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# Chapter 1

## Introduction

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The mainboard is a high-performance mainboard based on the advanced Pentium™ microprocessor and featuring PCI Local Bus and the high-end chipset. The mainboard offers a high degree of flexibility in configuration and is fully IBM PC/AT compatible.

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## Key Features

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The advanced features of this mainboard include:

- Supports Pentium™ 90 ~ 300 MHz with P54C/P55C (MMX™), Cyrix/IBM 6x86, 6x86L, 6x86MX (M2), IDT C6, and AMD K5/K6 CPUs at 60/66/75/83.3 MHz external clock speed
- Supports Write Allocation feature for AMD K6; Error Checking & Correction (ECC) and Parity for DRAM; Linear Wrap Mode for Cyrix M1, M2
- Supports 64M-bit (16Mx4, 8Mx8, 4Mx16) DRAM/SDRAM technology
- Provides 4 x 72-pin SIMM and 3 x 168-pin DIMM to support FPM/EDO/SDRAM modules “Table Free” configuration so that DIMM and SIMM can be installed in any combinations up to 384MB
- Supports single piece of 72-pin SIMM working capability
- **Onboard 1MB (1024KB) Pipelined Burst synchronous L2 cache**
- Dual 20-pin ATX and 12-pin AT power connectors; ATX power supports Modem Ring On, Suspend Switch, and Alarm Wake Up
- Supports Ultra DMA/33 and ACPI
- Provides auto switching power between 2.2V and 3.5V for CPU Core voltage
- Supports 2.88MB, Iomega ZIP-100M, and IDE LS-120 FDD, bootable from floppy, HDD ,CD-ROM, SCSI, NetWork, LS-120, ZIP, or others
- 4 PCI Local Bus slots and 3 x 16 bits ISA Bus slots
- Onboard PCI Bus Master IDE interface supports 4 IDE devices with 2 channels; BIOS supports 4 IDE harddisk drives which do not need device driver

for S/W application and the capacity of each harddisk can be larger than 528MB and up to 8.4GB

- PCI IDE Controller supports PIO Mode 0 to Mode 4 and Ultra DMA/33 at maximum transfer rate of 33 MB/s and Bus Master IDE DMA Mode 2
- Onboard super Multi-I/O chip supports 2 serial ports with 16550 fast UART compatible, 1 parallel port with EPP and ECP capabilities, and one floppy disk drive interface
- Supports PS/2 Mouse connector and pin header
- **Supports ATX FORM CARD containing PS/2 Mouse, USB interface x 2, and Infrared connectors (optional)**
- BIOS supports NCR810 SCSI BIOS firmware and “Plug & Play” Flash ROM
  
- Onboard Sound Pro supports the following features:
  - Sound Blaster 16/PRO compatible with stereo voice up to 48KHz sampling rates, HRTF 3D Positional Audio Technology
  - Windows Sound System V2.0 compatible, Accelerates Direct Sound 3D in Win95, and Windows 95/31 & DOS drivers supported
  - Supports 44.1K digital audio (SPDIF) IN/OUT, HSP-23 Wavetable synthesizer, full duplex 16-bits CODEC with filters, and high quality 3D sound (ON/OFF controllable)
  - Device supports SB16, WSS, & Game
  - Stereo Mixer supports analog mixing from CD-Audio & Line-In and digital mixing from Voice, FM/Wave-table, and digital CD-Audio.

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## Unpacking the Mainboard & Static Electricity Precautions

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This Mainboard package contains the following items:

1. The Mainboard
2. The Device Driver for this mainboard
3. This User's Guide
4. Sound & Game ribbon cables/bracket
5. ATX Form Card (optional)

The mainboard is easily damaged by static electricity. Follow the precautions below while unpacking or installing the mainboard.

1. Do not remove the mainboard from its original package until you are ready to install it.
2. Frequently ground yourself to discharge any static electric charge that may build up in your body while working on installation and/or configuration. For example, you may ground yourself by grasping an unpainted portion of the system's metal chassis.
3. Remove the mainboard from its anti-static packaging and place it on a grounded surface, component side up.
4. Handle the mainboard by its edges or by the mounting bracket to avoid touching its components.

5. Check the mainboard for damage. If any integrated circuit appears loose, press carefully to seat it firmly in its socket.
6. Do not apply power if the mainboard appears damaged. If there is damage to the board contact your dealer immediately.

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## **Chapter 2**

# **Hardware Configuration**

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Before you install the mainboard into the system chassis, you may find it convenient to first configure the mainboard's hardware. This chapter describes how to set jumpers and install memory modules, and where to attach components.



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## Connectors

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Attach system components and case devices to the mainboard via the mainboard connectors. See Figure 2-1 for the location of the connectors on the mainboard.

*Note: Make sure that the power is turned off before making any connection to the board.*

### **PWR1 – AT Power Supply Connectors**

### **COM1/2 – Serial Port #1/#2**

### **PRN – Parallel Port**

### **FDC – Floppy Disk Port**

### **IDE1/IDE2 – Primary/Secondary IDE Ports**

### **PS1 – PS/2 Mouse Head Connector**

### **PS2 – PS/2 Mouse Pin Connector**

### **KBD – Keyboard Connector**

### **J3 – ATX Form Card Connector**

### **J3 (1-4, 10-13) – 2 sets of Universal Serial Bus (USB) Connectors**

USB		USB	
Pin	Description	Pin	Description
1	+5V	10	+5V
2	Data –	11	Data –
3	Data +	12	Data +
4	Ground	13	Ground

**J3 (5-6, 15-16) – PS/2 Mouse Connector**

Pin	Description
5	+5V
6	Mouse CLK
15	Mouse Data
16	Ground

**J3 (7-9, 17-18) – Infrared Connector**

Pin	Description
7	Ground
8	Reserved
9	+5V
17	IR In
18	IR Out

**J2 (2, 4, 6, 8, 10) (KEY LOCK) – Keylock & Power LED Connector**

Keylock connector enables and disables the keyboard key-in function on the case.

Pin	Description
2	LED Output
4	N.C.
6	Ground
8	Keylock
10	Ground

**J2 (1, 3, 5, 7) (SPK) – Speaker Connector**

Pin	Description
1	Data Out
3	N.C.
5	Ground
7	+5V

**J2 (13, 14) (TB-LED) – Turbo LED Connector**

Pin	Description
13 (+)	Anode
14 (-)	Ground

**J2 (15, 16) (HDD-LED) – HDD LED Connector**

Pin	Description
15 (+)	+5V
16 (-)	Active Low

**J2 (17, 18) (RST) – Reset Switch Connector**

Attach the Reset push button cable to this connector.

Setting	Description
Open	Normal Mode
Close	Reset System

**J2 (19, 20) (SP-LED) – Suspend LED Connector**

Pin	Description
19 (+)	+5V
20 (-)	Active Low

**J1 (FAN-PWR) – Fan Power**

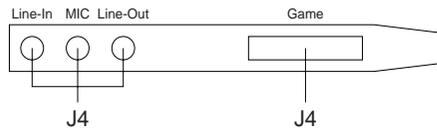
Pin	Description
1	+12V
2	Ground
3	Ground
4	+5V

**Sound Pro Connectors:****CD1/CD2 – Analog Audio for Sony/Panasonic**

Connect to “AUDIO” on the CD-ROM drive.

**J4 – Sound and Game**

Sound contains Line-in/MIC (Microphone), and Line-out (Speaker). Game connector is also the Joystic connector. Connect this connector to the Sound & Game ribbon cable/bracket as the following drawing:

**J7 – Digital Audio IN**

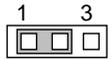
Depending on the type of your CD-ROM drive to connect this connector to “DIGITAL AUDIO” on the CD-ROM drive.

**J6 – Digital Audio OUT**

Connect to the Digital Audio Device.

## Jumper Settings

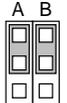
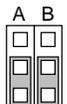
### JP1 – CMOS RAM Clear Selector\*

Description	Setting
Normal Mode	
Clear CMOS (default)	

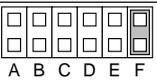
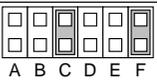
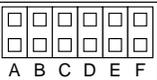
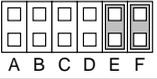
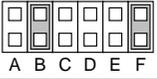
### JP4 – DIMM Voltage Selectors\*\*

Voltage Selectors	Setting
5V	
3.3V (default)	

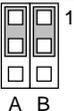
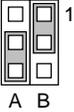
### JP3 – CPU Type Selector

CPU	Setting	Example
P55C (Dual Voltage) (default)		Intel MMX™, AMD K6, IBM/Cyrix 6x86L/6x86MX(M2)
P54C (Single Voltage)		Intel P54C, IDT C6, AMD K5, IBM/Cyrix 6x86

### JP6 – CPU Core Voltage Selectors

Vcc	Setting	Vcc	Setting	Vcc	Setting
2.5V		3.2V		2.2V	
2.8V (default)		3.3V			
2.9V		3.5V			

**JP5 (A, B) – CPU Internal Clock Speed Selectors**

IDT	Intel	Cyrix	AMD	JP5
Reserved	1.5X/ 3.5X	Reserved	K5 1.5X/ K6 3.5X	 1 A B
Reserved	2.0X (default)	2.0X	Reserved	 1 A B
Reserved	2.5X	M2 2.5X	2.5X	 1 A B
C6 3.0X	3.0X	M2 3.0X	K6 3.0X	 1 A B

**JP7 (A, B) – CPU External Clock Selectors**

Clock	Settings	Clock	Settings
60MHz	 A B	75MHz	 A B
66MHz (default)	 A B	83MHz	 A B

**JP9 – Sound Pro Selector**

Description	Setting
Enabled	
Disabled	

**J5 – MIC Type Selector**

Description	Setting
Standard	
Special	

\* Make sure that the setting is set to Normal Mode before installing the mainboard.

\*\* The setting must be set to 3.3V position for all Synchronous DRAM.

## Memory Installation

The mainboard lets you add up to 384MB of system memory through SIMM and DIMM sockets on the board. Four SIMM sockets on the mainboard are divided into two banks: Bank 0 and Bank 1. Each bank consists of two 72-pin SIMM modules and three 168-pin DIMM sockets are divided into three banks: Bank 0, Bank 1, and Bank 2. The mainboard supports the following memory configurations.

Bank	Memory Module
Bank 0 SIMM1 & SIMM2 DIMM1	2 x 4MB/8MB/16MB/32MB/64MB or 4MB, 8MB, 16MB, 32MB, 64MB, 128MB
Bank 1 SIMM3 & SIMM4 DIMM2	2 x 4MB/8MB/16MB/32MB/64MB or 4MB, 8MB, 16MB, 32MB, 64MB, 128MB
Bank 2 DIMM3	4MB, 8MB, 16MB, 32MB, 64MB, 128MB
Total System Memory = Bank 0 + Bank 1 + Bank 2	

- Notes:
1. The following two types of DRAM module can not be used at the same time: SIMM 1 & 2 and DIMM1 or SIMM3 & 4 and DIMM2.
  2. Use 2 DRAM types: FPM/EDO faster than 70ns for SIMM socket.
  3. Use 3 DRAM types: FPM/EDO/SDRAM faster than 70ns for DIMM socket.

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# Chapter 3

## ACPI Functions & Connectors with ATX Power

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### PWR2 – ATX Power Connector

The ATX power supply provides a single 20-pin connector and supports the ACPI specification.

Pin	Description	Pin	Description
1	3.3V	11	3.3V
2	3.3V	12	-12V
3	Ground	13	Ground
4	+5V	14	PS-ON
5	Ground	15	Ground
6	+5V	16	Ground
7	Ground	17	Ground
8	Power OK	18	-5V
9	5VSB	19	+5V
10	+12V	20	+5V

The functions and connectors described below work with the ATX power supply.

### Software Power-Off

Follow the steps below to use the “Software Power-Off Control” function in Windows 95 with ATX power supply.

1. Click the **START** button on the Windows 95 task bar.
2. Select **Shut Down The Computer** to turn off the computer. The message “**It is now safe to turn off your computer.**” will not be shown when using this function.

### Modem Ring Power-On

While in Soft-off/Suspend state, if an external modem ring-up signal occurs, the system wakes up and can be remotely accessed. Make sure that the Ring Resume From Soft Off option is set to Enabled in the BIOS setup section (Refer to the Power Management section in Chapter 4.)

### Alarm Wake Up

If you want to autoboot the system at a certain time, set the function of RTC Alarm time properly and the function of RTC Alarm Resume From Soft Off option in the BIOS Setup section will be set to Enabled.

## **J2 (21, 22) (PWRBT) – ATX Power Button and Suspend Switch Connector**

Attach the ATX Power Button or Suspend Switch cable to this connector.

In the AT power system, this connector will act as a suspend switch; and in the ATX power system, this connector will be not only an ATX power button but a Suspend switch as well. Details are described below:

When the system is off, push the power button to turn the system on. When the system is on, push the power button rapidly to switch the system to the Suspend mode, and, by pushing and holding the button for more than 4 seconds, it will turn the system completely off. When the system is in the Suspend mode, push the power button rapidly to turn the system on.

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## Chapter 4

### BIOS Setup

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This chapter explains how to configure the mainboard's BIOS setup program. The setup program provided with the mainboard is the BIOS from AMI.

After you have configured the mainboard and have assembled the components, turn on the computer and run the software setup to ensure that the system information is correct.

The software setup of the system board is achieved through Basic Input-Output System (BIOS) programming. You use the BIOS setup program to tell the operating system what type of devices are connected to your system board.

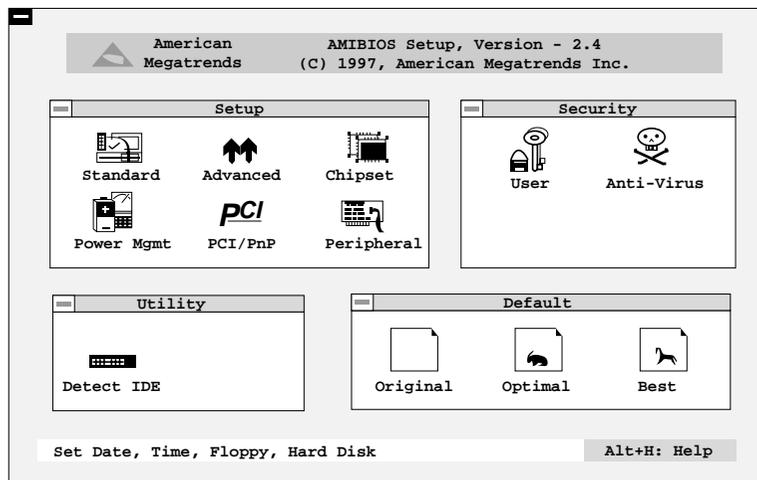
The system setup is also called CMOS setup. Normally, you need to run system setup if either the hardware is not identical with information contained in the CMOS RAM, or if the CMOS RAM has lost power.

*Note: When installing newer BIOS into this mainboard, you must clear CMOS for a moment then set back to Normal Mode, or hold down the <End> key then power on to reboot the system.*

## Entering WinBIOS Setup

To enter the WinBIOS Setup program:

1. Turn on or reboot the system. A screen appears with a series of diagnostic checks.
2. When “Hit <DEL> if you want to run SETUP” appears, press the <DEL> key to enter the BIOS setup program. The following screen appears:



3. Use your keyboard or mouse to choose options. Modify system parameters to reflect system options. Press Alt-H for Help.

## Default

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Every option in the BIOS Setup contains three default values: Original default, Best default, and the Optimal default value.

**Original:** The original default values recover the modified settings to the original values.

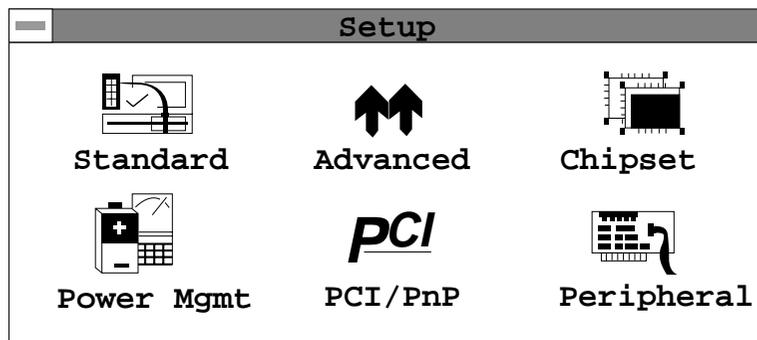
**Optimal:** The Optimal default values provide optimum system settings for all devices and system features.

**Best:** The Best default values provide best performance settings for all devices and system features, but dependent used devices and we aren't guaranty that system run overnight on these settings.

## Setup Window

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The Setup window has six icons that allow you to set system configuration options.



## Standard Setup

The WinBIOS Setup options described in this section are displayed by choosing the Standard icon from the Setup section on the WinBIOS Setup main menu. All Standard Setup options are described in this section.

- Pri Master** Choose these icons to configure the hard disk drive named in the option. When you click on an icon, the following parameters are listed:
- Pri Slave** Type, LBA/Large Mode, Block Mode, 32Bit Mode, and PIO Mode. All parameters relate to IDE drives except **Type**. Choose the **Type** parameter and select Auto BIOS automatically detects the IDE drive parameters and displays them. Choose on **LBA Mode** and choose *On* to enable support for IDE drives with capacities greater than 528MB. Click on **Blk Mode** and choose *On* to support IDE drives that use Blk Mode. Click on **32Bit Mode** and click on *On* to support IDE drives that permit 32-bit accesses.
- Sec Master**
- Sec Slave**
- Date/Time** Select the Date/Time option to change the date or time. The current date and time are displayed. Enter new values through the displayed window.
- Floppy Drive A; B** Choose the Floppy Drive A or B icon to specify the floppy drive type. The settings are 360KB 5<sup>1</sup>/<sub>4</sub>", 1.2MB 5<sup>1</sup>/<sub>4</sub>", 720KB 3<sup>1</sup>/<sub>2</sub>", 1.44MB 3<sup>1</sup>/<sub>2</sub>", or 2.88MB 3<sup>1</sup>/<sub>2</sub>".

## Advanced Setup

The WinBIOS Setup options described in this section are displayed by choosing the Advanced icon from the Setup section on the WinBIOS Setup main menu. All Advanced Setup options are described in this section.

- 1st Boot Device;**  
**2nd Boot Device;**  
**3rd Boot Device;**  
**4th Boot Device**      Set these options to select the boot sequence from different booting devices.
- S.M.A.R.T for Hard Disks**      Select this option to enable or disable the S.M.A.R.T. function of HDDs.
- Quick Boot**      Set this option to *Enabled* to permit BIOS to boot within 5 seconds.
- Boot Up Num-Lock**      When this option is set to *On*, BIOS turns off the *Num Lock* key when the system is powered on so the end user can use the arrow keys on both the numeric keypad and the keyboard.
- Floppy Drive Swap**      Set this option to *Enabled* to specify that floppy drives A: and B: are swapped.
- Floppy Drive Seek**      Choose Enabled or Disabled. Disabled provides a faster boot and reduces the possibility of damaging the heads.
- PS/2 Mouse Support**      When this option is set to *Enabled*, BIOS supports a PS/2 type mouse.

<b>Password Check</b>	<p>This option specifies the type of BIOS password protection that is implemented. The settings are:</p> <p>Setup: The password prompt appears only when an end user attempts to run WinBIOS Setup.</p> <p>Always: A password prompt appears every time the computer is powered on or rebooted.</p> <p>The BIOS password does not have to be enabled. The end user sets the password by choosing the Password icon on the WinBIOS Setup screen.</p>
<b>Internal Cache</b>	This option selects to enable the internal cache or not.
<b>External Cache</b>	This option selects to enable External Cache or not.
<b>System BIOS Cacheable</b>	BIOS always copies the system BIOS from ROM to RAM for faster execution. Set this option to <i>Enabled</i> to permit the contents of the F0000h RAM memory segment to be written to and read from cache memory.
<b>Video BIOS Shadow; C800, 16K Shadow; CC00, 16K Shadow; D000, 16K Shadow; D400, 16K Shadow; D800, 16K Shadow; DC00, 16K Shadow</b>	<p>Disabled: The specified ROM is not copied to RAM.</p> <p>Enabled: The contents of the ROM area are not only copied from ROM to RAM for faster execution, the contents of the RAM area can be written to or read from cache memory.</p> <p>Cached: The contents of the ROM area are copied from ROM to RAM for faster execution.</p>

## Chipset Setup

Choose the Chipset icon from the Setup section on the WinBIOS Setup main menu. All Chipset Setup options are then displayed and are described in the following section:

<b>USB Function for DOS</b>	Set this option to enable the system BIOS USB (Universal Serial Bus) functions.
<b>DRAM Write Timing</b>	Set this option to select the proper DRAM Write Timing.
<b>Page Mode DRAM Read Timing</b>	Set this option to select the proper Page Mode DRAM Read Timing.
<b>RAS Precharge Period</b>	Set to select the RAS Precharge Period.
<b>RAS to CAS Delay Time</b>	Set to select the Delay Time of RAS to CAS.
<b>EDO DRAM Read Timing</b>	Set this option to select the proper EDO DRAM Read Timing.
<b>DRAM Speculative Read</b>	Set to enable the DRAM Speculative Read.
<b>SDRAM CAS Latency</b>	Set this select the SDRAM CAS Latency.
<b>SDRAM Timing</b>	Set to select the SDRAM Timing.
<b>SDRAM Speculative Read</b>	Set to enable the SDRAM Speculative Read.
<b>Pipe Function</b>	Set to enable the Pipe Function.

<b>Slow Refresh</b>	Set to select the Slow Refresh.
<b>DRAM Data Integrity Mode</b>	Set to select the DRAM Data Integrity Mode.
<b>Primary Frame Buffer</b>	Set to select the Primary Frame Buffer.
<b>VGA Frame Buffer</b>	Set to enable the VGA Frame Buffer.
<b>Passive Release</b>	Set to enable the Passive Release.
<b>ISA Line Buffer</b>	Set to enable the ISA Line Buffer.
<b>Delay Transaction</b>	Set to enable the Delay Transaction.
<b>AT Bus Clock</b>	Set to select the AT Bus Clock.

## Power Management Setup

The BIOS Setup options described in this section are selected by choosing the Power Mgmt icon from the Setup section on the WinBIOS Setup main menu.

<b>Power Management/APM</b>	Set this option to enable power management features and APM (Advanced Power Management).
<b>Green PC Monitor Power State</b>	This option specifies the power state that the green PC-compliant video monitor enters when AMIBIOS places it in a power savings state after the specified period of display inactivity has expired.

<b>Video Power Down Mode</b>	This option specifies the power conserving state that the VESA VGA video subsystem enters after the specified period of display inactivity has expired.
<b>Hard Disk Power Down Mode</b>	This option specifies the power conserving state that the hard disk drive enters after the specified period of hard drive inactivity has expired.
<b>Standby Time out (Minute)</b>	This option specified the length of system inactivity while in Full power on state. When this length of time expires, the computer enters Standby power state.
<b>Suspend Time out (Minute)</b>	This option specified the length of a period of system inactivity while in Standby state. When this length of time expires, the computer enters Suspend power state.
<b>Monitor Parallel Port; Monitor serial Port; Monitor Floppy; Monitor VGA; Monitor Audio; Monitor Pri-HDD; Monitor Sec-HDD</b>	When set to <i>Yes</i> , these options enable event monitoring on the specified hardware interrupt request line and the computer is in a power saving state, BIOS watches for activity on the specified IRQ line. The computer enters the full on power state if any activity occurs.
<b>Power Button Override</b>	Set this option to enable Power Button function.
<b>Power Button Function</b>	This option specifies the operation of Soft-Off by the Power Button. Select "Green" function to enter "On-Suspend-Off" or select "Soft Off" function to enter "On-Off" operation cycle.

**Ring Resume From Soft Off** Set this option to enable the Modem Ring to wake up the system which is Soft Off.

**RTC Alarm Resume From Soft Off** Set this option to enable the RTC Alarm to wake up the system which is Soft Off.

**RTC Alarm Date;** Set these options to specify the RTC Alarm  
**RTC Alarm Hour;** time on Date/ Hour /Minute /Second.  
**RTC Alarm Minute;**  
**RTC Alarm Second**

## PCI/PnP Setup

Choose the PCI/PnP icon from the Setup section on the WinBIOS Setup main menu.

**OnBoard USB** Set this option to enable USB function on Chipset.

**Plug and Play Aware OS** Set this option to *Yes* if the operation system in this computer is aware of and follows the Plug and Play specification. Currently, only Windows 95 is PnP-aware.

**PCI Latency Timer (PCI Clocks)** This option specifies the latency timings (in PCI clocks) for all PCI devices on the PCI bus.

**PCI VGA Palette Snoop** When this option is set to Enabled, multiple VGA devices operating on different buses can handle data from the CPU on each set of palette registers on every video device. Bit 5 of the command register in the PCI device configuration space is the VGA Palette Snoop bit (0 is disabled).

- OffBoard PCI IDE Card** This option specifies if an offboard PCI IDE controller adapter card is installed in the computer. You must specify the PCI expansion slot on the motherboard where the offboard PCI IDE controller is installed. If an offboard PCI IDE controller is used, the onboard IDE controller is automatically disabled. If an offboard PCI IDE controller adapter card is installed in the computer, you must also set the **Offboard PCI IDE Primary IRQ** and **Offboard PCI IDE Secondary IRQ** options.
- OffBoard PCI IDE Primary IRQ;**  
**OffBoard PCI IDE Secondary IRQ** These options specify the PCI interrupt used by the Primary (or secondary) IDE channel on the offboard PCI IDE controller.
- Assign IRQ to PCI VGA Card** Set this option to *Enabled* to assign IRQ to PCI VGA Card.
- PCI Slot 1/2/3/4/5 IRQ Priority** These options specify the priority IRQ to be used for any PCI devices installed in PCI expansion slots 1 through 5.
- DMA Channel 0, 1, 3, 5, 6, 7** These options specify the bus that the specified DMA channel is used on.
- IRQ3, 4, 5, 7, 9, 10, 11, 12, 14, 15** These options specify the bus that the specified IRQ line is used on. These options allow you to reserve IRQs for legacy ISA adapter cards.

## Peripheral Setup

Choose the Peripheral icon from the Setup section on the WinBIOS Setup main menu.

- |   |  |
|---|--|
| <b>OnBoard FDC</b>  | This option enables the FDC (Floppy Drive Controller) on the motherboard or auto detects the FDC.  |
| <b>OnBoard Serial Port1</b>   | This option specifies the base I/O port address of serial port 1.  |
| <b>Serial Port1 IRQ</b>   | This option specifies IRQ to Serial Port 1.  |
| <b>OnBoard Serial Port2</b>   | This option specifies the base I/O port address of serial port 2.  |
| <b>Serial Port2 Mode</b>  | This option specifies the serial port2 mode.<br>Normal: The normal serial port mode is being used.<br>IrDA/ASKIR: The serial port2 will be redirected to support IR function when this option is set to IrDA or ASKIR. |
| <b>Serial Port2 IRQ</b>   | This option specifies IRQ to Serial Port2.   |
| <b>IR Transmitter Polarity;<br/>IR Receiver Polarity;<br/>IR Half-Duplex<br/>Time-Out</b> | These options show up only when either IrDA or ASKIR is chosen in the previous option (Serial Port2 Mode).   |
| <b>OnBoard Parallel Port</b>  | This option specifies the base I/O port address of the parallel port on the motherboard.   |

**Parallel Port Mode** Depends on the type of your external device which connects to this port to choose Normal, Bi-Dir, EPP, or EPP/ECP mode.

**EPP Version** This option is only available if the setting of the Parallel Port Mode option is set to EPP.

**Parallel Port IRQ** This option specifies IRQ to parallel port.

**Parallel Port DMA Channel** This option is only available if the setting of the Parallel Port Mode option is EPP/ECP.

**OnBoard IDE** This option specifies the channel used by the IDE controller on the motherboard.

**OnBoard Sound Pro** Set this option to enable the SoundPro functions.

## Security

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### User

This item lets you configure the system password which is required every time when the system boots up or an attempt is made to enter the Setup program. The password cannot be longer than six characters.

*Note: Keep a safe record of the new password. If you forget or lose the password, the only way to access the system is to discharge CMOS memory using Jumper JP1.*

### Anti-Virus

This item protects the boot sectors and partitions table of your hard disk against accidental modifications. Any attempt to write to boot sectors and partitions will cause the system to halt and you need to use a bootable none virus floppy disk to reboot the system and then

run the virus checking program to make sure that your system is ok.

The default setting is "Disabled." This setting is recommended due to the conflicts within new operating systems.

## Utility

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### Detect IDE

If your system has an IDE hard drive, you can use this utility to detect its parameters and automatically enter them into the Standard CMOS Setup. This utility will autodetect up to four IDE devices.

### Exit WinBIOS Setup

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Press the <ESC> key to exit the BIOS setup program while in the main menu of the WinBIOS Setup and the following three options will be displayed on the screen.

### Save Changes and Exit

Select this item to save the values entered during the current session and then exit the BIOS setup program.

### Do Not Save Changes and Exit

Select this item to exit the BIOS setup program without saving the values which has been entered during the current session.

### Continue

Select this item to return to the WinBIOS setup program.