

# MSI

MICRO-STAR INTERNATIONAL

## MS-6380 LE2 ATX Mainboard



**Version 2.0**  
**G52-MA00461**

Manual Rev: 2.0

Release Date: September 2001



### **FCC-B Radio Frequency Interference Statement**

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

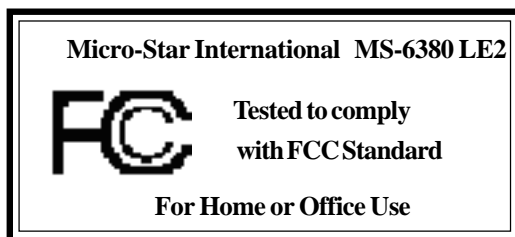
#### **Notice 1**

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

#### **Notice 2**

Shielded interface cables and A.C. power cord, if any, must be used in order to comply with the emission limits.

**VOIR LA NOTICE D'INSTALLATION AVANT DE RACCORDER AU RESEAU.**



## **Edition**

September 2001

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## **Revision History**

<b>Revision</b>	<b>Revision History</b>	<b>Date</b>
2.0	First release for PCB 2.X	September 2001

## Safety Instructions

1. Always read the safety instructions carefully.
2. Keep this User's Manual for future reference.
3. Keep this equipment away from humidity.
4. Lay this equipment on a reliable flat surface before setting it up.
5. The openings on the enclosure are for air convection hence protects the equipment from overheating. **DO NOT COVER THE OPENINGS.**
6. Make sure the voltage of the power source and adjust properly 110/220V before connecting the equipment to the power inlet.
7. Place the power cord such a way that people can not step on it. Do not place anything over the power cord.
8. Always Unplug the Power Cord before inserting any add-on card or module.
9. All cautions and warnings on the equipment should be noted.
10. Never pour any liquid into the opening that could damage or cause electrical shock.
11. If any of the following situations arises, get the equipment checked by a service personnel:
  - The power cord or plug is damaged
  - Liquid has penetrated into the equipment
  - The equipment has been exposed to moisture
  - The equipment has not work well or you can not get it work according to User's Manual.
  - The equipment has dropped and damaged
  - If the equipment has obvious sign of breakage
12. **DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT UNCONDITIONED, STORAGE TEMPERATURE ABOVE 60°C (140°F), IT MAY DAMAGE THE EQUIPMENT.**



**CAUTION:** Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.

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# *Introduction*

# *1*

The MS-6380 LE2 series ATX mainboards are high-performance computer mainboards based on **VIA® Apollo KT266A** chipset and designed for the **AMD® Athlon™, Athlon XP or Duron™** (PGA) processor for inexpensive business/personal desktop markets.

This chapter includes the following topics:

Mainboard Specification	1-2
Mainboard Layout	1-4
Quick Components Guide	1-5
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Back Panel	1-8

## **Chapter 1**

# **Mainboard Specification**

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### **CPU**

- Supports Socket A (Socket-462) for AMD® Athlon™/Athlon XP/Duron™ processor
- Supports 800MHz up to 1800+ MHz processor

### **Chipset**

- VIA® VT8366A chipset (552 BGA)
  - FSB @200/266MHz
  - AGP 4X and PCI Advanced high performance memory controller
- VIA® VT8233 chipset (376 BGA)
  - High Bandwidth V-link Client controller
  - Integrated Faster Ethernet LPC (Optional CNR card support)
  - Integrated Hardware Sound Blaster/Direct Sound AC97 audio
  - Ultra DMA 33/66/100 master mode PCI EIDE controller
  - ACPI

### **Clock Generator**

- 100/133MHz clocks are supported.

### **MainMemory**

- Supports six memory banks using three 184-pin DDR DIMMs
- Supports a maximum memory size up to 3GB
- Supports 2.5v DDR SDRAM DIMM

### **Slots**

- One AGP slot
  - AGP (Accelerated Graphics Port) specification compliant
  - Supports AGP 2.0 1x/2x/4x
- One CNR (Communication Network Riser) slot
- Five 32-bit Master PCI Bus slots
- Supports 3.3V/5V PCI bus Interface

### **On-BoardIDE**

- An IDE controller on the VIA® VT8233 chipset provides IDE HDD/CD-ROM with PIO, Bus Master and Ultra DMA 33/66/100 operation modes
- Can connect up to 4 IDE devices

**Audio**

- Chip integrated (2 channel S/W audio)
  - Direct Sound AC97 Audio

**On-Board Peripherals**

- On-Board Peripherals include:
  - 1 floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88Mbytes
  - 2 serial ports (COMA + COMB)
  - 1 parallel port supporting SPP/EPP/ECP mode
  - 6 USB ports (2 from rear ports/4 from USB header)
  - 1 IrDA connector for SIR/ASKIR/HPSIR
  - 1 Audio/Game port
  - 1 D-Bracket™ header

**BIOS**

- The mainboard BIOS provides “Plug & Play” BIOS which detects the peripheral devices and expansion cards of the board automatically.
- The mainboard provides a Desktop Management Interface (DMI) function which records your mainboard specifications.

**Dimension**

- ATX Form Factor (30.4 cm X 23.5 cm)

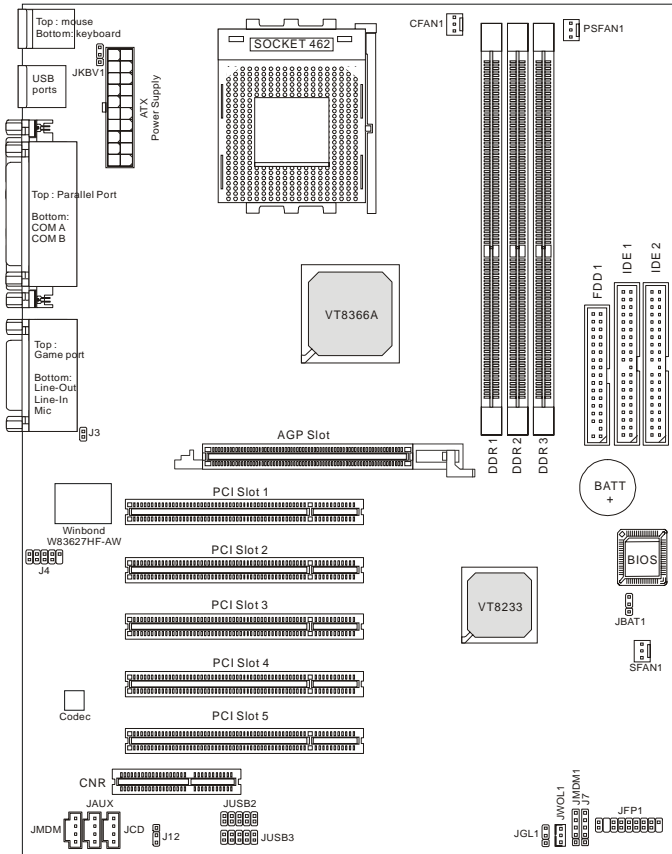
**Mounting**

- 6 mounting holes



## Chapter 1

# Mainboard Layout



**MS-6380 LE2 ATX Mainboard**

## Quick Components Guide


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Component	Function
DDR1~3	Installing DDR SDRAM modules
Socket 462	Installing CPU
CFAN1	Connecting to CPUFAN
SFAN1	Connecting to SYSTEM FAN
PSFAN1	Connecting to Power Supply FAN
ATX Power Supply	Installing power supply
IDE1 & IDE2	Connecting to IDE hard disk drive
FDD1	Connecting to floppy disk drive
JUSB1~3	Connecting to USB interfaces
PCI Slot 1~5	Installing expansion cards
AGP Slot	Installing AGP cards
CNR Slot	Installing expansion cards
JMDM1	Connecting to modem module
JWOL1	Connecting to LAN card
JBAT1	Clearing CMOS data
JFP1	Connecting to case
JGL1	Connecting to power saving LED
J7	Connecting to IR module
J3	Connecting to chassis intrusion switch
J4	Connecting to D-Bracket™
JKBV1	Enabling PS/2 Keyboard/Mouse/ <b>Rear USB</b> wake up function
J12	Enabling <b>Front USB</b> device wake up function
JCD	Connecting to CD-ROM audio connector
JAUX	Connecting to Line-in connector of DVD add-on card
JMDM	Connecting to internal audio connector of modem


## Chapter 1

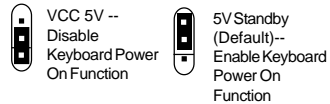
# Jumpers & Connectors


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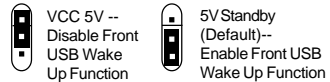
**JBAT1**  A battery must be used to retain the mainboard configuration in CMOS RAM. Short 1-2 pins of JBAT1 to store the CMOS data.



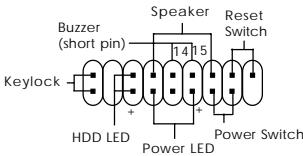
**JKBV1**  This is used to set the PS/2 Keyboard/Mouse & **Rear** USB wake-up (power on) function.




**J12**  This is used to set the **Front** USB device wake-up (power on) function.




**JFP1**




The Keylock, Power Switch, Reset Switch, Power LED, Speaker, and HDD LED are all connected to the JFP1 connector block. If Onboard Buzzer is available, then: **Always short pin 14-15** to enable Onboard Buzzer

**JMDM1**  The JMDM1 connector is for use with Modem add-on card that supports the Modem Wake Up function.


5VSB  
NC  
MDM\_WAKEUP  
GND  
NC

**JWOL1**  The JWOL1 connector is for use with LAN add-on card that supports Wake Up on LAN function.

MP\_WAKEUP  
GND  
5VSB


**J7**  This connector is for optional wireless transmitting and receiving infrared module.


IRTX  
GND  
IRRX  
NC  
VCC

**JGL1**  Attach a power saving LED to JGL1.

GND  
Suspend LED  
PLED1

## ***Introduction***

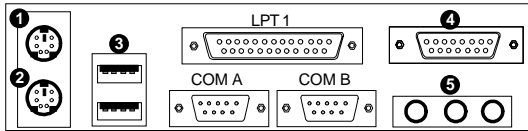
**J3**  Connect a 2-pin chassis intrusion switch to the connector.

**J4**  Connect to OPTIONAL D-Bracket™.

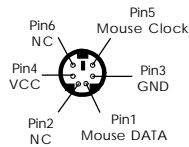
## Chapter 1

# Back Panel

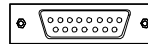
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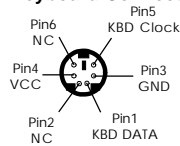
### 1 Mouse Connector



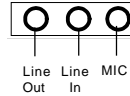
### 4 Joystick/MIDI



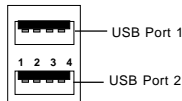
### 2 Keyboard Connector



### 5 Audio Ports



### 3 USB Ports



PIN	SIGNAL
1	VCC
2	-Data
3	+Data
4	GND

---

# AMI® BIOS Setup

# 2

The mainboard uses AMI® BIOS ROM that provides a Setup utility for users to modify the basic system configuration. The information is stored in a battery-backed CMOS RAM so it retains the Setup information when the power is turned off.

The chapter contains the following topics:

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Selecting the First Boot Device	2-2
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## Chapter 2

# Entering Setup

---

Power on the computer and the system will start POST (Power On Self Test) process. When the message below appears on the screen, press <DEL> key to enter Setup.

DEL:Setup      F11:Boot Menu      F12:Network boot      TAB:Logo

If the message disappears before you respond and you still wish to enter Setup, restart the system by turning it OFF and On or pressing the RESET button. You may also restart the system by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys.

# Selecting the First Boot Device

---

You are allowed to select the 1st boot device without entering the BIOS setup utility by pressing <F11>. When the same message as listed above appears on the screen, press <F11> to trigger the boot menu.

The POST messages might pass by too quickly for you to respond in time. If so, restart the system and press <F11> after around 2 or 3 seconds to activate the boot menu similar to the following.

Select First Boot Device		
Floppy	:	1st Floppy
IDE-0	:	IBM-DTLA-307038
CDROM	:	ATAPI CD-ROM DRIVE 40X M
[Up/Dn] Select	[RETURN] Boot	[ESC] cancel

The boot menu will list all the bootable devices. Select the one you want to boot from by using arrow keys and then pressing <Enter>. The system will boot from the selected device. The selection will not make changes to the settings in the BIOS setup utility, so next time when you power on the system, it will still use the original first boot device to boot up.

## Control Keys

---

<↑>	Move to the previous item
<↓>	Move to the next item
<←>	Move to the item in the left hand
<→>	Move to the item in the right hand
<Enter>	Select the item
<Esc>	Jumps to the Exit menu or returns to the main menu from a submenu
<+/PU>	Increase the numeric value or make changes
<-/PD>	Decrease the numeric value or make changes
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load High Performance defaults, only for Option Page Setup Menu
<F7>	Load BIOS Setup defaults
<F10>	Save all the CMOS changes and exit

## Getting Help

---

After entering the Setup utility, the first screen you see is the Main Menu.

### Main Menu

The main menu displays the setup categories the BIOS supplies. You can use the arrow keys (↑↓) to select the item. The on-line description for the selected setup category is displayed on the bottom of the screen.

### Default Settings

The BIOS setup program contains two kinds of default settings: the BIOS Setup and High Performance defaults. BIOS Setup defaults provide stable performance settings for all devices and the system, while High Performance defaults provide the best system performance but may affect the system stability.

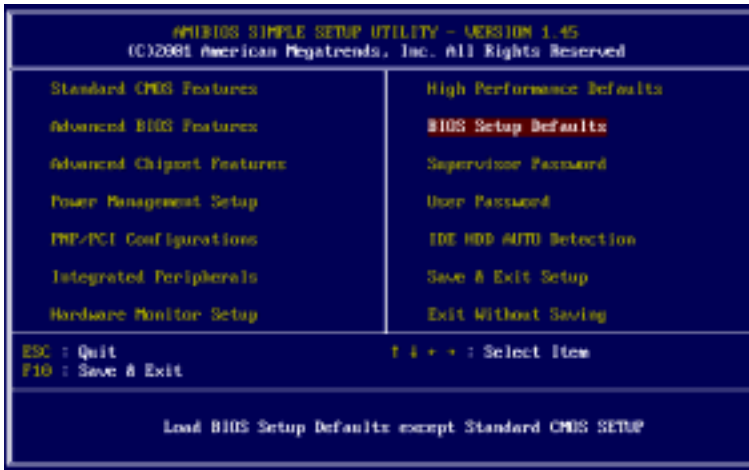


## Chapter 2

# The Main Menu

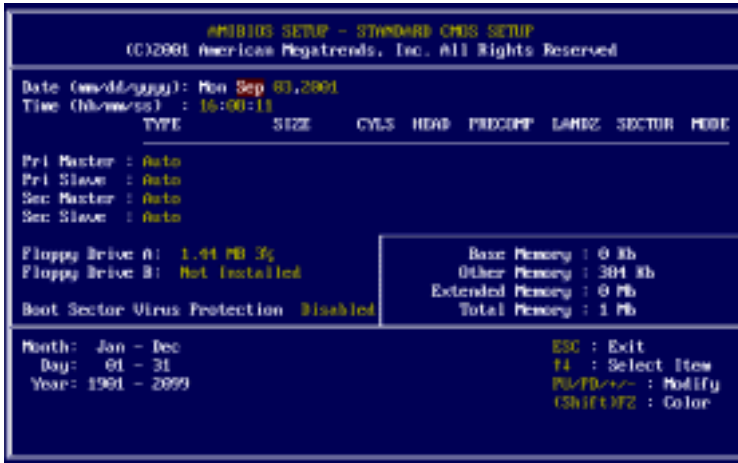
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Once you enter AMIBIOS SIMPLE SETUP UTILITY, the Main Menu will appear on the screen. The Main Menu displays twelve configurable functions and two exit choices. Use arrow keys to move among the items and press <Enter> to enter the sub-menu.



## Standard CMOS Features

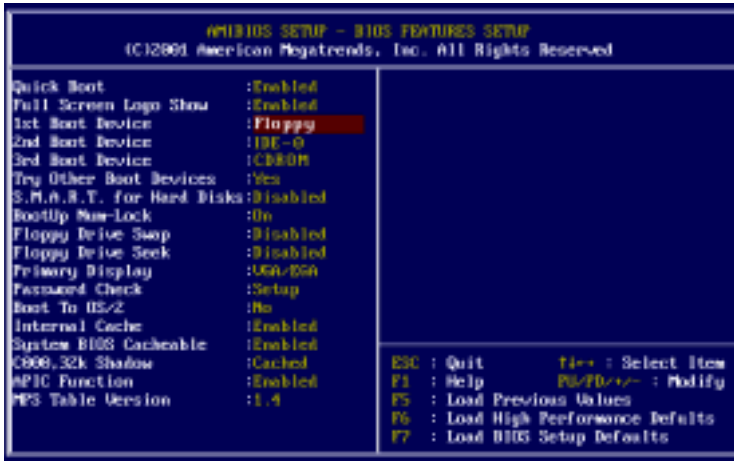
The items inside STANDARD CMOS SETUP menu are divided into 9 categories. Each category includes none, one or more setup items. Use the arrow keys to highlight the item you want to modify and use the <PgUp> or <PgDn> keys to switch to the value you prefer.



## Chapter 2

# Advanced BIOS Features


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## Advanced Chipset Features

---



 *Note: Change these settings only if you are familiar with the chipset.*

## Chapter 2

# Power Management Setup

---

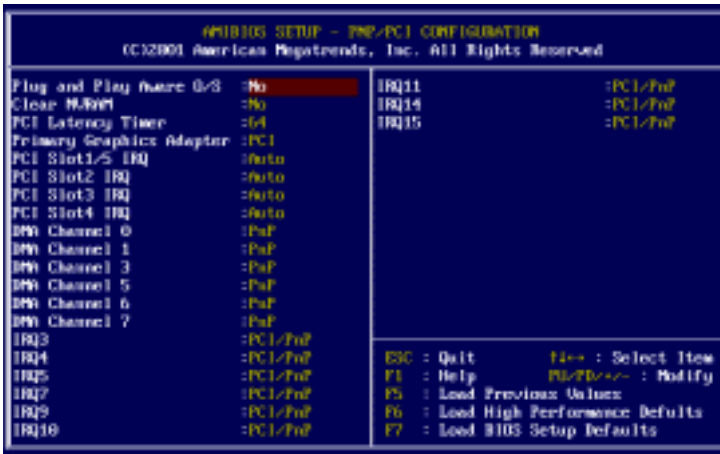
#MBIOS SETUP - POWER MANAGEMENT SETUP			
(C)2001 American Megatrends, Inc. All Rights Reserved			
APM Function	:Yes	After AC Power Loss	:Power-Off
ACPI Standby State	:S1/POS	Wake Up On Ring/LAN	:Enabled
Call VGA at S3 Resuming	:Disabled	Wake Up On PME	:Enabled
USB Wakeup From S3	:Disabled	Resume By Alarm	:Disabled
Power Management/APP	:Enabled	Alarm Rate	:15
Power/Sleep LED	:Single LED	Alarm Hour	:12
Suspend Time Out (Minute)	:Disabled	Alarm Minute	:30
Display Activity	:Ignore	Alarm Second	:30
IRQ3	:Monitor		
IRQ4	:Monitor		
IRQ5	:Ignore		
IRQ7	:Monitor		
IRQ9	:Ignore		
IRQ10	:Ignore		
IRQ11	:Ignore		
IRQ13	:Ignore		
IRQ14	:Monitor		
IRQ15	:Ignore		
CPU Critical Temperature	:Disabled		
Power Button Function	:On/Off		

ESC	: Quit	F4	: Select Item
F1	: Help	F5/F6/+/<	: Modify
F5	: Load Previous Values		
F6	: Load High Performance Defaults		
F7	: Load BIOS Setup Defaults		

## PNP/PCI Configurations

This section describes configuring the PCI bus system and PnP (Plug & Play) feature. PCI, or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.



## Chapter 2

# Integrated Peripherals

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#BIOS SETUP - INTEGRATED PERIPHERALS			
(C)2001 America Megatronics, Inc. All Rights Reserved			
FDC Function	:Auto	USB Controller	:All USB Port
Serial Port1	:Auto	USB Legacy Support	:Disabled
Serial Port2	:Auto	Port 64/66 Emulation	:Disabled
Serial Port2 Mode	:Normal		
IR Duplex Mode	:Half Duplex		
IR Pin Select	:IRRX/IRTX		
Parallel Port	:Auto		
Port Mode	:ECP		
EPP Version	:N/A		
IRQ	:Auto		
DMA Channel	:Auto		
Onboard MIDI Port	:Disabled		
MIDI IRQ Select	:5		
Onboard Game Port	:000		
Keyboard PowerOn Function	:Disabled		
Specific Key for PowerOn	:N/A	ESC : Quit	F4++ : Select Item
Mouse PowerOn Function	:Disabled	F1 : Help	PG/PB+/- : Modify
Onboard IDE	:Both	F5 : Load Previous Values	
AC'97 Audio	:Enabled	F6 : Load High Performance Defaults	
PC'97 Modem	:Auto	F7 : Load BIOS Setup Defaults	

## Hardware Monitor Setup

This section describes how to set the Chassis Intrusion feature, CPU FSB frequency, monitor the current hardware status including CPU/system temperatures, CPU/System Fan speeds, Vcore etc. Monitor function is available only if there is hardware monitoring mechanism onboard.

#MIBIOS SETUP - Hardware Monitor Setup (C)2001 American Megatrends, Inc. All Rights Reserved		
Spread Spectrum	+0.25 %	+50 SB 4.848 U
CPU FSB Clock	133MHz	
CPU FSB/PCI Overclocking	H/W	
CPU Ratio	Auto	
CPU Ucore (U)	Auto	
DDR Voltage (U)	Auto	
Chassis Intrusion	Disabled	
CPU Temperature	206°C/406°F	
System Temperature	51°C/123°F	
CPU Fan Speed	5113 RPM	
System Fan Speed	8 RPM	
Power Fan Speed	8 RPM	
Ucore	1.776 U	
Ubt	1.248 U	
Uio	3.264 U	
+ 5.000U	4.975 U	
+12.000U	12.471 U	
-12.000U	-12.317 U	
- 5.000U	-5.177 U	
Battery	3.168 U	
		ESC : Quit      F10 : Select Item
		F1 : Help      F2/F3/F4 : Modify
		F5 : Load Previous Values
		F6 : Load High Performance Defaults
		F7 : Load BIOS Setup Defaults

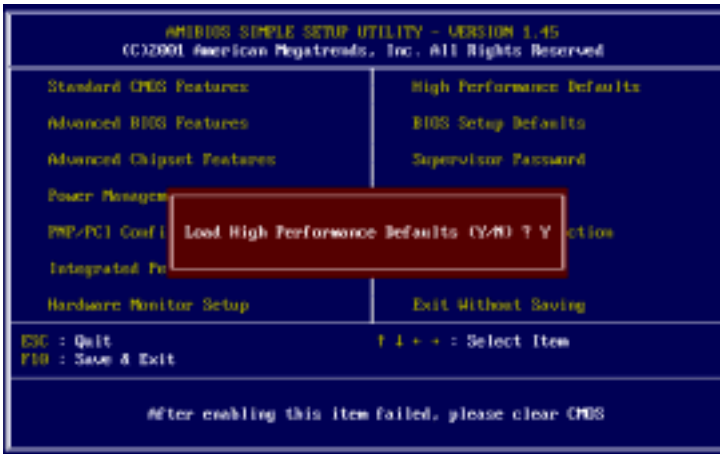


## Chapter 2

# High Performance/BIOS Setup Defaults

The two options on the main menu allow users to restore all of the BIOS settings to High Performance defaults or BIOS Setup defaults. The High Performance Defaults are the default values set by the mainboard manufacturer for the best system performance but probably will cause a stability issue. The BIOS Setup Defaults are the default values also set by the mainboard manufacturer for stable performance of the mainboard.

When you select High Performance Defaults, a message as below appears:



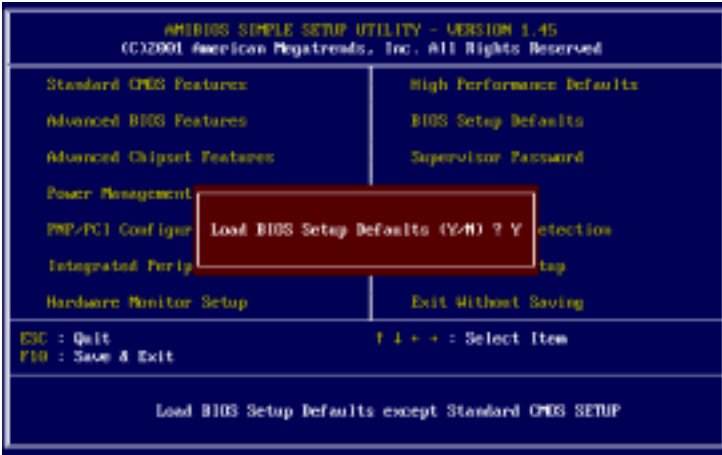
Pressing ‘Y’ loads the default BIOS values that enable the best system performance but may lead to a stability issue.



### WARNING!

*The option is for power or overclocking users only. Use of high performance defaults will tighten most timings to increase the system performance. Therefore, a high-end system configuration is a must, which means you need high-quality VGA adapter, RAM and so on. **We don't recommend that users should apply the high performance defaults in their regular systems.** Otherwise, the system may become unstable or even crash. If the system crashes or hangs after enabling the feature, please **CLEAR CMOS DATA** to resolve the problem. For more information, refer to “Clear CMOS Jumper:JBAT1” on page 1-6.*

When you select BIOS Setup Defaults, a message as below appears:



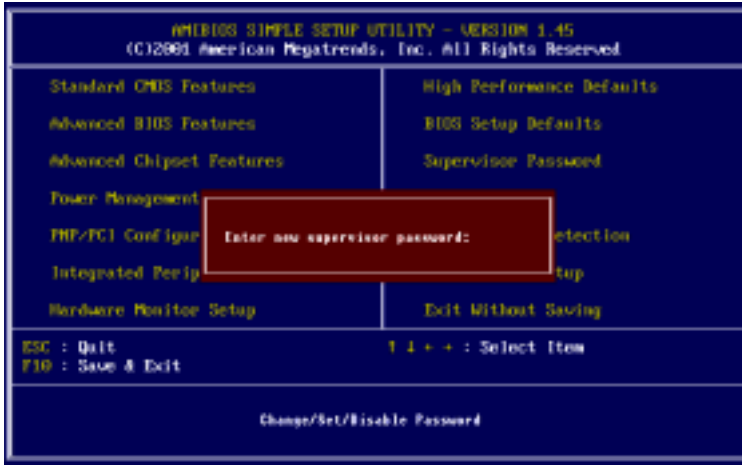
Pressing 'Y' loads the default values that are factory settings for stable system performance.

## Chapter 2

# Supervisor/User Password

---

When you select this function, a message as below will appear on the screen:



Type the password, up to six characters in length, and press <Enter>. The password typed now will replace any previously set password from CMOS memory. You will be prompted to confirm the password. Retype the password and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To clear a set password, just press <Enter> when you are prompted to enter the password. A message will show up confirming the password will be disabled. Once the password is disabled, the system will boot and you can enter Setup without entering any password.

When a password has been set, you will be prompted to enter it every time you try to enter Setup. This prevents an unauthorized person from changing any part of your system configuration.

Additionally, when a password is enabled, you can also have AMIBIOS to request a password each time the system is booted. This would prevent unauthorized use of your computer. The setting to determine when the password

prompt is required is the PASSWORD CHECK option of the ADVANCED BIOS FEATURES menu. If the PASSWORD CHECK option is set to *Always*, the password is required both at boot and at entry to Setup. If set to *Setup*, password prompt only occurs when you try to enter Setup.



***About Supervisor Password & User Password:***

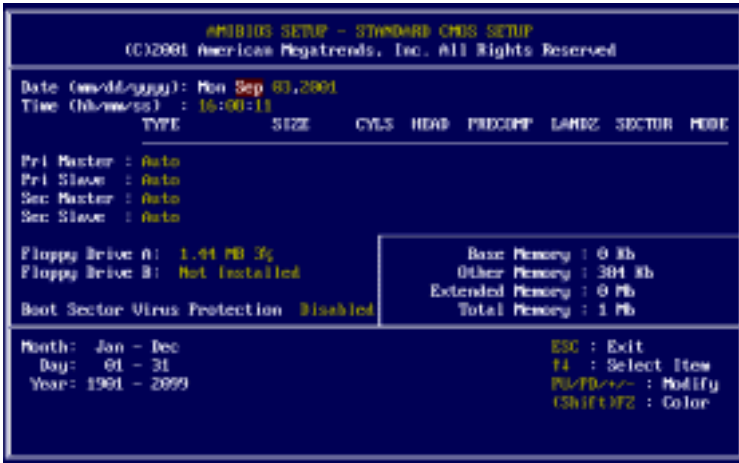
*Supervisor password:* Can enter and change the settings of the setup menu.

*User password:* Can only enter but do not have the right to change the settings of the setup menu.

## Chapter 2

# IDE HDD AUTO Detection

You can use this utility to AUTOMATICALLY detect the characteristics of most hard drives.



## Save & Exit Setup

---

When you want to quit the Setup menu, you can select this option to save the changes and quit. A message as below will appear on the screen.



Typing *Y* will allow you to quit the Setup Utility and save the user setup changes to RTC CMOS.

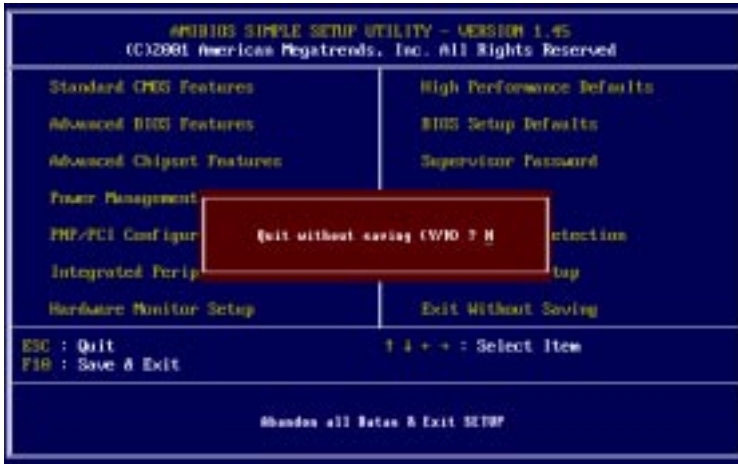
Typing *N* will return to the Setup Utility.

## Chapter 2

# Exit Without Saving

---

When you want to quit the Setup menu, you can select this option to abandon the changes. A message as below will appear on the screen.



Typing *Y* will allow you to quit the Setup Utility without saving any changes to RTCCMOS.

Typing *N* will return to the Setup Utility.