

# **MB-540P**

**PCI BUS PENTIUM  
GREEN MOTHERBOARD**



**USER'S MANUAL**



# **MB-540P**

## **PCI BUS PENTIUM GREEN MOTHERBOARD**

### **USER'S MANUAL**

**VER: 1.0**

Copyright 1995 Publishing. All Rights Reserved.

This manual and the software and firmware described in it are copyrighted by their respective owners and protected under the laws of the Universal Copyright Convention. You may not reproduce, transmit, transcribe, store in a retrieval system, or translate into any language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, biological, molecular, manual, or otherwise, any part of this publication without the express written permission of the publisher.

All products and trade names described within are mentioned for identification purpose only. No affiliation with or endorsement of the manufacturer is made or implied. Product names appearing in this manual are registered trademarks of their respective companies.

The information published herein has been checked for accuracy as of publishing time. No representation or warranties regarding the fitness of this document for any use are made or implied by the publisher. We reserve the right to revise this document or make changes in the specifications of the product described therein at any time without notice and without obligation to notify any person of such revision or change.

Written, edited, and printed in the Republic of China in Taiwan.

# Table of Contents

<b>CHAPTER 1 : INTRODUCTION .....</b>	<b>1-1</b>
<b>Features .....</b>	<b>1-1</b>
<b>Green PC Functions .....</b>	<b>1-2</b>
<b>CHAPTER 2 : INSTALLATION.....</b>	<b>2-1</b>
<b>Mainboard Layout Drawing .....</b>	<b>2-1</b>
<b>Jumper &amp; Connector Setting .....</b>	<b>2-2</b>
CPU Type Selection.....	2-2
Clock Multiplier Selection .....	2-3
System & CPU Clock Selection .....	2-3
Flash ROM Voltage Selection.....	2-3
Flash ROM & EPROM Selection.....	2-3
Cache Size Selection.....	2-4
CMOS Clear Selection.....	2-4
Other Jumpers & Connectors.....	2-5
<b>Memory Configuration.....</b>	<b>2-7</b>
<b>CHAPTER 3 : WINBIOS SETUP .....</b>	<b>3-1</b>
<b>Introduction .....</b>	<b>3-1</b>
<b>WinBIOS Setup Main Menu.....</b>	<b>3-3</b>

<b>Setup</b> .....	<b>3-5</b>
Standard Setup .....	3-5
Advanced Setup .....	3-6
Chipset Setup .....	3-11
Power Management Setup .....	3-15
Peripheral Setup .....	3-17
<b>Utility</b> .....	<b>3-19</b>
<b>Security</b> .....	<b>3-19</b>
WinBIOS Password Support .....	3-19
Anti-Virus .....	3-21
<b>Default</b> .....	<b>3-23</b>



## **Chapter 1 : Introduction**

### **Features**

- Design Based on OPTi556, OPTi557, OPTi558 chipsets
- Support Intel P54C, P55C, AMD K5, and Cyrix M1 CPU (75/90/100/120/133MHz)
- Support 256K, 512K, 1 MB direct-mapped, write-back/write-through cache memory.
- Support 4\* 72Pin SIMM Socket up to 512MB DRAM for 586 system, and provides page mode and EDO mode DRAM operation
- Support system and video BIOS cacheable and shadow
- Support PnP function
- Support Hidden Refresh
- Support Flash ROM
- Support four ISA slots, three PCI slots
- Support IDE LBA mode
- Support two 16550 compatible serial ports
- Supports one multi-mode high performance parallel port (SPP/EPP/ECP)
- Support up to 4 EIDE drives (32 bit data transfer and LBA Mode)
- Built-in power management features ideal for Green PCs

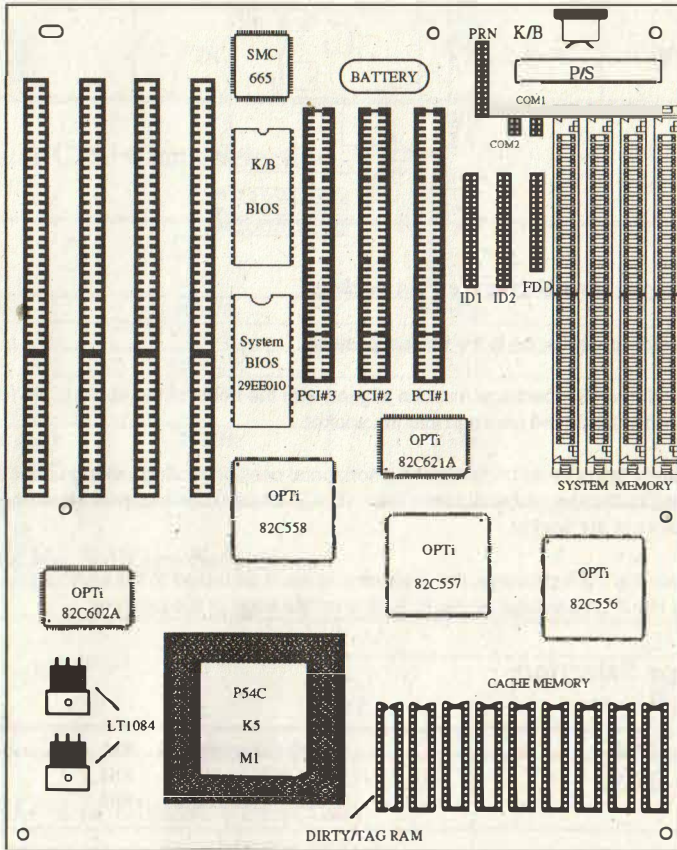
## **Green PC Functions**

- Meet E.P.A Energy Star requirement
- Power off the monitor when Green timer is timeout
- No hard disk drive spindle activity in idle mode
- Auto wake-up when COM1, COM2, BUS mouse, FDD, HDD, KBD, VGA, LPT are accessed



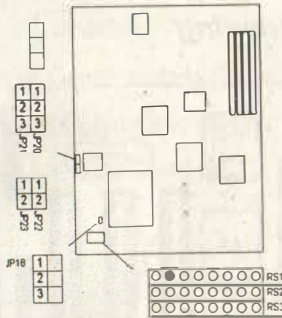
## Chapter 2 : Installation

### Mainboard Layout Drawing



## Jumper & Connector Setting

(A \* indicates factory default setting)





### Note for engaging/disengaging the PGA package

1. The actuator arm must be in the vertical position
2. The pins of the PGA package must be aligned with the holes of the socket. No force should be required to insert the package into the socket.
3. The actuator arm should be rotated to a horizontal position resting locking under the actuator detent and bottoming on the actuator stop. The PGA package has now been engaged with the contacts of the socket.
4. To remove the PGA package, the actuator arm must be raised to the vertical position. Remove the PGA package by gently pulling on the edge of the package.

### CPU Type Selection

<p>P54C P55C</p>		<p>RS1 RS2 RS3</p>
<p>M1</p>		
<p>K5</p>		

### Clock Multiplier Selection

JP18	P54C	K5	M1	P55C
	1.5x	1.5x 2x 3x	3x	2x
	2x	1x	2.5x	2.5x

### System & CPU Clock Selection

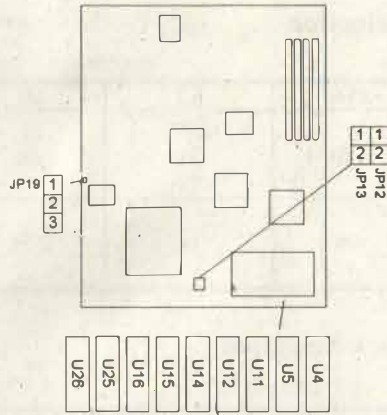
JP22/23			
System Clock	50MHz	*60MHz	66MHz
CPU clock (1.5x)	75MHz	90MHz	100MHz
CPU clock (2x)	100MHz	120MHz	133MHz
CPU Clock (3x For K5 & M1)	150MHz	-----	-----
CPU Clock (2.5x For P55C)	125MHz	150MHz	-----

### Flash ROM Voltage Selection




JP20	*5V	12V
		

### Flash ROM & EPROM Selection



JP21	EPROM	Flash ROM
		

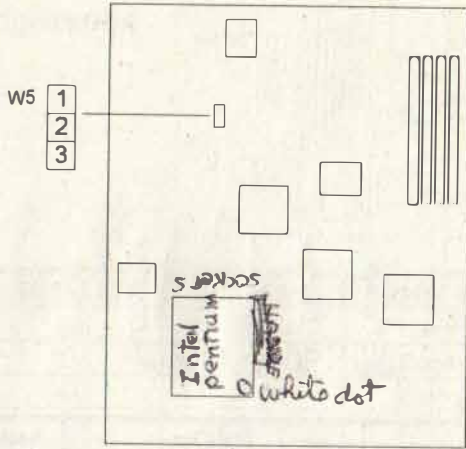


### Cache Size Selection

	JP12/JP13	U4/5/11/12/14/15/16/25	U26
*256K		32Kx8	32Kx8/64Kx8
512K		64Kx8	32Kx8/64Kx8
1M		128Kx8'	32Kx8/64Kx8

### CMOS Clear Selection

JP19	*Normal Operation	CMOS Clear
		

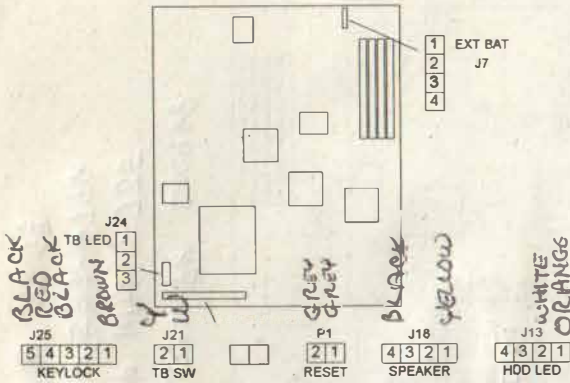


A80501-90 SX968  
 ICOMP INDEX = 735  
 C5220533-0796  
 INTEL © 92.93

**Other Jumpers & Connectors**

W5: On Board Print Port IRQ Selection	IRQ5	*IRQ7

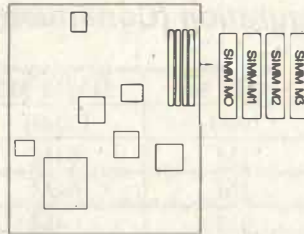




Connector	Pin Out	Assignment
J25: Keylock	1	VCC
	2	Ground
	3	Ground
	4	Keylock
	5	Ground
J18: Speaker	1	Data Out
	2	Not Used
	3	Ground
	4	VCC
J24: Turbo LED	1	Turbo Signal
	2	VCC
J21: Turbo SW	1	Ground
	2	Turbo Signal
P1: Reset	1	Ground
	2	Reset
J7: External Battery Connector	1	+ External Battery
	4	- External Battery
J13: HDD LED	1	VCC
	2	Signal



**Memory Configuration**



SIMM M0	SIMM M1	SIMM M2	SIMM M3	Total
1M	1M	Empty	Empty	2M
2M	2M	Empty	Empty	4M
4M	4M	Empty	Empty	8M
8M	8M	Empty	Empty	16M
16M	16M	Empty	Empty	32M
32M	32M	Empty	Empty	64M
1M	1M	1M	1M	4M
1M	1M	2M	2M	6M
2M	2M	2M	2M	8M
1M	1M	4M	4M	10M
2M	2M	4M	4M	12M
4M	4M	4M	4M	16M
1M	1M	8M	8M	18M
2M	2M	8M	8M	20M
4M	4M	8M	8M	24M
8M	8M	8M	8M	32M
1M	1M	16M	16M	34M
2M	2M	16M	16M	36M
4M	4M	16M	16M	40M
8M	8M	16M	16M	48M
16M	16M	16M	16M	64M
1M	1M	32M	32M	66M
2M	2M	32M	32M	68M
4M	4M	32M	32M	72M
8M	8M	32M	32M	80M
16M	16M	32M	32M	96M
32M	32M	32M	32M	128M

### Memory Configuration (Continued)

SIMM M0	SIMM M1	SIMM M2	SIMM M3	Total
64M	64M	Empty	Empty	128M
1M	1M	64M	64M	130M
2M	2M	64M	64M	132M
4M	4M	64M	64M	136M
8M	8M	64M	64M	144M
16M	16M	64M	64M	160M
32M	32M	64M	64M	192M
64M	64M	64M	64M	256M
128M	128M	Empty	Empty	256M
4M	4M	128M	128M	264M
8M	8M	128M	128M	272M
16M	16M	128M	128M	288M
32M	32M	128M	128M	320M
64M	64M	128M	128M	384M
128M	128M	128M	128M	512M

## **Chapter 3 : WinBIOS Setup**

### ***Introduction***

WinBIOS Setup Configures system information that is stored in CMOS RAM. WinBIOS Setup has an easy-to-use graphical user interface that will be immediately recognizable to anyone who has ever used Microsoft Windows. WinBIOS Setup sets a new standard in BIOS user interfaces.

### **Starting WinBIOS Setup**

AT POST executes, the following appears:

Hit <Del> if you want to run SETUP

Press <Del> to run WinBIOS Setup.

### **Using a Mouse with WinBIOS Setup**

WinBIOS Setup can be accessed via keyboard, mouse, or pen. The mouse click functions are:

Single click to change or select both global and current fields and

Double click to perform an operation in the selected field.

### **Using the Keyboard with WinBIOS Setup**

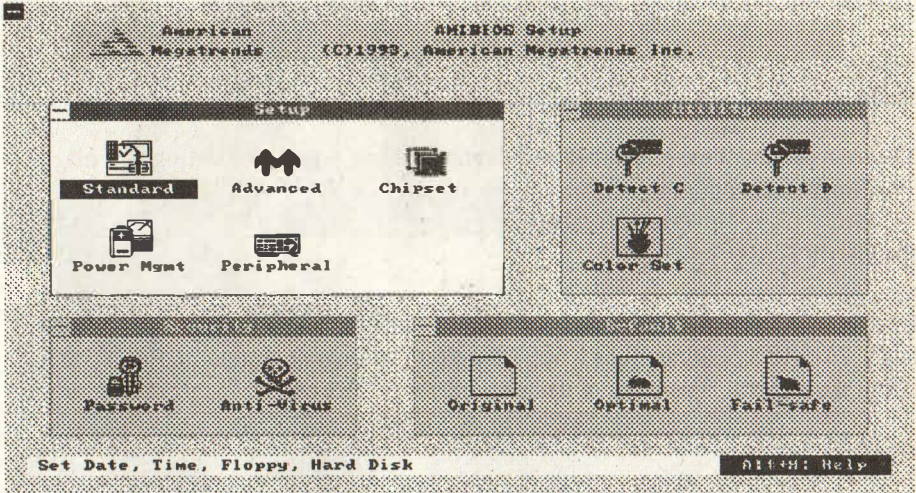
WinBIOS Setup has a built-in keyboard driver that uses simple keystroke combinations:

<b>Keystroke</b>	<b>Function</b>
<Tab>	Move to the next window or field.
, , ,	Move to the next field to the right, left, above, or below.
<Enter>	Select in the current field.
+	Increments a value.
-	Decrements a value.
<Esc>	Closes the current operation and return to previous level.
<PgUp>	Returns to the previous page.
<PgDn>	Advances to the next page.
<Home>	Returns to the beginning of the text.
<End>	Advances to the end of the text.
<Alt> <H>	Access a help window.
<Alt> <Spacebar>	Exit WinBIOS Setup.
Alphabetic keys	A to Z are used in the Virtual Keyboard, and are not case sensitive.
Numeric keys	0 to 9 are used in the Virtual Keyboard and Numeric Keypad.



## WinBIOS Setup Main Menu

The WinBIOS Setup main menu, shown below, is organized into four windows. Each window corresponds to a section in this chapter.



**Note:** The figures in this chapter are provided only as examples.

Each section contains several icons. Clicking on each icon activates a specific function. The WinBIOS Setup icons and functions are described in this chapter. The sections are:

### Setup

This section has four icons that permit you to set system configuration options such as date, time, hard disk type, floppy type, and many others,

## **Utilities**

This section has four icons that perform system functions.

## **Security**

This section has two icons that control WinBIOS security features.

## **Default**

This section has three icons that permit you to select a group of settings for all WinBIOS Setup options.

## **Default Settings**

Each WinBIOS Setup option has two default settings. These settings can be applied to all WinBIOS Setup options when you select the Default section on the WinBIOS Setup main menu. The types of defaults are:

### **Optimal**

These settings provide the best performance characteristics.

### **Fail-Safe**

These settings are more likely to configure a workable computer when something is wrong. If you cannot boot the computer successfully, select the Fail-Safe WinBIOS Setup options and try to diagnose the problem after the computer boots. These settings do not provide optimal performance.



PENT B

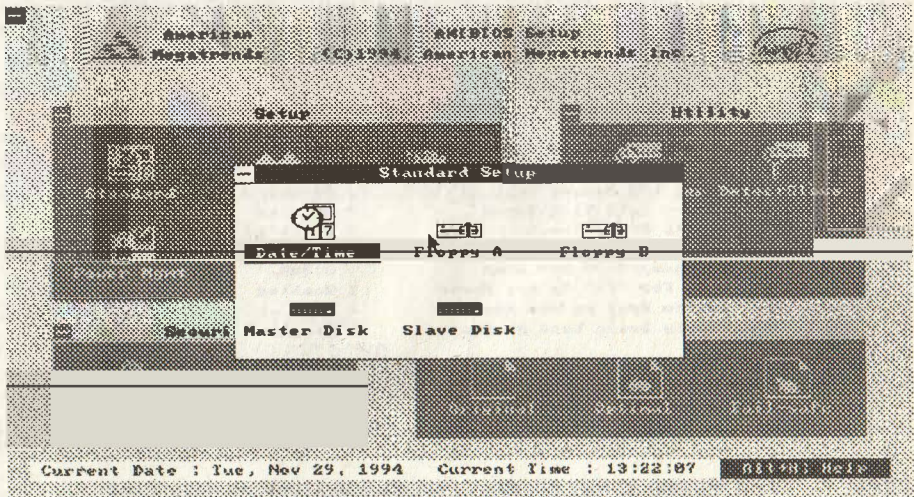
USER 1046 16 C65535 1046 C03 515MB  
Cyl Hd Wp L2 Sec Size WinBIOS Setup

---

## Setup

### Standard Setup

When you access Standard Setup, the following screen appears:

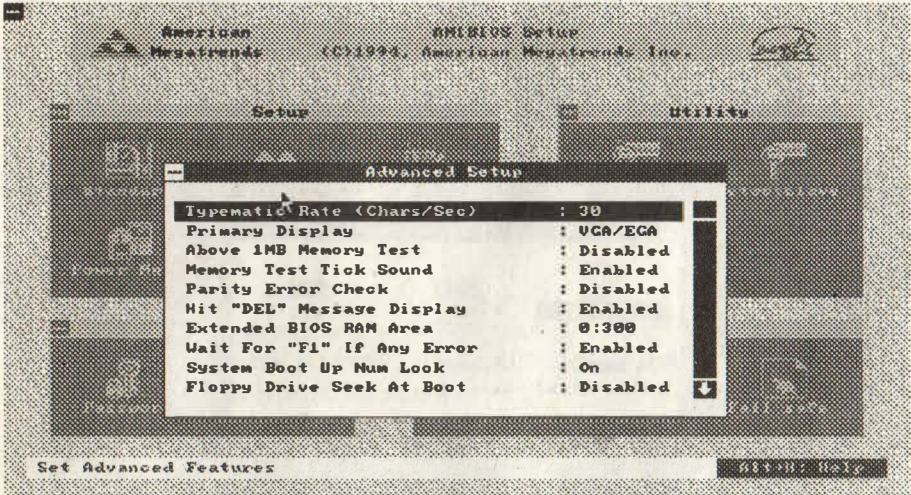


**Note:** The figures in this chapter are provided only as examples.

This section allows users to set system configuration such as date, time, hard disk type, floppy type, and many others.

## Advanced Setup

The Advanced Setup options described in this section are the standard options as shown on the following screen.



**Note:** The figures in this chapter are provided only as examples.

### Typematic Rate (Chars/Sec)

Typematic Rate sets the rate at which characters on the screen repeat when a key is pressed and held down. The settings are 15, 20, or 30 characters per second.

### System Keyboard

This option does not specify if a keyboard is attached to the computer. Rather, it specifies if error messages are displayed if a keyboard is not attached. This option permits you to configure workstations with no keyboards. The settings are Absent or Present.



**Primary Display**     *VGA / EGA*

Select this icon to configure the type of monitor attached to the computer.

*MOUSE SUPPORT → ENABLED I CHANGED IT DAYS AGO?*

**Above 1 MB Memory Test**

When this option is enabled, the WinBIOS memory test is performed on all system memory. When this option is disabled, the memory test is done only on the first 1 MB of system memory. The settings are *Enabled* or *Disabled*.

**Memory Test Tick Sound**

This option enables (turns on) or disables (turns off) the ticking sound during the memory test. The settings are *Enabled* or *Disabled*.

**Hit <DEL> Message Display**

Disabling this option prevents

Hit <DEL> if you want to run Setup

from appearing when the system boots. The settings are *Enabled* or *Disabled*.

**Extended BIOS RAM Area**

Specify in this option if the top 1 KB of the system programming area beginning at 639K or 0:300 in the system BIOS area in low memory will be used to store hard disk information. The settings are *Top 1K* or *0:300*.

**Wait for <F1> If Any Error**

WinBIOS POST runs system diagnostic tests that can generate a message followed by:

Press <F1> to continue

If this option is enabled, WinBIOS waits for the end user to press <F1> before continuing. If this option is disabled, WinBIOS continues the boot process without waiting for <F1> to be pressed. The settings are *Enabled* or *Disabled*.

### System Boot Up Num Lock

When *Off*, this option turns off *Num Lock* when the system is powered on so the end user can use the arrow keys on both the numeric keypad and the keyboard. The settings are *On* or *Off*.

NUMERIC PROCESSOR TEST ENABLED  
GREY  
Floppy Drive Seek At Boot DISABLED

When this option is enabled, WinBIOS performs a *Seek* command on floppy drive A: before booting the system. The settings are *Enabled* or *Disabled*.

### Floppy Drive Swapping DISABLED

This option effectively change your A: drive to B: and the B: to A:.

### System Boot Up Sequence

This option sets the sequence of boot drives (either floppy drive A: or hard disk drive C:) that WinBIOS attempts to boot from after POST completes. The settings are C:,A: or A:,C:.

### System Boot Up CPU Speed

This option sets the speed of the CPU at system boot time. The settings are *High* or *Low*.

### Internal Cache

“Enable” turns on the Internal cache function. “Disable” turns it off

### External Cache

“Enable” turns on the on-board secondary cache function. “Disable” turns it off

### Turbo Switch Function

When this option is set to Enabled, the externally-mounted turbo switch is enabled. The settings are Enabled or Disabled.

### Password Checking

This option enables the password check option every time the system boots or the end user runs Setup. If *Always* is chosen, a user password prompt appears every time the computer is turned on. If *Setup* is chosen, the password prompt appears if WinBIOS is executed. See page for instructions on changing a password. The Optimal and Fail-Safe default settings are *Setup*.

### Video Shadow C000, 32K

When *Enabled*, the video ROM area is copied (shadowed) to RAM for faster execution. The settings are *Enabled* or *Disabled*.

Shadow C800,16K

Shadow CC00,16K

Shadow D000,16K

Shadow D400,16K

Shadow D800,16K

Shadow DC00,16K

These options enable shadowing of the contents of the ROM area named in the option title. The settings are *Absent*, *NoShadow*, or *Shadow*.

### Pri. IDE Master Drive Type

The settings of this item are "Auto" or "Manual"

### Pri. IDE Slave Drive Type

The settings of this item are "Auto" or "Manual"

**IDE Multi-Block Transfer Mode**      **DISABLED**      **AUTO**

To speed IDE transfer, set this item to "Enable" and the IDE transfer is active in block mode.

**Pri. IDE 32 Bit Mode**      **DISABLED**      **ENABLED**

WIN 3.11 ?

Enabled this item if your IDE adapter supports **32 Bit mode**

**Pri. IDE Master Drive LBA Mode**      **ENABLED**

If your IDE Master Drive > 528MB, please enable this item.

**Pri. IDE Slave Drive LBA Mode**      **DISABLED**      **ENABLED**

If your IDE Master Drive > 528MB, please enable this item.

**Sec. IDE Port**

The settings of this item are "Enabled" or "Disabled"

**Onbd PCI IDE**      **AUTO**

The settings of this item are "Enabled" or "Disabled"

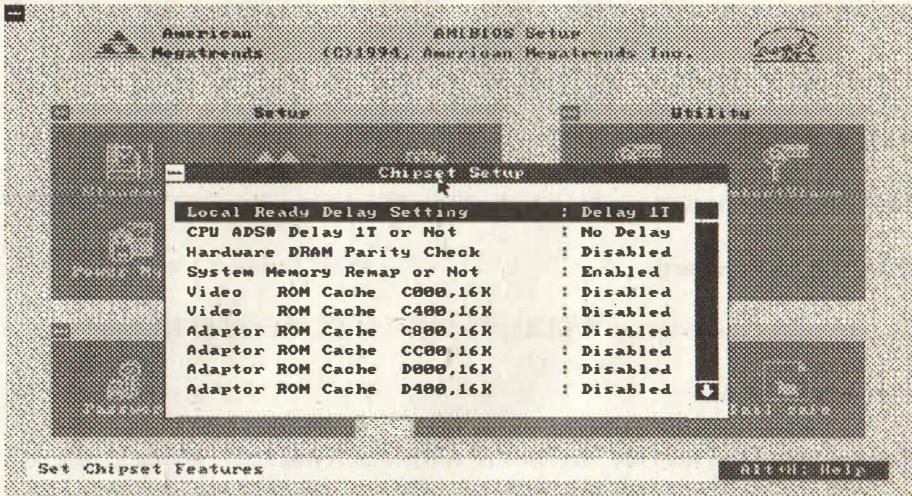
**IDE Controller PIO Mode**

The settings of this item are "Auto", "Mode 0", "Mode 1", "Mode 2", "Mode 3"

SEC	IDE DRIVES	AUTO DETECT	DISABLED
"	"	32 bit mode	"
"	"	MASTER DRIVE LBA MODE	"
"	"	SLAVE " " "	"



## Chipset Setup



**Note:** The figures in this chapter are provided only as examples.

### Hidden Refresh **ENABLED**

By enabling this feature, a CPU cycle can be eliminated. Technically, when a cache DRAM controller refreshes DRAM, it asserts CAS before RAS (Row Address Sequence). Normally, this requires a CPU cycle for each. On the other hand, if the CAS is "hidden", it does not require a CPU cycle

### CPU Address Pipeline Mode

The settings of this item are "Enabled" or "Disabled"

### Internal Cache Mode

The settings of this item are "WrBack" or "WrThru"

**DRAM Row Address Hold**

The settings of this item are "2 CLK" or "1 CLK"

**DRAM Read CAS Pulse Width**

The settings of this item are "3 CLK" or "2 CLK"

**DRAM Write CAS Pulse Width**

The settings of this item are "3 CLK" or "2 CLK"

**DRAM RAS Precharge**

The settings of this item are "6 CLK", "5 CLK", "4 CLK" or "3 CLK"

**Ext. Cache Mode**

The settings of this item are "WrThru", "AWB 1", "AWB 2" or "WrBack"

**Ext. Cache to DRAM Post Write**

The settings of this item are "Enabled" or "Disabled"

**Ext. Cache CAS Precharge**

The settings of this item are "2 CLK" or "1 CLK"

**Ext. Cache Read Burst Mode**

The settings of this item are "X-4-4-4", "X-3-3-3", "X-2-2-2" or "X-1-1-1"

**Ext. Cache Read Leadoff**

The settings of this item are "5-X-X-X", "4-X-X-X", "3-X-X-X" or "2-X-X-X"

**Ext. Cache Write Burst Mode**

The settings of this item are "X-4-4-4", "X-3-3-3", "X-2-2-2" or "X-1-1-1"

---

**Ext. Cache Write Leadoff**

The settings of this item are "5-X-X-X", "4-X-X-X", "3-X-X-X" or "2-X-X-X"

**Byte/Word merge Support**

The settings of this item are "Enabled" or "Disabled"

**DRAM Base Memory**

The settings of this item are "640KB" or "512KB"

**DRAM Region A Control Mode**

The settings of this item are "Enabled" or "Disabled"

**DRAM Region A Size**

The settings of this item are "Enabled" or "Disabled"

**DRAM Region A Base Address**

The settings of this item are "Enabled" or "Disabled"

**DRAM Region B Control Mode**

The settings of this item are "Enabled" or "Disabled"

**DRAM Region B Size**

The settings of this item are "Enabled" or "Disabled"

**DRAM Region B Base Address**

The settings of this item are "Enabled" or "Disabled"

**Video Cacheable C000, 32K**

The settings of this item are "Yes" or "No"

### PnP Operating System

The settings of this item are "Yes" or "No"

ENABLE ONBOARD PCI VGA → NO YES

### PCI IRQ

The settings of this item are "Edge" or "Level"

### PCI VGA Palette Snooping

This option must be set to *Enabled* if any ISA adapter card installed in the system requires VGA palette snooping. The settings are *Enabled* or *Disabled*. The Optimal and Fail-Safe defaults are *Disabled*.

### PCI SCSI BIOS for offBoardDevice

The settings of this item are "Enabled" or "Disabled"

- IRQ 5 used by ISA NO
- IRQ 9 used by ISA NO
- IRQ 10 used by ISA YES NO
- IRQ 11 used by ISA YES NO
- IRQ 12 used by ISA NO
- IRQ 15 used by ISA YES

The settings of the above items are "Yes" or "No"

### PCI IDE Card Present in

The settings of this item are "Absent", "Slot 1", "Slot 2" or "Slot 3"

### PCI IDE IRQ Connected to

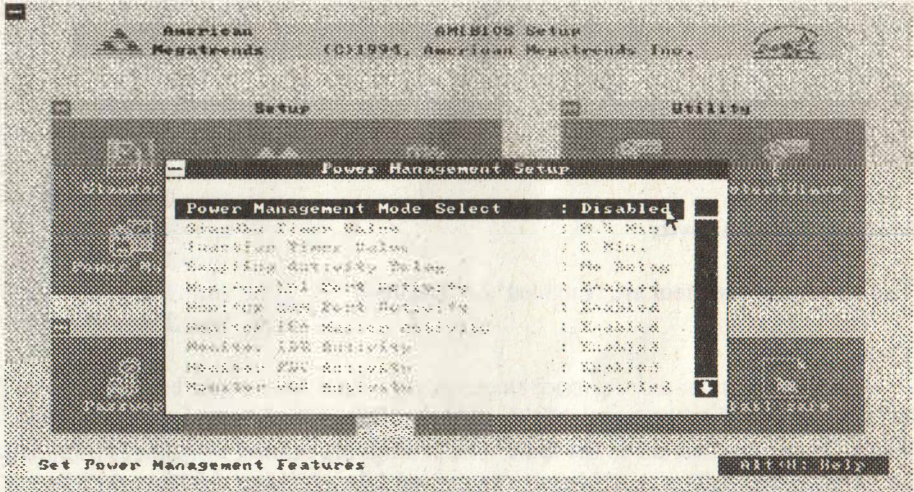
GR54  
The settings of this item are INTA, "INTB", "INTC" or "INTD"

### PCI IDE IRQ

GR54  
The settings of this item are Level or "Edge"



## Power Management Setup



**Note:** The figures in this chapter are provided only as examples.

### Advanced Power Management

Set this option to *Enabled* to enable APM (Advanced Power Management). The settings are *Enabled* or *Disabled*. The Optimal and Fail-Safe default settings are *Disabled*.

### IDE Drive Power Down

GREY

Set this option to *Enabled* to allow the IDE drive to be powered down by WinBIOS. The settings are *Enabled* or *Disabled*. The Optimal and Fail-Safe default settings are *Disabled*.

**VESA Video Power Down**

GREY

Set this option to *Enabled* to allow the VESA video adapter and monitor to be powered down by WinBIOS. The settings are *Disabled*, *Standby*, *Suspend*, or *Off*. The Optimal and Fail-Safe default settings are *Disabled*.

**Monitor Modem Activity**

GREY

The settings of this item are "Enabled" or "Disabled"

**Monitor Video Activity**

GREY

The settings of this item are "Enabled" or "Disabled"

**Timeout Value**

GREY

This option specifies the length of time that the IDE drive remains inactive before WinBIOS turns power off to the drive. The settings are *5 Min.*, *10 Min.*, *15 Min.*, *20 Min.*, *25 Min.*, *30 Min.*, *35 Min.*, *40 Min.*, *45 Min.*, *50 Min.*, *55 Min.*, *60 Min.*, *65 Min.*, *70 Min.*, or *75 Min.* The Optimal and Fail-Safe default settings are *5 Min.*



IRQ0 Break Event	NOT THERE
IRQ1 Break Event	
IRQ3 Break Event	DIS ENA
IRQ4 Break Event	DIS ENA
IRQ5 Break Event	DIS
IRQ6 Break Event	ENABLED
IRQ7 Break Event	DIS ENA
IRQ8 Break Event	
IRQ9 Break Event	DIS
IRQ10 Break Event	DIS
IRQ11 Break Event	DIS
IRQ12 Break Event	DIS
IRQ13 Break Event	
IRQ14 Break Event	DIS ENA
IRQ15 Break Event	DIS ENA

The option listed above each enable break events for a specific interrupt request line. The settings for each of these options are *Enabled* or *Disabled*. The Optimal and Fail-Safe default settings are *Disabled* for all of the above options except **IRQ1 Break Event**, **IRQ6 Break Event**, and **IRQ12 Break Event**. The default settings for these three options are *Enabled*. ?

## Peripheral Setup

### Programming Mode

The settings are Auto or Manual. When set to Auto, WinBIOS automatically detects all adapter cards installed in the system and configures the onboard I/O (serial ports, parallel ports, floppy controllers, and IDE controller) automatically. All other Peripheral Setup option settings are ignored. Any serial port, parallel port, floppy controller, or IDE (Integrated Drive Electronics) controller on an adapter card in an expansion slot is configured before onboard I/O. If Auto is selected, WinBIOS also attempts to avoid IRQ conflicts. If the offboard serial ports are configured to specific starting I/O ports via jumper settings, WinBIOS configures the onboard serial ports to avoid conflicts. For example, if the default serial port starting I/O ports (serial port1 - 3F8h, serial port2 - 2F8h, serial port3 - 3E8h, serial port4 - 2E8h) are, the following configurations are possible:

<b>If there are...</b>	<b>the ports are...</b>	<b>the onboard serial ports are</b>
two offboard serial ports	3E8h and 2F8h	3E8h and 2E8h
two offboard serial ports	3F8h and 3E8h	3F8h and Disabled
one offboard serial ports	2F8h	3F8h and Disabled
one offboard serial ports	3F8h	2F8h and Disabled

If Manual is selected, the settings chosen by the end user in Peripheral Setup apply. WinBIOS reports any I/O conflicts after displaying the BIOS Configuration Summary Screen, but only if Manual is chosen.

#### **OnBoard FDC**

GREY ENABLED

This option enables the use of the floppy drive controller on the motherboard (if installed).

#### **Serial Port 1**

GREY 3F8H

IRQ4 is used for the first serial port (COM1). This option enables serial Port 1 on the motherboard (if installed).

#### **Serial Port 2**

GREY 2F8H

IRQ3 is used for the first serial port (COM2). This option enables serial Port 1 on the motherboard (if installed).

#### **Parallel Port**

GREY 378H

IRQ7 is used for the parallel port (LPT1). The IRQ can be changed to IRQ5. This option enables the parallel port on the motherboard (if installed).

#### **IRQ Active**

This option specifies if the parallel and serial port IRQs are active high or active low.

#### **Parallel Port Mode**

This option specifies the parallel port mode. NORMAL

## Utility

The following icons appear in this section:

Detect Master: if drive C: is an IDE drive, the hard disk drive parameters for drive C: are automatically detected and reported to the Hard Disk Drive C: screen in Standard Setup, so you can easily configure drive C:.

Detect Slave: if drive D: is an IDE drive, the hard disk drive parameters for drive D: are automatically detected and reported to the Hard Disk Drive D: screen in Standard Setup, so you can easily configure drive D:.

Color Set sets the WinBIOS Setup screen colors.

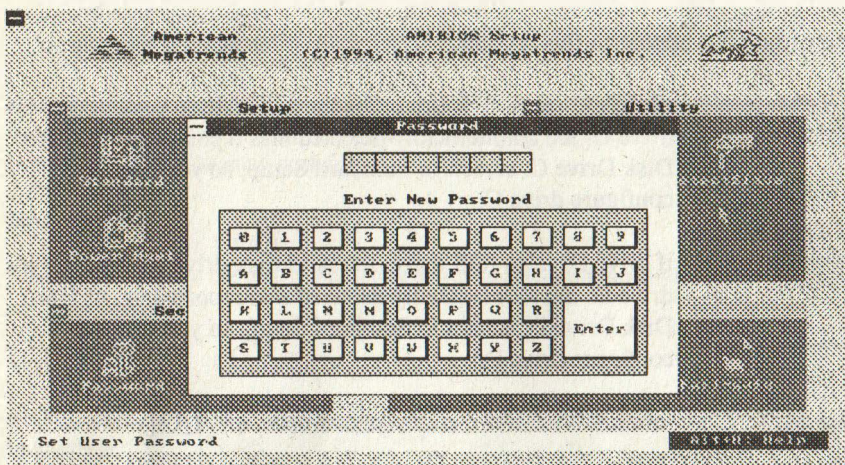
✓ LCD  
ARMY  
PASTEL  
SKY

## Security

### WinBIOS Password Support

WinBIOS Setup has an optional password feature. The system can be configured so that all users must enter a password every time the system boots or when WinBIOS Setup is executed. The following screen appears when you select the password icon.





You can enter a password by:

- typing the password on the keyboard,
- selecting each letter via the mouse, or
- selecting each letter via the pen stylus.

Pen access must be customized for each specific hardware platform.

### Setting a Password

The password check option is enabled in Advanced Setup by choosing either *Always* (the password prompt appears every time the system is powered on) or *Setup* (the password prompt appears only when WinBIOS Setup is run). The password is stored in CMOS RAM. The system asks for a password.

Enter a 1~6 character password. The password does not appear on the screen when typed. WinBIOS will ask you to retype the password. Make sure you write it down. If you forget it, you must drain CMOS RAM and reconfigure the system.



## Changing a Password

Select the *Password* icon from the Security section of the WinBIOS Setup main menu. Enter the password and press <Enter>. The screen does not display the characters entered. After the new password is entered, retype the new password as prompted and press <Enter>.

If the password confirmation is incorrect, an error message appears. If the new password is entered without error, press <Esc> to return to the WinBIOS Setup Main Menu. The password is stored in CMOS RAM after WinBIOS Setup completes. The next time the system boots, you are prompted for the password if the password function is present and is enabled.

## Remember the Password

Keep a record of the new password when the password is changed. If you forget the password and your computer has an American Megatrends motherboard, remove the computer cover, set switch 1-2 (the DIAG switch) to ON, power on the computer. WinBIOS erases the password.

## Anti-Virus

When this icon is selected from the Security section of the WINBIOS Setup main menu, WINBIOS issues a warning when any program (or virus) issues a Disk Format command or attempts to write to the boot sector of the hard disk drive. The following screen appears when you select the Anti-Virus icon:

The settings are *Enabled or Disabled*. *If enabled, the following appears when a write is attempted to the boot sector. You may have to type N several times to prevent the boot sector write.*

Boot Sector Write!!!  
Possible VIRUS: Continue (Y/N)? \_

The following is displayed after any attempt to format any cylinder, head, or sector of any hard disk drive via the BIOS INT 13 Hard Disk Drive Service:

```
Format!!!  
Possible VIRUS: Continue (Y/N)? _
```

### Formatting the Hard Disk Drive

You should not enable anti-virus protection when formatting a hard disk drive.

The DOS hard disk Format utility does not use INT 13h function AH = 05h to format the hard disk. It only verifies the hard disk using the INT 13h Verify function (AH = 04h). The virus warning message is not displayed during DOS hard disk drive formatting.

If the anti-virus feature is enabled, a virus warning message will be displayed when you attempt to format the hard disk drive.

If you select *Continue*, formatting proceeds as normal.

If you do not want to continue formatting, you may have to press *N* several times (depending on how many retries are performed by the upper-level software). DOS, for example, does at least five retries before the Format utility is actually aborted.

## **Default**

?

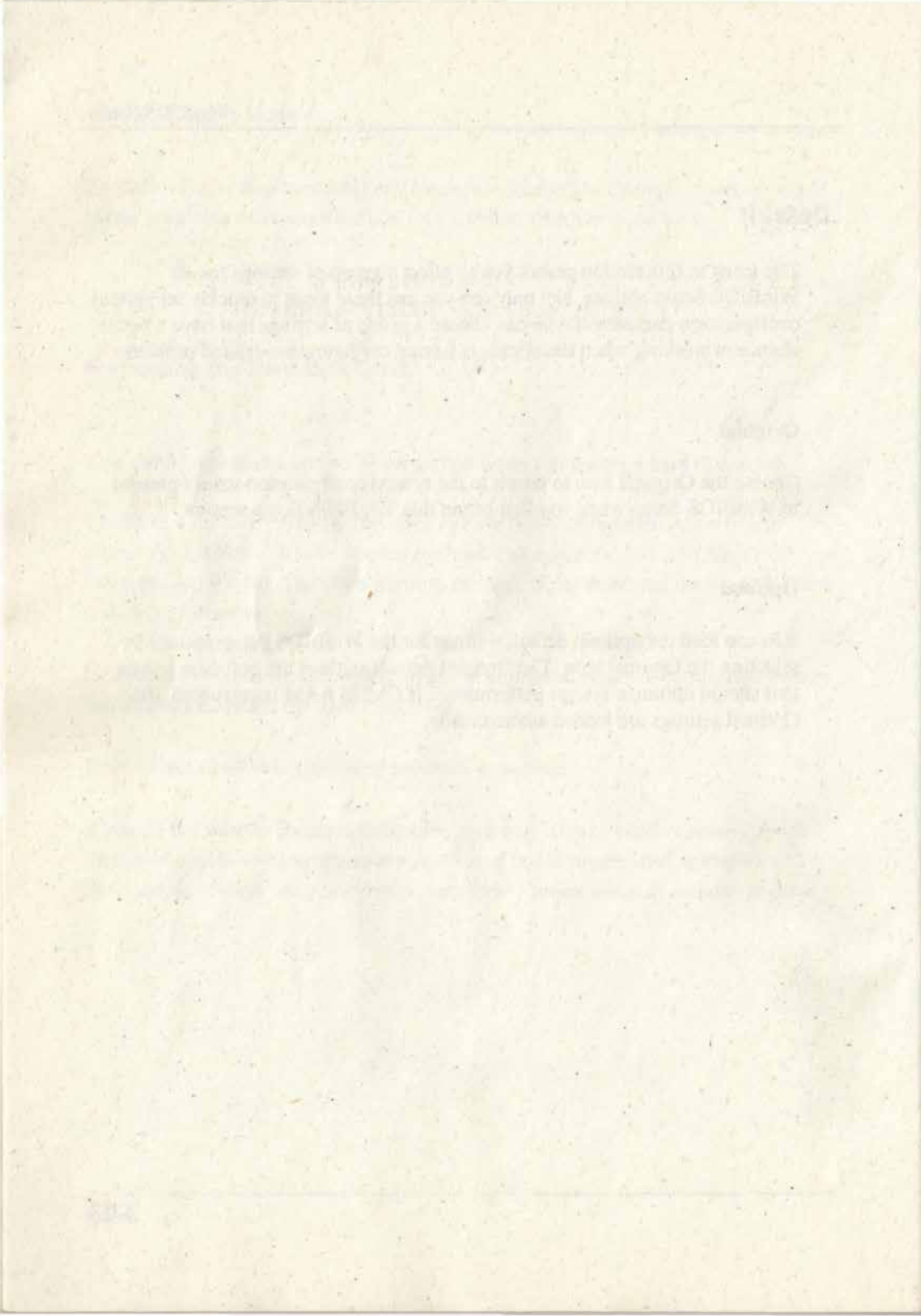
The icons in this section permit you to select a group of settings for all WinBIOS Setup options. Not only can you use these icons to quickly set system configuration parameters, you can choose a group of settings that have a better chance of working when the system is having configuration-related problems.

## **Original**

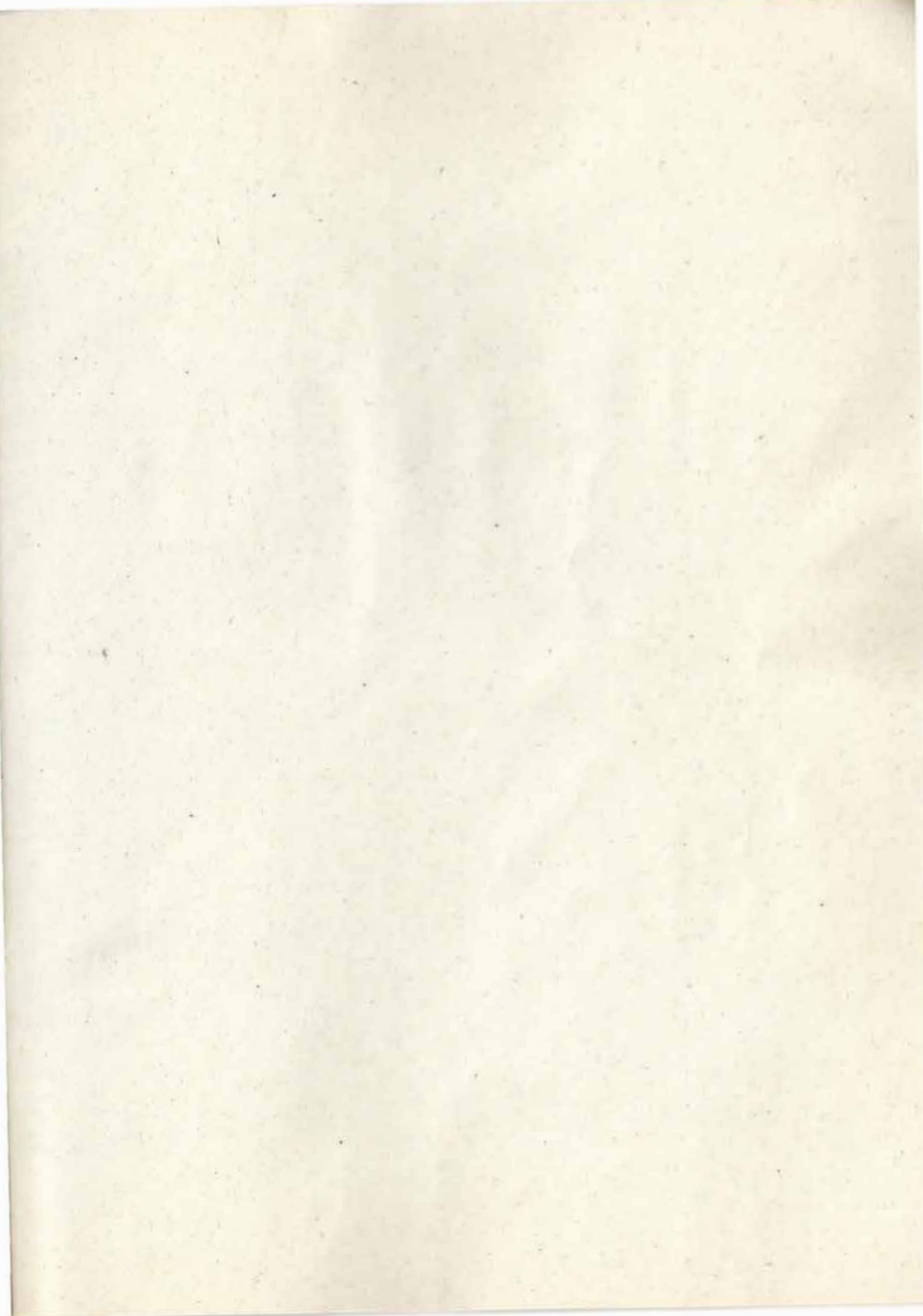
Choose the Original icon to return to the system configuration values present in WinBIOS Setup when you first began this WinBIOS Setup session.

## **Optimal**

You can load the optimal default settings for the WinBIOS Setup options by selecting the Optimal icon. The Optimal default settings are best-case values that should optimize system performance. If CMOS RAM is corrupted, the Optimal settings are loaded automatically.

















This manual is printed on recycled paper.