configuration options. Some of them are defaults required by the mainboard's design, others depend on the features of your system.

ROM PCI/ISA BIOS (5200M)  
 BIOS FEATURES 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	: Enabled	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/MII CPUID	: Enabled
Gate A20 Option	: Fast		
Memory Parity/ECC Check	: Enabled		
Typematic Rate Setting	: Disabled		
Typematic Rate(Chars/Sec)	: 6		
Typematic Delay(Msec)	: 250	Esc : Quit	↑↓→←:Select Item
Security Option	: Setup	F1 : Help	PU/PD/+/- : Modify
PCI/VGA Palette Snoop	: Disabled	F5 : Old Values (SHIFT)	F2 : Color
OS Select for DRAM>64MB	: Non-OS2	F6 : Load BIOS Defaults	
Report No FDD For Win95	: No	F7 : Load Setup Defaults	
RTC Y2K Compliance	: Enabled		

***Virus Warning*** When this item is enabled, the Award BIOS will monitor the boot sector and partition table of the hard disk drive for any attempt at modification. If an attempt is made, the BIOS will halt the system and the following error message will appear.

Afterwards, if necessary, you will be able to run an antivirus program to locate and remove the problem before any damage is done.

<p><b>! WARNING !</b></p> <p>Disk boot sector is to be modified</p> <p>Type 'Y' to accept write or 'N' to abort write</p>
---

Award Software, Inc.	
Enabled	Activates automatically when the system boots up. If anything attempts to access the boot sector or hard disk, partition table will cause a warning message to appear.
Disabled	No warning message will appear when anything attempts to access the boot sector or hard disk partition table.

Many disk diagnostic 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 first disable Virus Protection beforehand.

**CPU Internal Cache, External Cache** These two categories speed up memory access. However, it depends on CPU/chipset design. The default value is ‘enabled’.

**Quick Power On Self Test** This category speeds up Power On Self Test after you power up the computer. If you set Enabled, BIOS will shorten or skip some items under check during POST.

**Boot Sequence** This category determines which drive to search first for System booting(i.e., DOS). The system will search those drives in order, Ex.: C, CDROM, A: System will first search for hard disk drive then CDROM drive, and the last is floppy disk drive.

Note: C is primary master; D is primary slave; E is secondary master, F is secondary slave.

**Swap Floppy Drive** This item allows you to determine whether to enable the swap floppy drive or not. The choice : Enabled/ Disabled

**Boot Up Floppy Seek** This item enabled, System will boot with floppy disk track verification: 40tracks/80 tracks. This item disabled, System will not search for the floppy disk type.

**Boot Up NumLock Status** This allows you to determine the default state of the numeric keypad. By default, the system boots up with NumLock on.

On	Keypad is for numeric keys
Off	Keypad is for arrow keys

**Gate A20 Option** The Gate A20 is a device used to address memory above 1MB. While Gate A20 support can be provided through keyboard, it is much faster for system chipset to provide Gate A20 support. To set “Normal” for keyboard, “Fast” for chipset.

**Memory Parity/ECC Check** Enabled, this item supports the SDRAM which has the Memory Parity/ECC Check functions.

**Typematic Rate Setting** This determines if the typematic rate is to be used. When disabled, continually holding down a key on your keyboard will generate only one key instance. In other words, the BIOS will only report that the key is down. When the typematic rate is enabled, the BIOS will report as before, but it will then wait a moment, and, if the key is still down, it will begin the report that the key has been depressed repeatedly. For example, you would use such a feature to accelerate cursor movements with the arrow keys. The choice : Enabled/Disabled

**Typematic Rate (Chars/Sec)** When the typematic rate is enabled, this item allows you to select the rate at which the keys are repeated. 6 means 6 characters per second.

**Typematic Delay (Msec)** When the typematic rate is enabled, this item allows you to select the delay between when the key was first depressed and when the acceleration begins. 250: 250 msec (500,750,1000)

**Security Option** This category allows you to limit access to the system and Setup, or just to Setup.

System	The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt
Setup	The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt

To disable the security, select PASSWORD SETTING at Main Menu, and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable the security. Once the security is disabled, the system will boot and you can enter Setup freely.

**PCI/VGA Palette Snoop** It determines whether the MPEG ISA/VESA VGA cards can work with PCI/VGA or not.

Enabled	When PCI/VGA working with MPEG ISA/VESA VGA Card
Disabled	When PCI/VGA not working with MPEG ISA/VESA VGA Card

**OS Select for DRAM > 64MB** This item allows you to access the memory that is over 64MB in OS/2. The choice : Non-OS2, OS2.

*Report No FDD For WIN 95* Set this item to Yes, BIOS will report FDD to Win95. If in standard CMOS setup, set Drive A to none and set this item to yes. Inside Win95, My Computer and File manager Disk(A:) will show Removable Disk (A:).

*RTC Y2K Compliance* “Enabled”, RTC (Real Time Clock)will pass the Y2K Compliance Test. “Disabled”, RTC will not pass the Y2K Compliance Test.

*Video BIOS Shadow* Determines whether video BIOS will be copied to RAM. However it is optional depending on chipset design. Video Shadow will increase the video speed. The choice : Enabled/Disabled

*C8000 – CBFFF Shadow; DC000 – DFFFF Shadow* These categories determine whether option ROMs will be copied to RAM. An example of such option ROM would be the support of onboard SCSI. The choice : Enabled/Disabled

*Cyrix 6x86/MII CPUID* “Enabled”, Cyrix 6x86/MII MMX function is active. “Disabled”, Cyrix 6x86/MII MMX function is Closed, so that NetWare System may run without interference.

3-2-3 Chipset Features Setup

This screen controls the setting for the chipset on the mainboard.

ROM PCI/ISA BIOS (5200M)			
CHIPSET FEATURES SETUP			
AWARD SOFTWARE, INC.			
Bank 0/1 DRAM Timing	: FP/EDO 70ns	OnChip USB	: enabled
Bank 2/3 DRAM Timing	: FP/EDO 70ns	USB Keyboard Support	: Disabled
Bank 4/5 DRAM Timing	: FP/EDO 70ns	Auto Detect DIMM/PCI Clk	: Enabled
SRAM Cycle Length	: 2	Spread Spectrum	: Disabled
DRAM Read Pipeline	: Disabled		
Sustained 3T Write	: Enabled		
Cache Rd+CPU Wt Pipeline	: Disabled		
Cache Timing	: Fast		
Video BIOS Cacheable	: Disabled		
System BIOS Cacheable	: Disabled		
Memory Hole At 15Mb Addr.	: Disabled		
AGP Aperture Size (MB)	: 64MB		
		Esc: Quit	:Select Item
		F1 : Help	PU/PD/+/-:Modify
		F5 : Old Values	(Shift)F2 :Color
		F6 :Load BIOS Defaults	
		F7 : Load Setup Defaults	

**Bank 0/1/2/3/4/5 DRAM Timing** The DRAM speed is controlled by the DRAM timing registers. The timing programmed into this register depends on the system design. Slower rates may be required in certain system designs to support loose layouts or slower memory. i.e. 60ns; 70ns

**SDRAM Cycle Length** You should select CAS latency time in HCLKS of 2/2 or 3/3. The system board designer should 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..

The choice : 2, .3

DRAM Read Pipeline Enable/Disable DRAM Read Pipeline Cycle.

Sustained 3T Write Enabled : set cache to write back mode.  
Disabled : set cache to write through mode.

Cache Rd+CPU Wt Pipeline Enable/Disable Cache Read Write cycle.

Cache Timing Fast : Better system performance will occur.

Video BIOS Cacheable Select Enabled allows caching of the video BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

System BIOS Select Enabled allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

Memory Hole At 15Mb Addr. In order to improve performance, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory below 16MB.

AGP Aperture Size (MB) Select the size of the AGP aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycle that hit the aperture range are forwarded to the AGP without any translation. See [www.agpforum.org](http://www.agpforum.org) for AGP information.

Onchip USB & USB Keyboard Support Enable/Disable USB. If USB is “Enabled”, “USB Keyboard” will appear for “Enabled/Disabled” option.

Auto Detec DIMM/PCI Clk If this item is enabled, the unused DIMM and PCI slot clock will be disabled. If this item is disabled the unused DIMM and PCI slot will still get the active clock signal.

Spread Spectrum Modulated Enable / Disable this item the BIOS will Enable / Disable the clock generator spread spectrum .



3-2-4 Power Management Setup

This screen controls the 'green' features of this mainboard.

ROM PCI/ISA BIOS (5200M)  
 POWER MANAGEMENT SETUP  
 AWARD SOFTWARE, INC.

Power Management	: User Defined	Primary INTR	: ON
PM Control by APM	: Yes	IRQ3 (COM2)	: Primary
Video Off Option	: Suspend ->OFF	IRQ4 (COM1)	: Primary
Video Off Method	: V/HSync+blank	IRQ5 (LPT 2)	: Primary
Modem Use IRQ	: 3	IRQ6 (Floppy Disk)	: Primary
Soft-Off by PWRBTN	: Delay 4 sec.	IRQ7 (LPT 1)	: Primary
** PM Timers	**	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 (Coprocessor)	: Disabled
LPT & COM	: LPT/COM	IRQ14 (Hard Disk)	: Primary
HDD & FDD	: ON	IRQ15 (Reserved)	: Disabled
DMA/master	: OFF	Esc: Quit	↑↓→← :Select Item
Modem Ring Resume	: Disabled	F1 : Help	PU/PD/+/- : Modify
RTC Alarm Resume	: Disabled	F5 : Old Values	(Shift) F2: Color
Date (of Month)		F6 : Load BIOS Defaults	
Timer (hh:mm:ss)		F7 : Load Setup Defaults	

**Power Management** This category allows you to select the type (or degree) of power saving and is directly related to the following modes : **Doze; Standby; Suspend; HDD Power Down.**

Min. Power Saving	Minimum power management. Doze =1hr.; Standby=1hr.; Suspend=1hr.; HDD Power Down=15min
Max. Power Saving	Maximum power management <b>only available for SL CPU.</b> Doze=1min.; Standby=1min.;Suspend=1min.;HDD Power Down=1min
User Defined	Allows you to set each mode individually. When not disabled, each of the ranges are from 1min. to 1hr. except for HDD Power Down which ranges from 1 to 15min. and disable

**If you would like to use Software Power-off Control function, you cannot choose “Disabled ”here, and should select “Yes” in PM Control by APM.**

**PM Control by APM**When enabled, an Advanced Power Management device will be activated to enhance the Max. Power Saving Mode and stop the CPU internal clock. If the Max.Power Saving is not enabled, this will be shown as NO.

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

Always On	Monitor will remain on during power saving modes.
Suspend	Monitor blanked when the systems enters the Suspend mode.
All Modes	Monitor blanked when the system enters any power saving mode.

**Video Off Method** This determines the manner in which the monitor is blanked.

V/H SYNC + Blank	This selection will cause the system to turn off the vertical and horizontal sync. ports and write blanks to the video buffer
Blank Screen	This option only writes blanks to the video buffer
DPMS	Initial display power management signaling

**MODEM Use IRQ** This item determines the IRQ in which the MODEM can be used. The choice : 3,4,5,7,9,10,11,NA.

**Soft-Off by PWR-BTTN** Instant-off : When push the power button, the system power will be off immediately. Delay 4 sec : when push the power button, it will enter suspend mode. We need to push the power button and hold for 4 seconds to turn off the power.

*The Following 4 modes are Green PC power saving functions which are only user configurable when 'User Defined' power management has been selected.*

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

**Doze Mode** When enabled and after the set time of system inactivity, the CPU clock will run at slower speed while all other devices will operate at full speed.

**Suspend Mode** When enabled and after the set time of system inactivity, all devices except the CPU will be shut off.

**VGA/LPT & COM** These are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system

**HDD & FDD/ DMA/master** from such a mode. In fact, the system remains alert for anything which occurs on a device which is configured as on, even when the system is in a password down mode. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ(Interrupt ReQuest) to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service. When set to off, activity will neither prevent the system from going into a power management mode nor awaken it.

**Modem Ring Resume** Enabled : when system in suspend mode, it can be wake up by modem. Disabled : it cannot be wake up by modem.

**RTC Alarm Resume** When enabled, two additional lines will be added to the screen for user's setup: Date (of Month) Alarm; Timer (hh:mm:ss) . After power off, the system will automatically power on at the specified date and time.

**Primary INTR** It enables/disables the IRQ3 to IRQ15 PM events. If Enabled, IRQ3 to IRQ15 will appear for user's setup.

**3-2-5 PNP/PCI Configuration**

This screen configures the PCI Bus slots.

ROM PCI/ISA BIOS (5200M)  
 PNP/PCI CONFIGURATION  
 AWARD SOFTWARE, INC.

PNP OS Installed	: No	CPU to PCI Write Buffer	: Enabled
Resources Controlled by	: Auto	PCI Dynamic Bursting	: Disabled
Reset Configuration Data	: Disabled	PCI Master 0 WS Write	: Enabled
		PCI Delay Transaction	: Disabled
IRQ-3 assigned to	: PCI/ISA PnP	PCI Master Read Prefetch	: Disabled
IRQ-4 assigned to	: PCI/ISA PnP	PCI#2 Access #1 Retry	: Disabled
IRQ-5 assigned to	: PCI/ISA PnP	AGP Master 1 WS Write	: Disabled
IRQ-7 assigned to	: PCI/ISA PnP	AGP Master 1 WS Read	: Disabled
IRQ-10 assigned to	: PCI/ISA PnP	Assign IRQ For USB	: Enabled
IRQ-11 assigned to	: PCI/ISA PnP	Assign IRQ For VGA	: Disabled
IRQ-12 assigned to	: PCI/ISA PnP		
IRQ-14 assigned to	: PCI/ISA PnP	Esc: Quit	↑↓→← :Select Item
IRQ-15 assigned to	: PCI/ISA PnP	F1 : Help	PU/PD/+/- : Modify
DMA-0 assigned to	: PCI/ISA PnP	F5 : Old Values	(Shift) F2: Color
DMA-1 assigned to	: PCI/ISA PnP	F6 : Load BIOS Defaults	
DMA-3 assigned to	: PCI/ISA PnP	F7 : Load Setup Defaults	
DMA-5 assigned to	: PCI/ISA PnP		

**PNP OS Installed** This item allows you to choose PnP OS or not. If “Yes”, OS will carry out PnP and BIOS will not. If “No”, OS will not do PnP, but BIOS will.

**Resources Controlled by** If “PnP OS Installed” is set “No”, the Award Plug and Play BIOS has the capability to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play OS such as Windows 95. Choices are Auto and Manual.

**Reset Configuration Data** This item allows you to determine whether to reset the configuration data or not.

**ACPI I/O Device Node** Enable : reserve a node in memory for ACPI.

**CPU to PCI Write Buffer** Enable/Disable CPU to PCI POST Write.

**PCI Dynamic Bursting** Enable/Disable PCI burst operation.

**PCI Master 0 WS Write** Enable : PCI Master 0 wait state mode.  
Disable : PCI Master 1 wait state mode.

**PCI Delay Transaction** This chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select “enabled” to support compliance with PCI specification version 2.1.

The choice : Enabled, disabled

**PCI Master Read Prefetch** Enable : always prefetch  
Disable : prefetch only if enhance command

**PCI#2 Access #1 Retry** Disable : PCI#2 will be disconnected until access finished  
Enable : PCI#2 will be disconnected if max. retries are attempted without success.

**AGP Master 1 WS Write** Enable/Disable AGP master one wait state write.

**AGP Master 1 WS Read** Enable/Disable AGP master one wait state read.

**Assign IRQ for USB** When this items is enabled, the system will assign an IRQ for USB. If this item is disabled, the USB will not occupy an IRQ; therefore the IRQ of USB will be released for other usage.

**Assign IRQ for VGA** When this items is enabled, the system will assign an IRQ for VGA. If this item is disabled, the VGA will not occupy an IRQ; therefore the IRQ of VGA will be released for other usage.

**3-2-6 Integrated Peripherals**

This section page includes all the items of IDE hard drive and Programmed Input/Output features. See also Section “Chipset Features Setup”.

ROM PCI/ISA BIOS (5200M)  
 INTEGRATED PERIPHERALS  
 AWARD SOFTWARE, INC.

OnChip IDE First Channel	: Enabled	Onboard Parallel Port	:378/IRQ7
OnChip IDE Second Channel	: Enabled	Onboard Parallel Mode	:SPP
IDE Prefetch Mode	: Disabled	ECP Mode Use DMA	: 3
IDE HDD Block Mode	: Disabled	Parallel Port EPP Type	: EPP1.9
IDE Primary Master PIO	: Auto		
IDE Primary Slave PIO	: Auto		
IDE Secondary Master PIO	: Auto		
IDE Secondary Slave PIO	: Auto		
IDE Primary Master UDMA	: Disabled		
IDE Primary Slave UDMA	: Disabled		
IDE Secondary Master UDMA	: Disabled		
IDE Secondary Slave UDMA	: Disabled		
Init Display First	: PCI Slot		
Onboard FDD Controller	: Enabled		
Onboard Serial Port 1	: 3F8/IRQ4	Esc: Quit	↑↓→← :Select Item
Onboard Serial Port 2	: 2F8/IRQ3	F1 : Help	PU/PD/+- : Modify
UART 2 Mode	: Standard	F5 : Old Values	(Shift) F2: Color
IR Function Duplex	: Full	F6 : Load BIOS Defaults	
RxD, TxD Active	: Hi, Hi	F7 : Load Setup Defaults	

**OnChip IDE First Channel** These 2 items allow you to either enable or disable the primary/secondary controller. You might choose to **OnChip IDE Second Channel** disable the controller if you were to add higher performance or specialized controller.

**IDE Prefetch Mode** Enable/Disable IDE Read Prefetch Buffer.

**IDE HDD Block Mode** This allows your HD controller to use the fast block mode to transfer data to and from your HDD drive

Enabled	IDE controller uses block mode
Disabled	IDE controller uses standard mode

- IDE Primary Master/Slave PIO PIO (Programmed Input/Output) allows the BIOS to tell the controller what it wants and then let the controller and the CPU to complete the task by themselves.
- IDE Secondary Master/Slave PIO This is simpler and more faster. Your system supports five modes, 0 - 4, which primarily differ in timing. When **Auto** is selected, the BIOS will select the best available mode. **Auto**, will support the Ultra DMA function.
- IDE Primary Master/Slave UDMA Disabled, will not support the Ultra DMA function.
- IDE Secondary Master/Slave UDMA
- Init AGP Display First “Enabled”, this item will activate the AGP in the multi-display environment it displayed, if “disabled”, and the system has both AGP and PCI VGA card, the AGP monitor will not display.
- KBC input clock Let user change the keyboard working clock.
- On Board FDC Controller This item will enable or disable the floppy disk controller.
- On Board UART Port 1 User can select serial port IRQ. If set to 3F8/IRQ4, system will assign an IRQ for it. Note : set to Auto is not recommended.
- On Board UART Port 2 User can select serial port IRQ. If set to 2F8/IRQ3, system will assign an IRQ for it. Note : set to Auto is not recommended.
- OnBoard UART 2 Mode This lets you select the Infrared mode. Choices are Standard, HPSIR, and ASKIR. If you choose HPSIR or ASKIR mode, the screen will show another two lines to let you choose ‘IR Function Duplex’ (Full or Half) and ‘RxD TxD Active’ (Hi Lo; Lo Hi; Hi Hi;Lo Lo).
- On Board Parallel Port Let user select IRQ for parallel port. When Disabled, the parallel port will be disabled
- On Board Parallel Mode Let user select Error Check Mode. Default is recommended not to be changed except that user has special request.
- ECP Mode Select a DMA channel for the port.
- Use DMA Choices are 3, 1.

**3-2-7 IDE HDD Auto Detection**

This allows you to detect the IDE hard disk drivers' parameters and enter them into 'Standard CMOS Setup' automatically. If the auto-detected parameters display on screen do not match the ones that should be used for your hard drive, do not accept them. Press <N> to reject the values and enter the correct ones manually on the Standard CMOS Setup screen.

ROM PCI/ISA BIOS (5200M)  
CMOS SETUP UTILITY  
AWARD SOFTWARE, INC.

Hard Disks	Type	Size	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master :								
Select Primary Master Option (N=Skip) : N								
<u>Options</u>	<u>Size</u>	<u>CYLS</u>	<u>Head</u>	<u>PRECOMP</u>	<u>LANDZ</u>	<u>Sector</u>	<u>Mode</u>	
2(Y)	1337	648	64	0	2594	63	LBA	
1	1339	2595	16	65535	2594	63	NORMAL	
3	1338	1297	32	65535	2594	63	LARGE	
Note : Some OSes (like SCO-UNIX) must use "Normal" for installation								
ESC : Skip								

**3-2-8 LOAD BIOS DEFAULTS**

When your mainboard has problems and needs to troubleshoot the system, you can use this function. When "Load BIOS Default" is highlighted and you press "Enter", the default values will be re-loaded to the "BIOS Features Setup", "Chipset Features Setup", "Power Management Setup" and "PNP/PCI Configuration Setup". No effect will be caused on the "Standard CMOS Setup".



### **3-2-9 LOAD SETUP DEFAULTS**

This allows you to load optimal settings which are stored in the BIOS ROM. To load the default values, highlight “Load Setup Defaults” and press “Enter. Then Setup Defaults values will be re-loaded to “BIOS Features Setup”, “Chipset Features Setup”, “Power Management Setup” and “PNP/PCI Configuration Setup”. There is no effect on the Standard CMOS Setup.

### **3-2-10 SUPERVISOR PASSWORD / USER PASSWORD**

This allows you to set the password. The mainboard defaults with password disabled.

**Enter/Change password :** Enter the current password, at the prompt, key-in your new password (up to eight alphanumeric characters), press <Enter>. At the next prompt, confirm the new password by typing it again and press <Enter>.

**Disable password :** Press the <Enter> key instead of entering a new password when the ‘Enter Password’ dialog box appears. A message will appear confirming that the password is disabled.

If you set both supervisor and user passwords, only the supervisor password allows you to enter the BIOS SETUP program.

<p><b>Reminder:</b> If you forget your password, you must disable the CMOS by turning power off and set JP 8 ‘Closedd‘and then set JP8 “open” again to reload the system.</p>
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### **3-2-11 SAVE & EXIT SETUP**

This allows you to save the new setting values in the CMOS memory and continue with the booting process. Select what you want to do, press <Enter>.

### **3-2-12 EXIT WITHOUT SAVING**

This allows you to exit the BIOS setup utility without recording any new values or changing old ones.

**Control Key Description ※**

UP ARROW	↑	Move to previous item
DOWN ARROW	↓	Move to next item
LEFT ARROW	←	Move to the item in the left hand
RIGHT ARROW	→	Move to the item in the right hand
Esc KEY	Esc	Main Menu : Quit and not save changes Setup menu : Exit current page and return to main menu
PgUp KEY		Increase the numeric value or make changes
PgDn KEY		Decrease the numeric value or make changes
F1 KEY	Help	General help
F2 KEY	< Shift > +F2	Change color from total 16 colors
F5 KEY	Old Value	Restore the pervious CMOS value from CMOS
F6 KEY	Load BIOS default	Load the default CMOS value from BIOS default table
F7 KEY	Load setup default	Load Setup default
F10 KEY	Save & Exit Setup	Save all the CMOS changes and Exit setup, only for Main Menu