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# **Chapter 1 Introduction**

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

# **Key Features**

The advanced features of the **TX** PRO mainboard include:

- TX PRO PENTIUM PCI chipset
- Supports Pentium<sup>™</sup> 90 ~ 300 MHz CPUs at 60/66/75/83.3 MHz external clock speed
- Supports Pentium<sup>™</sup> P54C and P55C (MMX<sup>™</sup>), Cyrix/IBM 6x86, 6x86L, 6x86MX (M2), IDT C6, and AMD K5/K6 CPUs
- Supports Write Allocation feature for AMD K6;
   Linear Wrap Mode for Cyrix M1, M2;
   Error Checking & Correction (ECC) and Parity for DRAM
- Supports 64M-bit (16Mx4, 8Mx8, 4Mx16) technology DRAM/SDRAM
- Provides 4 x 72-pin SIMM modules auto banking in multiple configuration up to 256MB; 3 x 168-pin DIMM to support SDRAM/EDO DRAM/Page Mode DRAM
- Supports single piece of 72-pin SIMM working capability
- Supports "Table Free" configuration so that DIMM and SIMM can be installed in any combinations up to 384MB of system
- 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
- Switching power provides CPU Core voltage between 2.5V and 3.5V

Introduction

 Supports 2.88MB, Iomega ZIP-100M, and IDE LS-120 FDD, bootable from floppy, HDD, CD-ROM, SCSI, NetWork, LS-120, ZIP, or others

- 5 PCI Local Bus slots and 3 x 16 bits ISA Bus slots, all 5 PCI slots support master mode
- 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

   8.4 GB
- 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 connecor 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 Green feature function, and "Plug & Play" Flash ROM

# **Static Electricity Precautions**

Static electricity can easily damage your mainboard. Following procedures can help you to protect your mainboard from electrostatic discharge:

- 1. Keep the mainboard and other system components in their antistatic packaging until you are ready to install them.
- 2. Ground yourself before removing any system component from its protective anti-static packaging. A grounded surface within easy reach is the expansion slot covers at the rear of the system case or any other unpainted portion of the system chassis.
- 3. Frequently ground yourself to discharge any static electric charge that may build up in your body while working on installation and/or configuration.
- 4. Handle the mainboard by its edges or by the mounting bracket to avoid touching its components.

# **Unpacking the Mainboard**

This Mainboard package contains the following items:

- 1. The TX PRO Mainboard
- 2. This User's Guide
- 3. Cables: 2 serial port ribbon cables/bracket;
  - 1 parallel ribbon cable/bracket;
  - 1 floppy ribbon cable;
  - 1 IDE ribbon cable

*Introduction* 5

- 4. The Device Driver for TX PRO
- 5. ATX Form card (optional)

Note: Do not remove the mainboard from its original package until you are ready to install it.

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

- 1. Before handling the mainboard, ground yourself by grasping an unpainted portion of the system's metal chassis.
- 2. Remove the mainboard from its anti-static packaging and place it on a grounded surface, component side up.
- 3. Check the mainboard for damage. If any integrated circuit appears loose, press carefully to seat it firmly in its socket.

Do not apply power if the mainboard appears damaged. If there is damage to the board contact your dealer immediately.

# **Chapter 2 Hardware Configuration**

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.

# **Mainboard Component Locations**

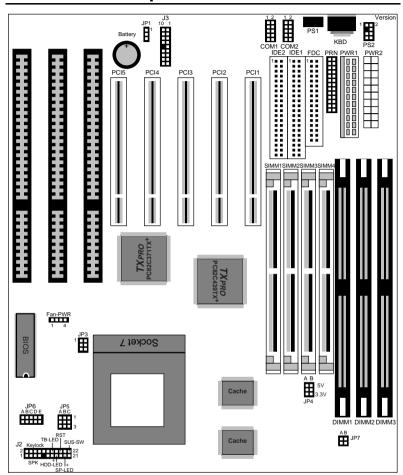


Figure 2–1. Mainboard Component Locations

## **Connectors**

Attach system components and case devices to the mainboard via the mainboard connectors. A description of each connector and its connector pins follows. 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**

The power supply connectors are two six-pin male header connectors. Plug the dual connectors from the power directly onto the board connectors. Most of power supply have two leads and each lead has six wires. Two of which are black, orient the connectors so that the black wires are in the middle.

Pin	Description	Pin	Description
1	Power Good	7	Ground
2	+5V DC	8	Ground
3	+12V DC	9	–5V DC
4	–12V DC	10	+5V DC
5	Ground	11	+5V DC
6	Ground	12	+5V DC

# **PWR2 – ATX Style 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.

#### A. Software Power-Off

Follow the steps below to use the "Software Power-Off Control" function in Windows 95.

- 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.

#### B. 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 3.)

#### C. 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.

# D. J2 (21, 22) (SUS-SW) – 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.

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

# **Jumper Settings**

# JP1 – CMOS RAM Discharge Selector\*

Description	Setting
Normal Mode	□ 3 □ 1
Clear CMOS (default)	□ 3 □ 1

# JP4 – DIMM Voltage Selectors\*\*

Voltage Selectors	Setting
5V	5V
3.3V (default)	5V

JP3 – CPU Type Selector

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

JP6 – CPU Core Voltage Selectors

Core Vcc	Setting	Core Vcc	Setting
2.5V	0 0 0 0 0 A B C D E	3.2V	A B C D E
2.8V (default)	A B C D E	3.3V	A B C D E
2.9V	A B C D E	3.5V	A B C D E

Hardware Configuration

JP5 (A. B) – CPU Internal Clock Speed Selectors

JF5 (A, B) - CF0 internal clock Speed Selectors				
IDT	Intel	Cyrix	AMD	JP5
Reserved	1.5X/ 3.5X	Reserved	K5 1.5X/ K6 3.5X	1 0 A B
Reserved	2.0X	2.0X	Reserved	1 A B
				(default)
Reserved	2.5X	M2 2.5X	2.5X	1 A B
C6 3.0X	3.0X	M2 3.0X	K6 3.0X	1

JP7 (A, B) – CPU External Clock Selectors

External Clock	JP7 (A, B) Settings	External Clock	JP7 (A, B) Settings
60MHz	A B	75MHz	A B
66MHz (default)	□ □ □ A B	83MHz	□ □ □ A B

Make sure that JP1 is set to Normal Mode (pin 1–2) before installing the mainboard.

JP4 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	$2 \times 4MB/8MB/16MB/32MB/64MB$	
(72-pin SIMM)	or	
DIMM1	4MB, 8MB, 16MB, 32MB, 64MB, 128MB	
(168-pin DIMM)		
Bank 1		
SIMM3 & SIMM4	$2 \times 4MB/8MB/16MB/32MB/64MB$	
(72-pin SIMM)	or	
DIMM2	4MB, 8MB, 16MB, 32MB, 64MB, 128MB	
(168-pin DIMM)		
Bank 2		
DIMM3	4MB, 8MB, 16MB, 32MB, 64MB, 128MB	
(168-pin DIMM)		
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. The speed of all SIMMs and DIMM modules have to be faster than 70ns.
  - 3. Use 2 DRAM types: Fast Page Mode or Extend DATA Out (EDO) for SIMM socket.
  - 4. Use 3 DRAM types: Fast Page Mode, Extend Data Out (EDO), or Synchronous DRAM (SDRAM) for DIMM socket.

# **Chapter 3 BIOS Setup**

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.

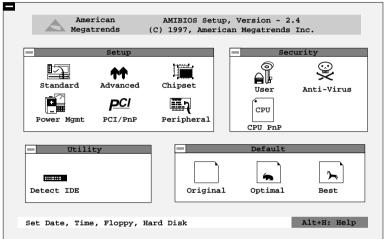
The system setup is also called CMOS setup. Normally, you need to run system setup if either the hardware is not identical with information contained in the CMOS RAM, or if the CMOS RAM has lost power.

Note: When installing newer BIOS into this mainboard, JP1 must be set to clear CMOS position 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

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.

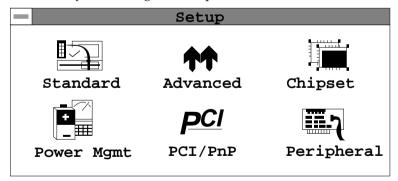
Best: The Best default values provide best

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**

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 Pri Slave Sec Master Sec Slave Choose these icons to configure the hard disk drive named in the option. When you click on an icon, the following parameters are listed: 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.

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  $5^{1}/_{4}$ ", 1.2MB  $5^{1}/_{4}$ ", 720KB  $3^{1}/_{2}$ ", 1.44MB  $3^{1}/_{2}$ ", or 2.88MB  $3^{1}/_{2}$ ".

## **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.

**Disks** 

S.M.A.R.T for Hard 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.

Choose Enabled or Disabled. Disabled Floppy Drive Seek

> 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.

This option configures the primary display **Primary Display** 

subsystem in the computer. The settings are Mono (monochrome), 40CGA, 80CGA, or

VGA/EGA.

**Password Check** 

This option specifies the type of BIOS

password protection that is implemented.

The settings are:

Setup: The password prompt appears

only when an end user attempts

to run WinBIOS Setup.

Always: A password prompt appears

every time the computer is

powered on or rebooted.

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.

**Internal Cache** 

This option selects to enable the internal

cache or not.

**External Cache** 

This option selects to enable External

Cache or not.

System BIOS Cacheable BIOS always copies the system BIOS from ROM to RAM for faster execution. Set this option to *Enabled* to permit the contents of the F0000h RAM memory segment to be written to and read from cache memory.

Video BIOS

Disabled: The specified ROM is not copied to RAM.

Shadow;

Enabled: The contents of the ROM area

C800, 16K Shadow; CC00, 16K Shadow; D000, 16K Shadow; D400, 16K Shadow; D800, 16K Shadow; DC00, 16K Shadow

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.

Cached: The contents of the ROM area

are copied from ROM to RAM

for faster execution.

## **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:

**USB Function for** 

Set this option to enable the system BIOS USB (Universal Serial Bus) functions.

**DRAM Write Timing** 

DOS

Set this option to select the proper DRAM

Write Timing.

**Read Timing** 

Page Mode DRAM Set this option to select the proper Page

Mode DRAM Read Timing.

**RAS Precharge** 

Set to select the RAS Precharge Period.

Period

**RAS to CAS Delay** Set to select the Delay Time of RAS to CAS.

Time

**EDO DRAM Read** Set this option to select the proper EDO

**Timing** DRAM Read Timing.

**DRAM Speculative** Set to enable the DRAM Speculative Read.

Read

**SDRAM CAS** Set this select the SDRAM CAS Latency.

Latency

**SDRAM Timing** Set to select the SDRAM Timing.

**SDRAM** Set to enable the SDRAM Speculative Read.

**Speculative Read** 

**Pipe Function** Set to enable the Pipe Function.

**Slow Refresh** Set to select the Slow Refresh.

DRAM Data Set to select the DRAM Data Integrity

**Integrity Mode** Mode.

**Primary Frame** Set to select the Primary Frame Buffer.

Buffer

**VGA Frame Buffer** Set to enable the VGA Frame Buffer.

**Passive Release** Set to enable the Passive Release.

**ISA Line Buffer** Set to enable the ISA Line Buffer.

**Delay Transaction** Set to enable the Delay Transaction.

**AT Bus Clock** 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.

**Power** Management/ **APM** 

Set this option to enable power management features and APM (Advanced Power

Management).

**Power State** 

**Green PC Monitor** 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.

Video Power Down Mode

This option specifies the power conserving state that the VESA VGA video subsystem enters after the specified period of display inactivity has expired.

**Hard Disk Power** Down Mode

This option specifies the power conserving state that the hard disk drive enters after the specified period of hard drive inactivity has expired.

(Minute)

Standby Time out 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.

(Minute)

**Suspend Time out** 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.

**Monitor Parallel** 

Port:

**Monitor serial** 

Port:

Monitor Floppy; Monitor VGA;

**Monitor Sec-HDD** 

**Monitor Audio**; **Monitor Pri-HDD**;

**Power Button** Override

Set this option to enable Power Button

When set to Yes, these options enable event

interrupt request line and the computer is in a

power saving state, BIOS watches for activity

monitoring on the specified hardware

on the specified IRQ line. The computer enters the full on power state if any activity

function.

occurs.

**Power Button Function** 

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 Off

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

RTC Alarm Minute: RTC Alarm Second

RTC Alarm Date; Set these options to specify the RTC Alarm RTC Alarm Hour; time on Date/Hour/Minute/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 This option specifies the latency timings (in PCI clocks) for all PCI devices on the PCI bus. (PCI Clocks)

Snoop

**PCI VGA Palette** 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).

Card

OffBoard PCI IDE 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 These options specify the PCI interrupt used by the Primary (or secondary) IDE channel on Primary IRQ; OffBoard PCI IDE the offboard PCI IDE controller. Secondary IRQ **Assign IRQ to PCI** Set this option to *Enabled* to assign IRQ to PCI VGA Card VGA Card. PCI Slot 1/2/3/4/5 These options specify the priority IRQ to be **IRQ Priority** used for any PCI devices installed in PCI expansion slots 1 through 5. DMA Channel 0, These options specify the bus that the specified DMA channel is used on. 1, 3, 5, 6, 7

IRQ3, 4, 5, 7, 9, 10, These options specify the bus that the

adapter cards.

11, 12, 14, 15

specified IRQ line is used on. These options

allow you to reserve IRQs for legacy ISA

## **Peripheral Setup**

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

This option enables the FDC (Floppy Drive OnBoard FDC

Controller) on the motherboard or auto

detects the FDC.

**OnBoard Serial** 

Port1

This option specifies the base I/O port

address of serial port 1.

Serial Port1 IRQ This option specifies IRQ to Serial Port 1.

**OnBoard Serial** 

Port2

This option specifies the base I/O port

address of serial port 2.

**Serial Port2 Mode** This option specifies the serial port2 mode.

Normal: The normal serial port mode is

being used.

IrDA/ASKIR: The serial port2 will be

redirected to support IR function when this option is set to IrDA or

ASKIR.

Serial Port2 IRQ This option specifies IRQ to Serial Port2.

IR Transmitter Polarity;

**IR Receiver** Polarity;

IR Half-Duplex

Time-Out

These options show up only when either IrDA or ASKIR is chosen in the previous option (Serial Port2 Mode).

Port

**OnBoard Parallel** 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.

This option is only available if the setting of **EPP Version** 

the Parallel Port Mode option is set to EPP.

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

**Parallel Port DMA** This option is only available if the setting of Channel

the Parallel Port Mode option is EPP/ECP.

OnBoard IDE This option specifies the channel used by the

IDE controller on the motherboard.

# Security

#### 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

#### **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**

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.