P5TX-B

User's Manual (for Award BIOS)

V1.0

March, 1997

This mainboard requires correct configuration information; otherwise, a malfunction may result.

Static electricity can cause serious damage to integrated circuit mainboard. To avoid building up a static electric charging on your body, be sure you discharge any static electricity by grounding yourself before handling the mainboard. If mainboard is handed from one person to another, they should touch hands first, then pass the mainboard.

Information presented in this publication has been carefully checked for reliability; however, no responsibility is assumed for inaccuracies. The information contained in this document is subject to change without notice.

Contact your dealer for warranty details.

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About this Manual

This manual is designed to offer detailed information about the P5TX-B mainboard. The content includes the main features of the mainboard, the installation , and the BIOS settings. There are three chapters to offer clear and detailed information of P5TX-B.

Chapter 1 **Introduction**
Describes the main features and major components.

Chapter 2 **Installation**
Describes the installation of hardware including jumpers , cables and connectors.

Chapter 3 **BIOS Setup**
Describes the setup of BIOS. Briefly explain each item and show the selection of option.

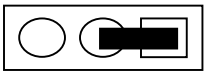
Warning Marks

In this manual , **warning marks** are used to stress important parts or notices of text that require users' attention. There are two kinds of warning marks in this manual:

Stress the important information or instructions that must pay more attentions to and should be noted.

Avoid the possible system error or damages , and offer detailed information.

Graphic Descriptions of Jumper Settings



means Pin 1 & Pin 2 are set as short

means Pin 1 & Pin 2 are set as open

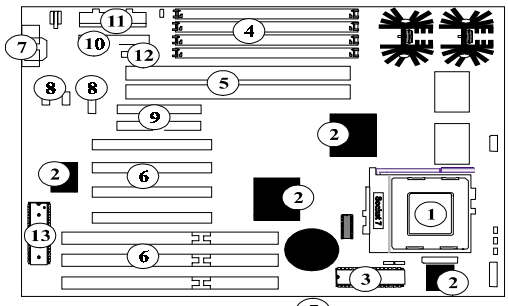
1 Introduction

Main Features

The P5TX-B mainboard integrates the latest advances in processor, memory, and I/O technologies into a 3/4 Baby AT form factor that combines performance, flexibility, and easy of use into a highly integrated mainboard capable of meeting a variety of price/performance levels. The P5TX-B mainboard utilizes Intel Pentium® 82430 TX PCIset. The board design will accept all Pentium family processors since P54C to P55C (supporting Intel Pentium® Processor with MMX™ technology) at speed of 75MHz to 200MHz. It also supports Cyrix 6x86 and AMD K5 processors. (refer to Appendix B and C) The memory subsystem supports up to 256MB of DRAM using 3.3V unbuffered 168-pin DIMM sockets and 72-pin SIMM sockets that accept Fast Page Mode (FPM), Extended Data Out (EDO) and Synchronous DRAM (SDRAM) memory. The L2 cache supports up to 512K Pipelined Burst SRAM and DRAM cache for option.

P5TX-B integrates a full set of I/O chip on board. The Intel 82371AB PCI/IDE Xcelerator (PIIX4) provides an integrated Bus Mastering IDE controller with two high performance IDE interfaces for up to four devices. It also supports two low cost Universal Serial Bus (USB) port to fit today and tomorrow's requirement. The Winbond W83877F Super I/O controller provides standard PC I/O function.

Mainboard Description



1. **Processor Socket (socket 7)**
2. **Chipset**
3. **System BIOS**
4. **SIMM Sockets**
5. **DIMM Sockets**
6. **Expansion Slots**
7. **PS/2 Mouse & Keyboard Set**
8. **Serial / Parallel Ports**
9. **IDE Connectors**
10. **FDD Connector**
11. **Power Supply Connector**
12. **USB Header**
13. **Keyboard Controller**

Specification

1. Processor Socket:

One Socket 7 supports:

- Pentium ® Processor 75/90/100/120/133/150/166/200 MHz. (P54C)
- Intel Pentium® Processor with MMX™ technology 166/200MHz.(P55C)
- Cyrix 6x86 / 6x86L and AMD K5 CPU. (refer to Appendix B and C)
- Upgrade capacity to future Pentium ® OverDrive® Processor.

2. Chipset:

- Intel Pentium ® 430TX PCIsest
- Winbond 83877F Series.

3. System BIOS:

- Award flash BIOS.
  - Ä DMI 2.0
  - Ä PnP 1.0a
  - Ä PCI 2.1
  - Ä CD ROM boot
  - Ä APM 1.2
  - Ä ACPI 1.0

4. SIMM Sockets:

- 4 pieces of 72-pin SIMM sockets with memory size from 4MB to 256MB.
- Support EDO / Fast Page Mode DRAM.
- Support Memory Module with 2/4/8/16/32/64 MB 5V FPM/EDO DRAM.

5. DIMM Sockets:

- 2 pieces of 168-pin DIMM sockets with memory size from 8MB to 256MB.
- Support Memory Module with 8/16/32/64/128 MB 3.3V unbuffered EDO or synchronous DRAM. (SDRAM)
- Compliance with JEDEC specifications for 3.3V unbuffered EDO/ SDRAM Module.

6. Expansion Slots:

- 3 16-bit ISA slots with 100% ISA compatible function.
- 4 32-bit PCI slots all support PCI master.
  - Ä PCI specification version 2.1.

7. PS/2 Mouse & Keyboard Set:

- Provides Connectors for PS/2 mouse & keyboard connector.

8. Serial / Parallel Ports:

- One multi-mode parallel port with chip-protect circuitry supports standard, enhanced (EPP), high speed (ECP) mode.
- Two high speed 16C550 UART compatible buffer fast serial port.
- Support IrDA/ASKIR or Fast IR (optional) Infrared Interface.

9. PCI IDE Connector:

- Build-in Intel Pentium® 82371AB chip 32-bit PCI IDE interface with 2 IDE channels.
  - Ä Independent Timing of up to 4 drives.
  - Ä PIO Mode 4 transfers up to 14 MB/Sec.
  - Ä Support ***Ultra*** 33 Synchronous DMA mode transfers up to 33 MB/Sec.
  - Ä Support glue-less ***Swap-Bay*** option with full electrical isolation.

10. FDD Connector:

- One floppy drive connector supports 360K/ 720K / 1.2MB / 1.44MB/2.88MB floppy drives.

11. Power Supply Connector:

- Provide the connectors for standard PC/AT power supply.

12. USB Header:

- Provide the interface for use of two USB channels.
- Two USB V1.0 Ports for serial transfers at 1.5 or 12 MB/Sec.
- Support UHCI Design Guide Rev1.1 interface.

13. Keyboard Controller:

- It is function compatible with Intel Pentium® 8042 Keyboard Controller, which provides enhanced gate A20 switching & PS/2 compatible mouse.

Mainboard Layout

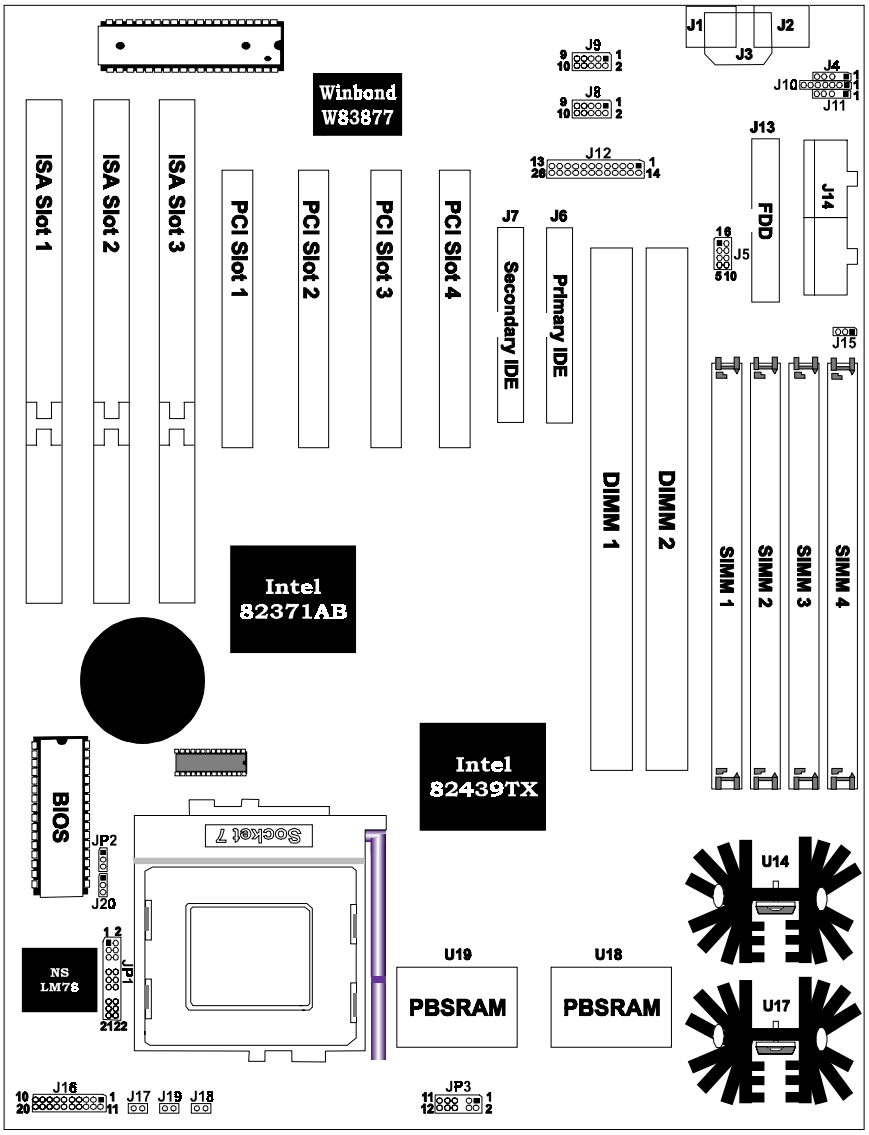


Figure 1. P5TX-B Mainboard Layout

2 Installation

This chapter provides information on how to install and configure P5TX-B Mainboard.

Check List

The standard packing of P5TX-B should include:

- ☑ P5TX-B mainboard
- ☑ 1 IDE cable
- ☑ 1 Floppy cable
- ☑ P5TX-B User's Manual

Optional packing of P5TX-B includes:

Device driver package

IrDA cable / bracket

USB cable / bracket

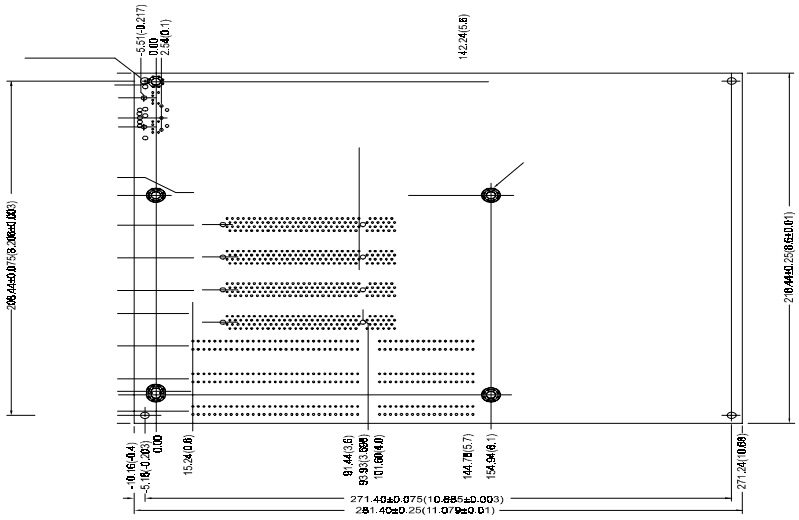
1 Audio Cable / Bracket

Special offer package of P5TX-B includes:

IrDA Motherboard Adapter

Dimensions

P5TX-B is designed to fit 3/4 Baby AT form factor chassis. Check the dimensions and mounting holes for special purpose of chassis only.



Install Main Memory

P5TX-B provides tremendous flexibility DRAM configurations. It accepts a maximum of 256MB memory size with Fast Page Mode or Extended Data Output (EDO) memory or Synchronous DRAM. The on-board DRAM is installed with 72-pin SIMM (32-bit) (Single-In-line-Memory Module) and 168-pin 3.3V unbuffered DIMM. (Dual- In-line-Memory Module)

The DIMM Socket is in compliance with JEDEC specifications for 3.3V unbuffered EDO / SDRAM Module. A DIMM Socket is provided to support up to 256MB EDO / Synchronous DRAM Module. (SDRAM)

Users can install the different memory size and type on any bank, according to the memory configuration table. ***Please pay more attentions***: the same bank of SIMM should be installed with the same memory size and type.

The following table lists a number of possible DRAM combinations.

Memory Configuration Table:

SIMM		DIMM		Total Memory Size
SIMM1/SIMM2	**SIMM3/SIMM4**	**DIMM1**	**DIMM2**	
2MB(S)/2MB(S)	-----	-----	-----	4MB
2MB(S)/2MB(S)	2MB(S)/2MB(S)	-----	-----	8MB
4MB/4MB	-----	-----	-----	8MB
4MB/4MB	2MB(S)/2MB(S)	-----	-----	12MB
4MB/4MB	4MB/4MB	-----	-----	16MB
8MB/8MB	-----	-----	-----	16MB
8MB/8MB	2MB(S)/2MB(S)	-----	-----	20MB
8MB/8MB	4MB/4MB	-----	-----	24MB
8MB/8MB	8MB/8MB	-----	-----	32MB
16MB/16MB	-----	-----	-----	32MB
16MB/16MB	2MB(S)/2MB(S)	-----	-----	36MB
16MB/16MB	4MB/4MB	-----	-----	40MB
16MB/16MB	8MB/8MB	-----	-----	48MB
16MB/16MB	16MB/16MB	-----	-----	64MB
32MB/32MB	-----	-----	-----	64MB
32MB/32MB	2MB(S)/2MB(S)	-----	-----	68MB
32MB/32MB	4MB/4MB	-----	-----	72MB
32MB/32MB	8MB/8MB	-----	-----	80MB
32MB/32MB	16MB/16MB	-----	-----	96MB
32MB/32MB	32MB/32MB	-----	-----	128MB
64MB/64MB	-----	-----	-----	128MB
64MB/64MB	2MB(S)/2MB(S)	-----	-----	132MB
64MB/64MB	4MB/4MB	-----	-----	136MB
64MB/64MB	8MB/8MB	-----	-----	144MB

Continued…..

SIMM		DIMM		Total Memory Size
SIMM1/SIMM2	**SIMM3/SIMM4**	**DIMM1**	**DIMM2**	
64MB/64MB	16MB/16MB	-----	-----	160MB
64MB/64MB	32MB/32MB	-----	-----	192MB
64MB/64MB	64MB/64MB	-----	-----	256MB
-----	-----	8MB	-----	8MB
-----	-----	8MB	8MB	16MB
-----	-----	16MB	-----	16MB
-----	-----	16MB	8MB	24MB
-----	-----	16MB	16MB	32MB
-----	-----	32MB	-----	32MB
-----	-----	32MB	8MB	40MB
-----	-----	32MB	16MB	48MB
-----	-----	32MB	32MB	64MB
-----	-----	64MB	-----	64MB
-----	-----	64MB	8MB	72MB
-----	-----	64MB	16MB	80MB
-----	-----	64MB	32MB	96MB
-----	-----	64MB	64MB	128MB
-----	-----	128MB	-----	128MB
-----	-----	128MB	8MB	136MB
-----	-----	128MB	16MB	144MB
-----	-----	128MB	32MB	160MB
-----	-----	128MB	64MB	192MB
-----	-----	128MB	128MB	256MB

Table 2 -1. P5TX-B Memory Configuration

1. It is not recommended to mix DIMMs which are 3V devices with 5V SIMMs . Mixing 5V and 3V memory is not recommended for reliability reason. Not all 3V memory are 5V tolerant.

2. The DIMM Sockets only support 3V DIMM Module. There is 3V key on the socket.

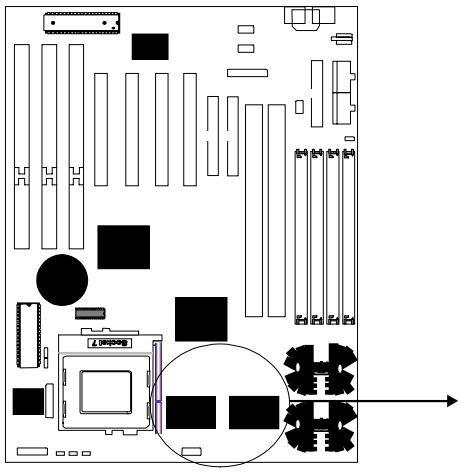
3. SIMM Socket pairs (i.e. SIMM1 / SIMM2) need to be populated with the same densities and type. The different SIMM Socket pair (i.e. SIMM1/SIMM2; SIMM3/ SIMM4) can be populated different densities and type. If the different memory is used for different SIMM Socket pair, each pair will be optimized for that type of memory.

4. DRAM parity is not supported on the chipset, so please ***do not*** *use parity modules for loading reasons.*

5.2MB(s): means 2Mbyte Single-side SIMM Module.

Cache Memory

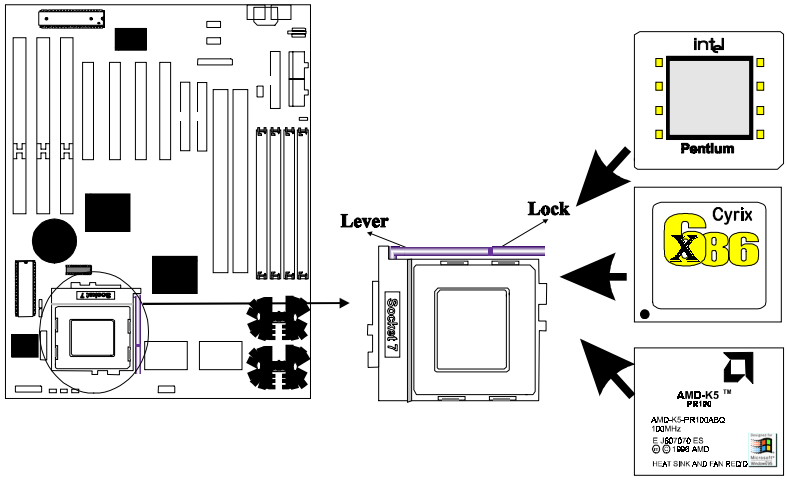
P5TX-B is equipped with L2 cache size 256KB or 512KB. L2 Pipelined Burst Cache / optional DRAM Cache. The memory size can be manufactured option.



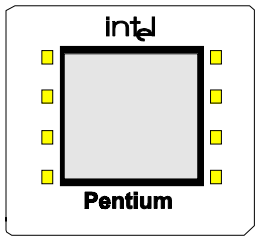
Size	Data RAM (U18, U19)
256KB	32K x 32 (3.3V) (Pipelined Burst / DRAM Cache)
512KB	64K x 32 (3.3V) (Pipelined Burst / DRAM Cache)

Install CPU

P5TX-B provides one ZIF socket 7 for installation of Intel Pentium ® processor, Intel Pentium ® processor with MMX™ technology, **Cyrix 6x86 / 6x86L or AMD K5 processor. (refer to Appendix B and C)** To install Pentium processor, check the direction of CPU and ZIF socket, lift the lever up to the top, put the CPU onto the socket, and lay down the lever of socket and then lock the lever of socket.



CPU Frequency and Bus frequency of Intel Pentium ® processor or Intel Pentium ® processor with MMX™ technology:

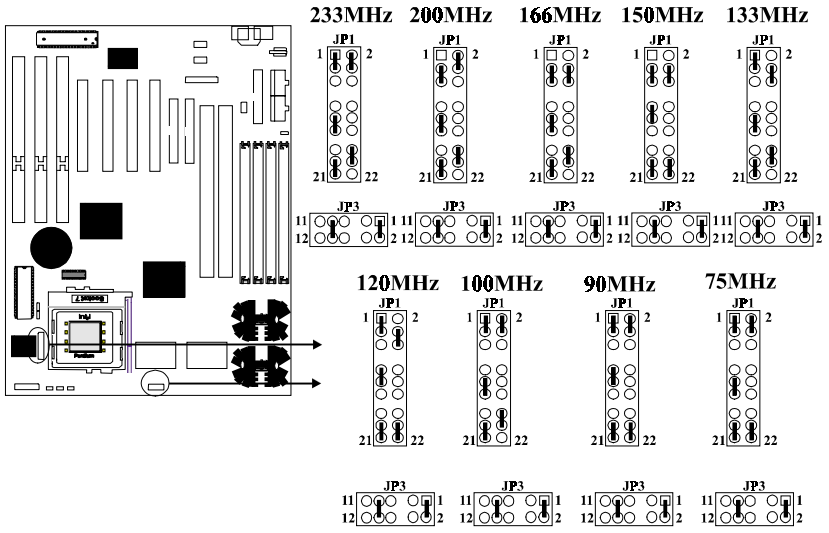


To install the CPU at its correct frequency, Please refer the following table to set up CPU frequency.

Core CPU Freq.	JP1 (Jumpser Short)	JP3 Voltage
233 MHz	1 - 3, 2 - 4, 11 - 13, 19 - 21, 18 - 20	1 - 2, 9 - 10
200 MHz	3 - 5, 2 - 4, 11 - 13, 19 - 21, 18 - 20	1 - 2, 9 - 10
166 MHz	3 - 5, 4 - 6, 11 - 13, 19 - 21, 18 - 20	1 - 2, 9 - 10
150 MHz	3 - 5, 4 - 6, 9 - 11, 19 - 21, 20 - 22	1 - 2, 9 - 10
133 MHz	1 - 3, 4 - 6, 11 - 13, 19 - 21, 18 - 20	1 - 2, 9 - 10
120 MHz	1 - 3, 4 - 6, 9 - 11, 19 - 21, 20 - 22	1 - 2, 9 - 10
100 MHz	1 - 3, 2 - 4, 11 - 13, 19 - 21, 18 - 20	1 - 2, 9 - 10
90 MHz	1 - 3, 2 - 4, 9 - 11, 19 - 21, 20 - 22	1 - 2, 9 - 10
75 MHz	1 - 3, 2 - 4, 11 - 13, 19 - 21, 20 - 22	1 - 2, 9 - 10

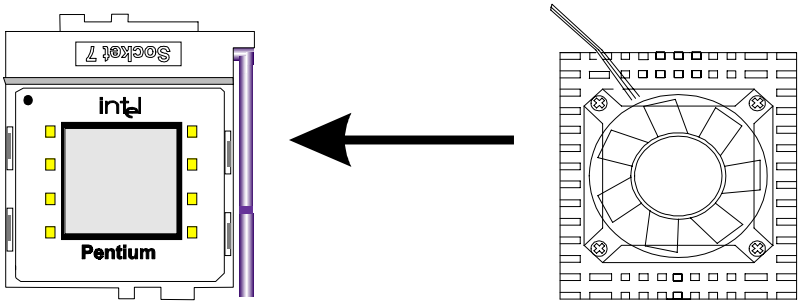
Table 2 -2. CPU Frequency and Bus Frequency

Intel Pentium ® processor with MMX™ technology only has 166MHz , 200 MHz and 233MHz.



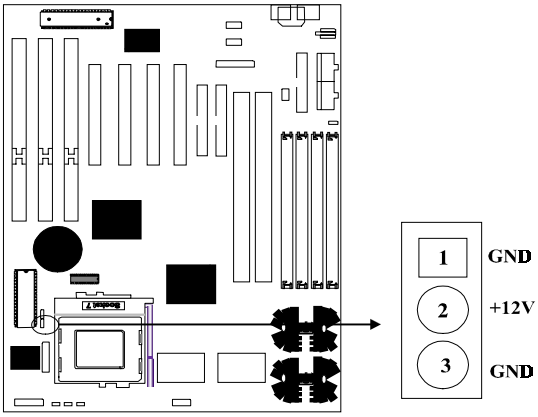
CPU Fan : (J20)

The Pentium ® Processor needs one fan / heatsink installed on to help heat dissipation. **Do not** install Pentium ® Processor without the fan/ heatsink.



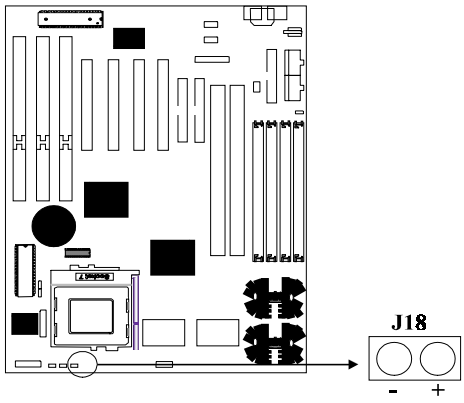
Install Fan Power On-board: (J20)

P5TX-B provides the ability to turn the CPU cooling fan off while the system is in low-power suspend mode. If the fan has 2-pin power-cord, please connect the CPU cooling fan power to J20 and enable "CPU Fan Power Green " function in BIOS "Power Management Setup" in order to make it work.



Green LED: (J18)

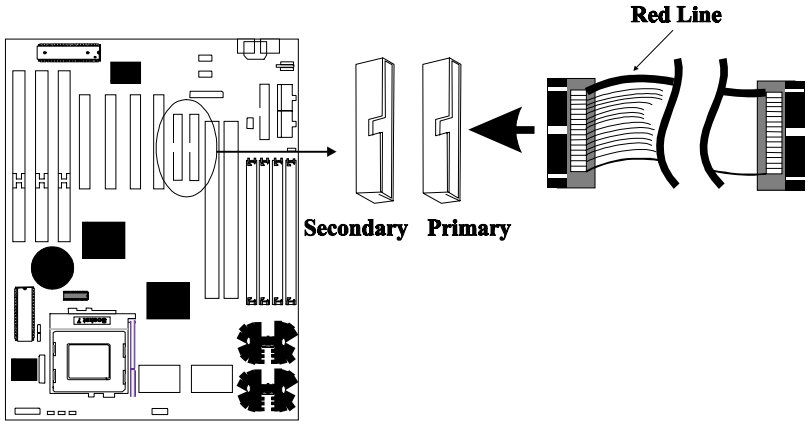
Install Green Function Indicator (Green LED) connect the front panel power LED or green LED to J18. The LED blinking indicates the system in low-power suspend mode.



Install Cables

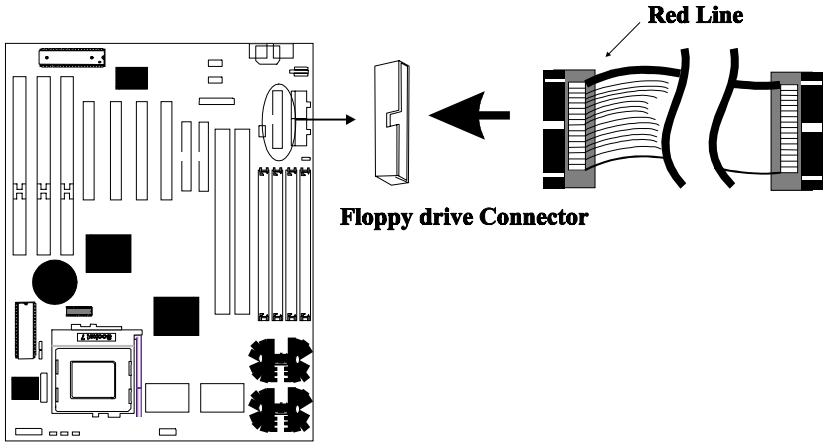
IDE Connector: (J6, J7)

P5TX-B provides 2 PCI IDE connectors which supports 2 ATAPI IDE devices (for example, Hard Drive and CD-ROM) on each connector. Use 40-pin IDE cable to connect IDE devices and IDE connector.



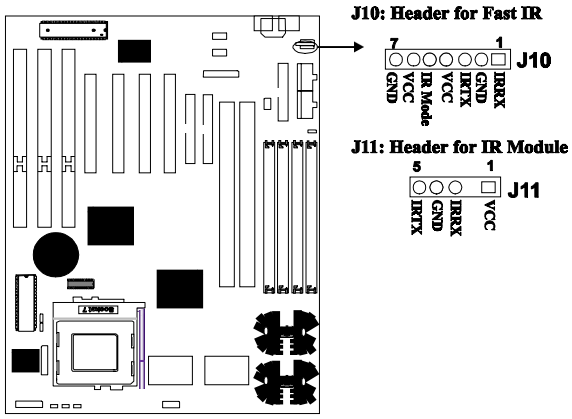
Floppy Disk Connector: (J13)

P5TX-B provides one floppy drive connector with one 34-pin floppy cable. It can support 2 floppy drivers with type : 360KB/ 720KB/ 1.2 MB / 1.44MB / 2.88MB or 3 mode.



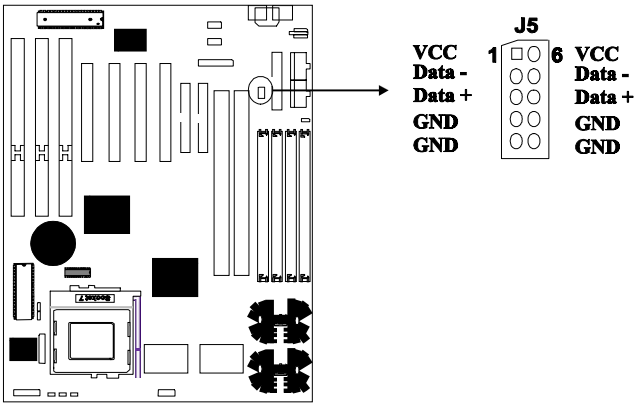
IrDA : (J10: Header for Fast IR / J11: Header for IR Module)

P5TX-B is an IrDA-capable / Fast IR (optional) mainboard. It gives users IR wireless data exchange directly from mobile computers, printers and PDAs,……etc. Optional IrDA / FIR cable/ bracket provides connector with IrDA module.



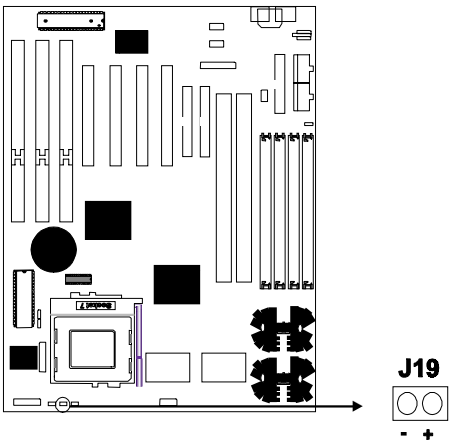
USB Header: (J5)

Universal Serial Bus (USB) is a new industry standard interface for ease use of PC peripheral expansion. Optional USB cable / bracket provides two USB connectors with USB devices.



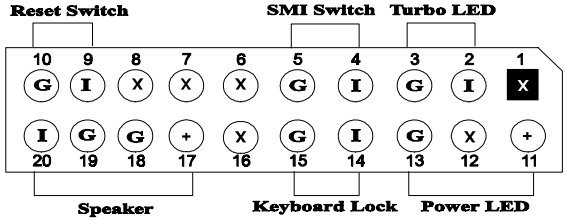
H.D.D. LED: (J19)

P5TX-B provides one set of IDE HDD LED headers to connect the front panel HDD LED. When the IDE devices are accessed, the LED will indicate the activity.



20-pin Front Panel Switch Connector: (J16)

In order to help quick install front panel switch, these headers are integrated in 20-pin header set.

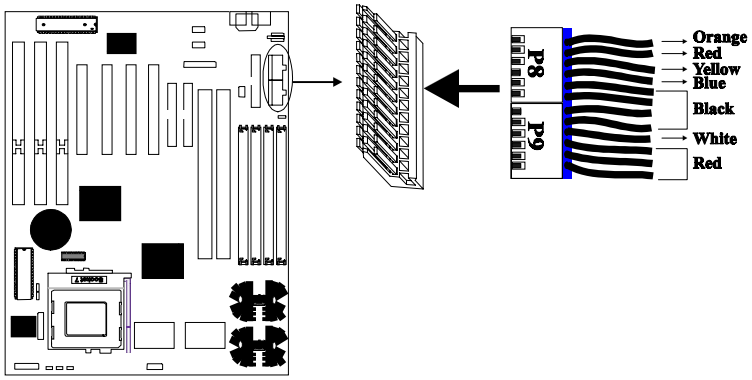


Connector	Featrue / Conect to
SMI Switch	Suspend / Resume
Reset Switch	Reset System
Keyboard Lock	Front Panel Keylock (Optional)
Speaker	Front Panel Speaker
Power LED	Front Panel Power LED
Turbo LED	Front Panel Turbo LED

Table 2 -3. Front Panel Switch Connector

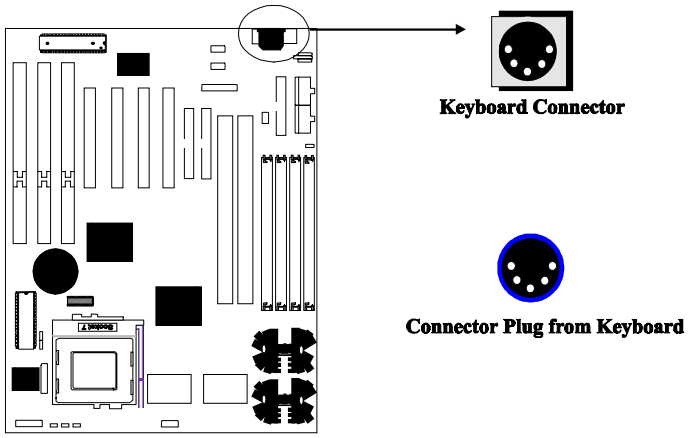
Power Supply Connector: (J14)

P5TX-B provides one set of J14 power supply connectors. Follow the direction to install the power cable on connectors.



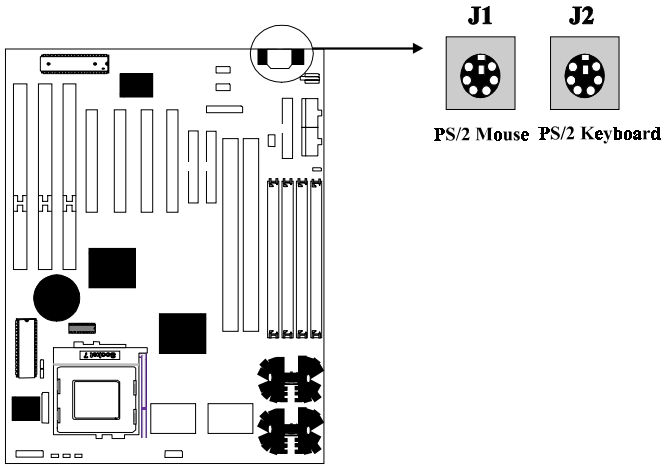
AT Keyboard Connector: (J3)

P5TX-B provides one AT keyboard connector. Follow the direction of keyboard cable to install on keyboard connector. If users want to install PS/2 mouse, P5TX-B provides one set of headers with PS/2 cable mouse / bracket to install on the back panel of your chassis.



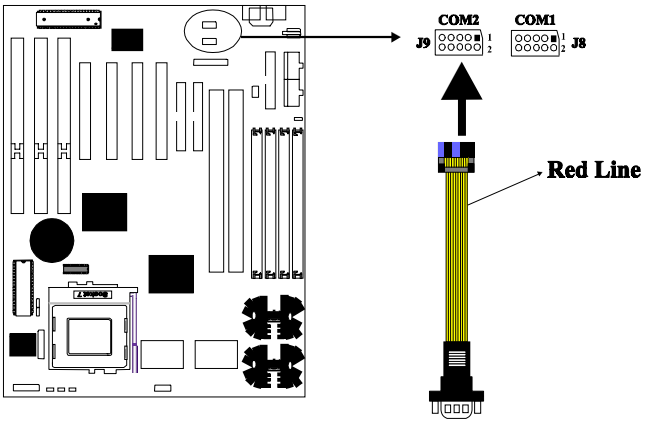
PS/2 Mouse & Keyboard Connector: (J1, J2)

P5TX-B provides (manufacture option) PS/2 mouse and keyboard set.



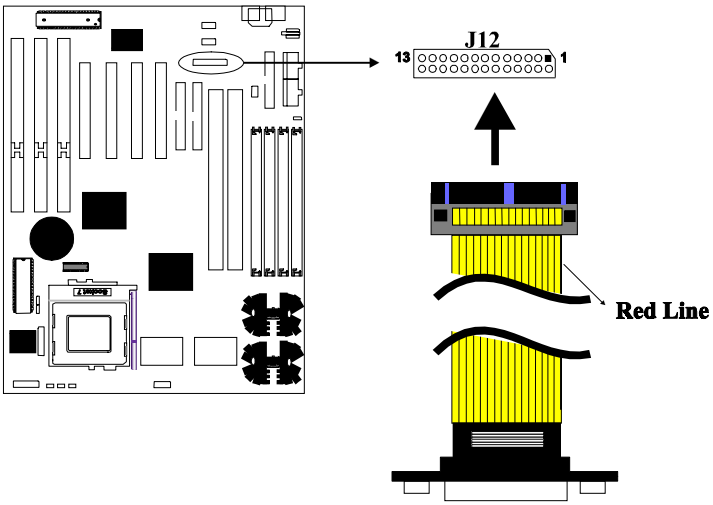
Serial Port COM1 and COM2 : (J8, J9)

P5TX-B provides two high speed 16550 UART compatible serial ports.



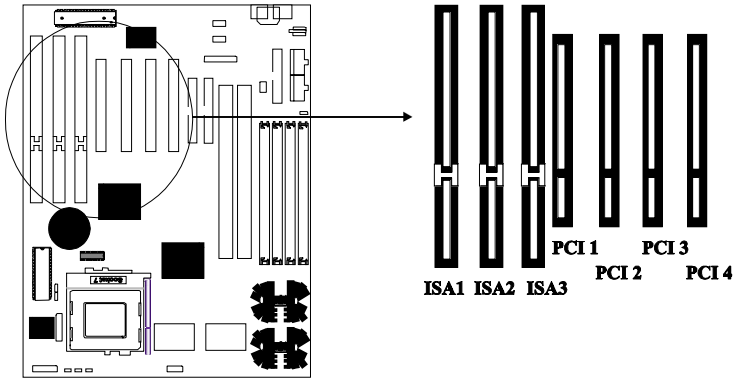
Parallel Port Printer Connector : (J12)

P5TX-B provides one set of high speed parallel port headers and cable. The parallel port can support bidirection / EPP / ECP mode.



Install Add-on Card

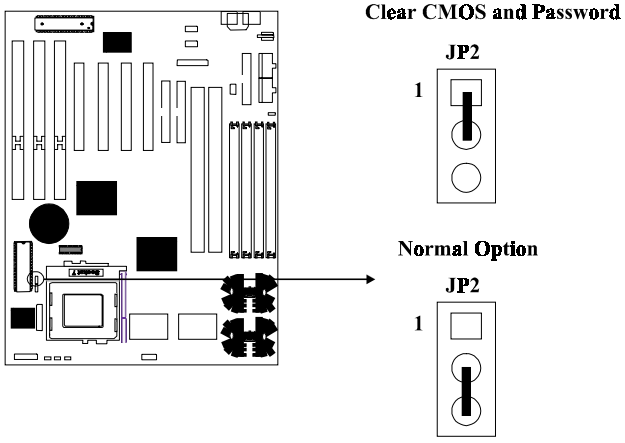
P5TX-B provides three ISA slots and four PCI slots. ISA 3 and PCI 1 slots are shared and can not be installed at the same time.



Other Jumpers

Clear CMOS (JP2)

BIOS setting values is stored in CMOS RAM. To clear CMOS Data of your computer, please open the computer chassis; short 1-2 of JP2 with short jumper; power on your system carefully until the screen is shown; power off your system; the CMOS data will be cleared. For normal optional, please short the 2-3 of JP2 and close your computer chassis.



Summary

Jumper Setting:

Jumper Block	Function	Configuration (Jumper short)
JP1	75MHz	9 -11, 17 - 19, 20 - 22
	66MHz	11-13, 19 - 21, 18 - 20
	60MHz	9 - 11, 19 - 21, 20 - 22
	55MHz	11-13, 17 - 19, 20 - 22
	50MHz	11-13, 19 - 21, 20 - 22
	x3.5	1 - 3, 2 - 4
	x3.0	2 - 4, 3 - 5
	x2.5	3 - 5, 4 - 6
	x2.0	1 - 3, 4 - 6
	x1.5	1 - 3, 2 - 4
JP2	Clear CMOS	1 - 2
	Normal	2 - 3
JP3	3.52 V	1 - 2, 9 - 10
	3.3 V	3 - 4, 9 - 10
	2.9V / 3.3V	1 - 2, 7 - 8
	2.8V / 3.3V	1 - 2, 9 - 10
	2.5V / 3.3V	1 - 2, 11- 12

Table 2 -4. Jumper Settings

Connector Table:

Connector	Function	Description
J1	PS/2 Mouse Connector (Optional)	Connect to PS/2 Mouse
J2	PS/2 Keyboard Connector (Optional)	Connect to PS/2 Keyboard
J3	AT Keyboard Connector	Connect to AT Keyboard
J4	5-pin PS/2 Mouse Header	Connect to PS/2 Mouse Cable / Breaket
J5	USB 5x2 Header	Connect to 2 channel of USB cable
J6	Primary Hard Disk Connector	Connect to the 1st IDE channel for 1 or 2 IDE drives
J7	Secondary Hard Disk Connector	Connect to the 2nd IDE channel for 1 or 2 IDE drives
J8	Serial Port One (COM1/ COM3)	Connect to Serial Port one cable / bracket
J9	Serial Port Two (COM2 / COM4)	Connect to Serial Port two cable / bracket
J10	7-pin Fast IR Header (Optional)	Connect to Fast Infrared cable/bracket
J11	5-pin IR Header	Connect to Infrared cable / bracket
J12	Parallel Port Connector	Connecto to Parallel Port one cable / bracket
J13	Floppy Disk Connector	Connect to one or two floppy drive
J14	12-pin AT Power Connector	Connect to AT Power Supply P8 and P9
J15	3-pin Green Power Header (Optional)	Connect to Green Power On/OFF control cable.
J16	Front Panel Switch Connector	Connect to several purpose of front panel function of indicator, Reset, SMI Switch……
J17	2-pin Green Power Switch Header (Optional)	Connect to Green Power On/OFF push buttom of front panel
J18	2-pin Green LED Header	Connect to Green LED indicates the low-power suspend mode
J19	2-pin Hard Disk LED Header	Connect to chassis front panel HDD indicator
J20	3-pin CPU Fan Header	Connect to 2 or 3-pin power cord of CPU fan

Table 2 -5. Connectors

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3 Built-in BIOS Setup Program

SETUP Program

This chapter describes the Award BIOS setup for P5TX-B. The setup program uses a number of menus that you can specify changes to your hardware and turn the special features on or off.

To enter the BIOS setup program, users can turn on or reboot the system. Press the <DEL> key when the system displays "`Press DEL to enter SETUP`".

The following screen will be displayed.

```
                ROM PCI/ISA BIOS <P5TX-B00>
                 CMOS SETUP UTILITY
                 AWARD SOFTWARE, INC.
```

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD OPTIMUM SETTING	
Esc : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	(Shift)F2 : Change Color
Time, Date, Hard Disk Type ...	

Figure 3 -1. SETUP Main Menu

The instructions at the bottom of Main Menu Screen show the items of each option.

- **STANDARD CMOS SETUP** - This option allows users to check or modify the basic system configuration.
- **BIOS FEATURES SETUP** - This option is used to set the various system options for the users, including the virus warning, external cache, security option, boot operations, and video BIOS shadow, etc.
- **CHIPSET FEATURES SETUP** - This option allows users to control the features of chipset.
- **POWER MANAGEMENT SETUP** - This option allows users to set the power saving status for reducing the power consumption.

- **PNP/PCI CONFIGURATION SETUP** - This option is used to set the various system function and internal addresses of the PCI devices. Allows users to configure system IRQ and DMA to **PCI/ISA PnP** or **Legacy ISA** .
- **LOAD BIOS DEFAULTS** - Users can load the BIOS default values to boot the system safely.
- **LOAD OPTIMUM SETTING** - This option supports the better performance for the system. It is recommended to choose **OPTIMUM Setting** for the setup.
- **INTEGRATED PERIPHERALS -** This option allows users to decide how many kinds peripherals need to change their I/O type , mode and used or not . This options also allows user to set the various system function and onboard PCI IDE controller.
- **SUPERVISOR PASSWORD** - Password is required when entering and changing all of the SETUP option or booting your system. Users can change the current password stored in the CMOS by accessing this option.
- **USER PASSWORD** - Password is required when booting your system and entering to change only the USER PASSWORD . Users can change the current password stored in the CMOS by accessing this option.
- **IDE HDD AUTO DETECTION** - This option can automatic detect the hard disk drive type(s) including the number of cylinders and heads, write pre-compensation time, read/write head landing zone, and number of sectors per track.
- **SAVE & EXIT SETUP** - After saving the changes what you have made in the SETUP program, then exit and reboot the system.
- **EXIT WITHOUT SAVING** - Abandon all previous settings, then exit and reboot the system.

After choosing an item from the SETUP main menu, move the cursor by using the ↑,↓,→,← arrow keys and press <Enter>. To modify the setting of an option, simply press the <PgUp> or <+> and the <PgDn> or <-> keys. Press the <F2> key when changing the color setting, <F1> for a context sensitive help function, and the <ESC> key when quitting SETUP.

Standard CMOS Setup

```
                    ROM PCI/ISA BIOS <P5TX-B00>
                      STANDARD CMOS SETUP
                      AWARD SOFTWARE, INC

  Data (mm:dd:yy) : Thu, March  27 1997
  Time (hh:mm:ss) : 17 : 58 :  42

  HARD DISKS         TYPE   SIZE   CYLS HEAD PRECOMP LANDZ SECTOR  MODE
  ------------------------------------------------------------------------
  Primary Master  :  Auto      0      0    0       0     0       0  Auto
  Primary Slave   :  Auto      0      0    0       0     0       0  Auto
  Secondary Master:  Auto      0      0    0       0     0       0  Auto
  Secondary Slave :  Auto      0      0    0       0     0       0  Auto

  Drive A         : 1.44M, 3.5 in.
  Drive B         : None                        Base Memory:   640K
  Floppy 3 Mode Support: Disabled             Extended Memory:  7168K
  Video           : EGA/VGA                     Other Memory:   384K
  Halt On         : All Errors                  ---------------------
                                                Total Memory: 8192K

Esc : Quit              ↑ ↓ → ←  : Select Item     PU/PD/+/- : Modify
F1  : Help              (Shift)F2 : Change Color
```

Figure 3 -2. Standard CMOS SETUP Screen

Date - Allows manual setting of the electronic calendar on the mainboard.

Time - Sets the system's internal clock which includes hour, minutes, and seconds.

Primary Master - Specifies the physical and electronic properties of the standard hard disk drives installed. Relevant specifications include the type, number of cylinders (CYLS), heads (HEAD), write pre-compensation time (PRECOMP), read/write head landing zone (LANDZ), number of sectors per track (SECTOR), and HDD mode (MODE). Selecting "***AUTO***" in the hard disk type item avoids the necessity of loading the HDD specifications and the function of the IDE HDD Auto Detection option in the main menu. The system BIOS will automatically detect the hard drive installed on the system upon bootup.

Drive A:/B: - Specifies the capacity and format of the floppy drive installed in your system.

Floppy 3 Mode Support - If 3 mode floppy is installed , enable this item make floppy diskette only compatible to the Floppy Diskette Format of Japan Spec. : **1.2MB, 3.5inch.** Otherwise, it is compatible to Floppy Diskette Format of IBM PC.

Video - Specifies the display adapter installed.

Halt On - Enables the system to halt on several conditions/options. The default value is set at "***All Errors***."

Base/Extended/Other Memory - A small section in the lower right corner of the screen displays important information about your system which includes the base, extended, and other memory sizes. They are updated automatically by the SETUP program according to the status detected by the BIOS self-test. This section of the Standard CMOS SETUP screen is for viewing purpose only and manual modifications are not allowed.

BIOS Features Setup

```
                    ROM PCI/ISA BIOS <P5TX-B00>
                      BIOS FEATURES SETUP
                      AWARD SOFTWARE, INC.

Virus Warning                : Disabled   Video  BIOS Shadow         : Enabled
CPU Internal Cache           : Enabled    C8000-CBFFF Shadow         : Disabled
External Cache               : Enabled    CC000-CFFFF Shadow         : Disabled
Quick Power On Self Test     : Enabled    D0000-D3FFF Shadow         : Disabled
Boot Sequence                : A,C,SCSI   D4000-D7FFF Shadow         : Disabled
Swap Floppy Drive            : Disabled   D8000-DBFFF Shadow         : Disabled
Boot Up Floppy Seek          : Enabled    DC000-DFFFF Shadow         : Disabled
Boot Up NumLock Status       : On
Boot Up System Speed         : High
Typematic Rate Setting       : Disabled
Typematic Rate <Chars/Sec>   : 6
Typematic Delay <Msec>       : 250
Security Option              : Setup
PCI/VGA Palette Snoop        : Disabled
OS Select For DRAM > 64MB    : Non-OS2    ESC : Quit          ↑↓→←: Select Item
                                          F1  : Help          PU/PD/+/- : Modify
                                          F5  : Old Values  (Shift)F2 : Color
                                          F6  : Load BIOS  Defaults
                                          F7  : Load Optimum Setting
```

Figure 3 -3. BIOS Features Setup Screen

Virus Warning - Allows the virus warning feature for the hard disk boot sector to display a warning message and produce a beep sound whenever an attempt is made to write on the hard disk's boot sector. The default value for this option is "***Disabled***."

CPU Internal Cache -Enables the internal code/data cache of CPU when set to "***Enabled***" (default).

External Cache - Enables the on-board secondary cache when set to "***Enabled***" (default).

Quick Power On Self Test - Allows the power on self test to run at either a fast or a normal speed. The available options are:

- Enabled (default)
- Disabled

Boot Sequence - Selects the drive where the system would search for the operating system to run with. The available options are:

- A,C, SCSI (default)
- C,CDROM, A
- D,A,SCSI
- F,A,SCSI
- SCSI,C,A
- C,A,SCSI
- CDROM,C,A
- E,A,SCSI
- SCSI,A,C
- C Only

Swap Floppy Drive - "***Enabled***" will effectively change the A: drive to B: and the B: to A: drive. "***Disabled***" (default) sets the floppy drives in their default states.

Boot Up Floppy Seek - Checks if the floppy drives installed on the system are correct or not. This option's operation usually occurs when the magnetic heads of the floppy drives produce a sound during power on self test. The available options are:

- Enabled (default)
- Disabled

Boot Up NumLock Status - Sets the <Num Lock> key to either on or off during system boot-up. The available options are:

- On (default)
- Off

Boot Up System Speed - Sets the speed of the system during power on self test sequence. The available options are:

- High (default)
- Low

Typematic Rate Setting - Defines the setting of the keyboard's typematic rate. The available options are:

- Disabled (default)
- Enabled

Typematic Rate <Chars/Sec> - Specifies the key repeat rate, in seconds, of keyboard character. The available options are:

- 6 (default)
- 8/10/12/15/20/24/30

Typematic Delay <Msec> - Selects the delay, in milliseconds, before a key repeat. The available options are:

- 250 (default)
- 500/750/1000

Security Option - Determines whether the password will be asked for in every boot (***System***), or when entering into the SETUP program (***Setup*** - default). Refer to the section entitled SUPERVISOR PASSWORD for the password setting procedure.

PCI/VGA Palette Snoop -Selects "Enabled" to solve the abnormal color in Windows while using ISA MPEG and PCI VGA card. The available options are:

- Disabled (default)
- Enabled

OS Select For DRAM > 64MB - Selects the OS if DRAM > 64MB. The available options are:

- Non-OS2 (default)
- OS2

Video BIOS Shadow - Enables the system shadowing and achieve the best performance of the system. The available options are:

- Enabled (default)
- Disabled

C8000-CBFFF, CC000-CFFFF, D0000-D3FFF, D4000-D7FFF, D8000-DBFFF, DC000-DFFFF Shadow - If you have a shadowing of the BIOS at any of the above segments, you may set the appropriate memory cacheable function to "***Enabled***". Otherwise, select ***"Disabled"*** (default).

Chipset Features Setup

```
                    áROM PCI/ISA BIOS <P5TX-B00>
                      CHIPSET FEATURES SETUP
                       AWARD SOFTWARE, INC.
```

Auto Configuration	: Enabled	PCI Passive Release	: Disabled
DRAM Timing	: 60ns	PCI Delayed Transaction	: Enabled
		Mem. Drive Str. <MA/RAS>	: Auto
DRAM Leadoff Timing	: 10/6/3		
DRAM Read Burst <EDO/FP>	: x222/x333		
DRAM Write Burst Timing	: x222		
Fast EDO Lead Off	: Enabled		
Refresh RAS# Assertion	: 4 Clks		
Fast RAS To CAS Delay	: 3		
DRAM Page Idle Timer	: 2 Clks		
DRAM Enhanced Paging	: Enabled		
Fast MA to RAS# Dealy	: 1 Clks		
SDRAM <CAS Lat/RAS-to-CAS>	:3/2		
SDRAM Speculative Read	: Disabled		
Speculative Lead Off	: Enabled		
System BIOS Cacheable	: Enabled	ESC : Quit	↑↓→←: Select Item
Video BIOS Cacheable	: Enabled	F1 : Help	PU/PD/+/- : Modify
8 Bit I/O Recovery Time	: 1	F5 : Old Values	(Shift)F2 : Color
16 Bit I/O Recovery Time	: 1	F6 : Load BIOS Defaults	
Memory Hole At 15M-16M	: Disabled	F7 : Load Optimum Setting	

Figure 3 -4. Chipset Features Setup Screen

Auto Configuration - Loads the default values, if "***Enabled***" (default), for the following DRAM and cache options. Otherwise, "***Disabled***" allows you to program each option as required.

- Enabled (default)
- Disabled

The following items are controlled by **Auto Configuration** *when users select "Enabled". For this reason, their default values will be changed by the speed of CPU. These items are :*

"DRAM Leadoff Timing", "DRAM Read Burst <EDO/FP>", "DRAM Write Burst Timing"", "Fast EDO Leadoff " and "Refresh RAS# Assertion" .

DRAM Timing - Configures the DRAM read/write timing for the maximum performance. The available options are:

- 60ns (default)
- 70ns

DRAM Leadoff Timing - Determines the leadoff time for R/W to the Cache. The available options (R/W/RAS# Precharge) are:

- 10/6/3 (default)
- 11/7/4, 10/6/4, 11/7/3

DRAM Read Burst <EDO/FP> - Determines the timing for burst read to the cache . If your DRAM type is EDO DRAM, we suggest you select x222 (EDO) timing to get a better performance. The available options are:

- x222/ x333 (default)
- x333/ x444
- x444/ x444

DRAM Write Burst Timing - Determines the timing for burst write to the cache. If your DRAM type is EDO DRAM , we suggest you select x222 (EDO)timing to get a better performance. The available options are:

- x222 (default)
- x333
- x444

Fast EDO Lead Off - Pulls in one host clock for all read leadoff latencies for EDO DRAMs if this option is set as enabled. This option has to be disabled if any of the DRAM rows is populated with FPM DRAMs. The available options are:

- Enabled (default)
- Disabled

Refresh RAS# Assertion -Determines the number of clocks RAS# is asserted for Refresh cycles. The available options are:

- 4 Clks (default)
- 5 Clks

Fast RAS To CAS Delay - Selects the RAS-to-CAS delay time for DRAM access. The available options are:

- 3 (default)
- 2

DRAM Page Idle Timer - Determines the amount of time in host clocks the MTXC DRAM controller will wait to close a DRAM page after the CPU become idle. The available options are:

- 2 Clks (default)
- 4/6/8 Clks

DRAM Enhanced Paging - The memory controller will keep the page open until a page/row miss if this option is set to disabled. It should be enabled for normal operation. The available options are:

- Enabled (default)
- Disabled

Fast MA to RAS# Delay - Selects the option for DRAM access. The available options are:

- 1 Clk (default)
- 2 Clks

SDRAM (CAS Lat/RAS-to-CAS) - Configs the SDARM CAS latency time / RAS to CAS delay. The available options are:

- 3/2 (default)
- 3/3

*" **SDRAM (CAS Lat /RAS-to-CAS)** " will be shown only when users plug the SDRAM Module.*

SDRAM Speculative Read - If this option is set as enabled, the SDRAM read will pull in one host clock for all read leadoff latencies. The available options are:

- Disabled (default)
- Enabled

Speculative Lead Off - If this option is set as enabled, the DRAM controller read request is presented before the final memory target has been decoded to memory controller. The available options are:

- Enabled (default)
- Disabled

System BIOS Cacheable - Allows caching of the different segments where there is system BIOS shadowing. The available options are:

- Enabled (default)
- Disabled

Video BIOS Cacheable - Allows caching of the different segments where there is video BIOS shadowing. The available options are:

- Enabled (default)
- Disabled

8 Bit I/O Recovery Time - Defines the 8-bit I/O recovery time with one of the following system clock options. The available options are:

- 1 (default)
- 2/3/4/5/6/7/8/NA

16 Bit I/O Recovery Time- Defines the 16-bit I/O recovery time with one of the following system clock options. The available options are:

- 1 (default)
- 2/3/4/NA

Memory Hole At 15M-16M - Enables this option to reserve the certain space in memory for ISA cards. The available options are:

- Disabled (default)
- Enabled

PCI Passive Release - Enables or disables the passive release mechanism encoded on the PHOLD# signal when "PCI to ISA/IDE Xecelerator" is a PCI master . The available options are:

- Disabled (default)
- Enabled

PCI Delayed Transaction - Enables or disables the delayed transaction mechanism when the "PCI to ISA/IDE Xecelerator" is the target of a PCI transaction. The available options are:

- Enabled (default)
- Disabled

Mem. Drive Str. (MA/RAS> - Controls the strength of the output buffers driving the MA, SRASx#, SCASx#, MWEx# and CKEx pins. The available options are:

- Auto (default)
- 10mA/10mA
- 10mA/16mA
- 16mA/10mA

Power Management Setup

```
ROM PCI/ISA BIOS <P5TX-B00>
Power MANAGEMENT SETUP
AWARD SOFTWARE, INC.

Power Management        : Disabled          ** Reload Global Timer Events **
PM Control by APM       : Yes               IRQ[3-7,9-15],NMI    : Enabled
Video Off Method        : V/H SYNC+Blank    Primary IDE 0        : Disabled
Video Off After         : Suspend           Primary IDE 1        : Disabled
                                            Secondary IDE 0      : Disabled
Doze Mode               : Disabled          Secondary IDE 1      : Disabled
Standby Mode            : Disabled          Floppy Disk          : Disabled
Suspend Mode            : Disabled          Serial Port          : Disabled
HDD Power Down          : Disabled          Parallel Port        : Disabled
Throttle Duty Cycle     : 62.5%
ZZ Active in Suspend    : Disabled
VGA Active Monitor      : Enabled
Power Button Override   : Enabled
CPUFAN Off In Suspend   : Enabled
**  Break Event From    Suspend  **
IRQ 8 Clock Event       : Disabled          ESC : Quit         ↑↓→←: Select Item
Ring-In Event           : Enabled           F1  : Help         PU/PD/+/- : Modify
                                            F5  : Old Values   (Shift)F2 : Color
                                            F6  : Load BIOS Defaults
                                            F7  : Load Optimum Setting
```

Figure 3 -5. Power Management Setup Screen

Power Management - Allows user determine how often the Power Saving activing . The available options are:

- Disable (default)
- Max Saving
- Min Saving
- User Define

PM Control by APM - Sets the power management (PM) control by the APM. The available options are:

- Yes (default)
- No

Video Off Method - Sets the video power green method . The available options are:

- V/H SYNC+Blank (default)
- DPMS
- Blank Screen

Video Off After - Turns off screen after selected standby or suspend mode. The available options are:

- Suspend (default)
- Standby
- Doze
- N/A

Doze Mode - Sets the time interval after system inactivity when the system enters DOZE mode. The available options are:

- Disabled (default)
- 1 Hour
- 1/2/4/6/8/12/20/30/40 Min

Standby Mode -Sets the timer interval after system inactivity when the system enters STANDBY mode. The available options are:

- Disabled (default)
- 1 Hour
- 1/2/4/6/8/12/20/30/40 Min

Suspend Mode -Sets the time interval after system inactivity when the system enters SUSPEND mode. The available options are:

- Disabled (default)
- 1 Hour
- 1/2/4/6/8/12/20/30/40 Min

HDD Power Down - Sets the interval time to power down HDD . The available options are:

- Disabled (default)
- 1....15 Min

Throttle Duty Cycle - Selects the percentage of time the STPCLK# signal is asserted which the throttle mode. The available options are:

- 62.5%(default)
- 50.0%, 37.5%, 25.0%, 12.5%, 87.5%, 75.0%

ZZ Active in Suspend - Determines whether to assert the ZZ signal while in suspend mode or not. The available options are:

- Disabled (default)
- Enabled

VGA Active Monitor - Determines whether to reload burst timer while PCI accesses to VGA I/O addresses or the A and B segment video memory ranges or not. The available options are:

- Enabled (default)
- Disabled

Power Button Override - Sets power button override function. It needs to press power button for over 4 seconds to power off a system if this option is set as enabled. The available options are:

- Enabled (default)
- Disabled

CPU FANOff In Suspend - Turns off CPU fan while in suspend mode. The available options are:

- Enabled (default)
- Disabled

Break Event From Suspend - Sets the resume event to "Enabled" **or "Disabled" while system enters the suspend mode.**

IRQ 8 Clock **Event**- The available options are:

- Disabled (default)
- Enabled

Ring-In event - The available options are:

- Enabled (default)
- Disabled

Reload Global Time Events- Sets the wake up event to "Enabled" or "Disabled" while system enters standby mode.

IRQ[3-7, 9-15], NMI - The available options are:

- Enabled (default)
- Disabled

Primary IDE 0 / 1 - The available options are:

- Disabled (default)
- Enabled

Secondary IDE 0 / 1 - The available options are:

- Disabled (default)
- Enabled

Floppy Disk - The available options are:

- Disabled (default)
- Enabled

Serial Port - The available options are:

- Disabled (default)
- Enabled

Parallel Port - The available options are:

- Disabled (default)
- Enabled

PNP/PCI CONFIGURATION Setup

```
ROM PCI/ISA BIOS <P5TX-B00>
 PNP/PCI CONFIGURATION
  AWARD SOFTWARE, INC.
```

PNP OS Installed : No Resources Controlled By : Auto Reset Configuration Data : Disabled	PCI IDE IRQ Map To : PCI-AUTO Primary IDE INT# : A Secondary IDE INT# : B
	ESC : Quit ↑↓→←: Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Values (Shift)F2 : Color F6 : Load BIOS Defaults F7 : Load Optimum Setting

Figure 3 -6. PNP/PCI CONFIGURATION SETUP Screen

PNP OS Installed - Tells if PnP OS is installed. The available options are:

- No (default)
- Yes

Resources Controlled By - Allows user what kind IRQs assignment to be used . **"Manual"** or **"Automatic"** definition . The available options are:

- Auto (default)
- Manual

*The default of " **Resources Controlled By"** is Auto. If users set Manual option for the setting," **IRQ-3 / IRQ-4 / IRQ-5 / IRQ-7 / IRQ-9 / IRQ-10 / IRQ-11 / IRQ-12 / IRQ-14 / IRQ-15 / DMA-0 / DMA-1 / DMA-3 / DMA-5 / DMA-6 / DMA-7 assigned to**" options below will be shown on the screen.*

Reset Configuration Data - To clear the ESCD data which is stored in flash ROM, please set "Enable". This is a one shot switch . After clearing the ESCD, the BIOS will change the value back to "Disabled". The available options are:

- Disabled (default)
- Enabled

PCI IDE IRQ Map To - Most of PCI IDE cards are non-PCI compliant . Defines the IRQ Routing to make them work properly. The available options are:

- PCI-AUTO (default)
- PCI-SLOT1
- PCI-SLOT3
- ISA
- PCI-SLOT2
- PCI-SLOT4

If user sets this option to "ISA", both the "Priminary IDE INT#" and "Secondary IDE INT#" options below will not be shown on the screen.

Primary IDE INT# - Selects a PCI interrupt pin which will be used by the primary channel of a PCI IDE card. The available options are:

- A (default)
- B/C/D

Secondary IDE INT# - Selects a PCI interrupt pin which will be used by the secondary channel of a PCI IDE card. The available options are:

- B (default)
- A/C/D

Load BIOS Defaults

In the event of a loss in memory on the configuration SETUP, the user can restore the information on the BIOS by loading its default values. Loading the BIOS defaults provides safety booting of the system.

Load Optimum Setting

SETUP defaults are considered default values with which the system will be enabled to perform better. This is due to the enabling of some options within the SETUP program. However, if problems are encountered after loading the Optimum Setting, reboot the system and load the BIOS defaults instead.

INTEGRATED PERIPHERALS

```
                    ROM PCI/ISA BIOS <P5TX-B00>
                     INTEGRATED PERIPHERALS
                     AWARD SOFTWARE, INC.
```

IDE HDD Block Mode	: Enabled	Onboard Parallel Mode	: SPP
IDE Primary Master PIO	: Auto		
IDE Primary Slave PIO	: Auto		
IDE Secondary Master PIO	: Auto		
IDE Secondary Slave PIO	: Auto		
IDE Primary Master UDMA	: Auto		
IDE Primary Slave UDMA	: Auto		
IDE Secondary Master UDMA	: Auto		
IDE Secondary Slave UDMA	: Auto		
On-Chip Primary PCI IDE	: Enabled		
On-Chip Secondary PCI IDE	: Enabled		
USB Keyboard Support	: Disabled		
Onboard FDD Controller	: Enalbed		
Onboard Serial Port 1	: 3F8/IRQ4		
Onboard Serial Port 2	: 2F8/IRQ3		
UART 2 Mode	: Standard	ESC : Quit	↑↓→←: Select Item
		F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values	(Shift)F2 : Color
		F6 : Load BIOS Defaults	
Onboard Parallel Port	: 378/IRQ7	F7 : Load Optimum Setting	

Figure 3 -7. Integrated Peripherals SETUP Screen

IDE HDD Block Mode - Determines whether block transfer mode want to use or not . The available options are:

- Enabled (default)
- Disabled

IDE Primary/Secondary Master/ Slave PIO - Sets the advanced hard disk PIO transfer mode which effects your hard disk transfer rate. The program will auto detect the mode of this option you select "***Auto***". Otherwise, you must set this option by yourself. The available options are:

- Auto (default)
- Mode 0
- Mode 1
- Mode 2
- Mode 3
- Mode 4

IDE Primary/Secondary Master/ Slave UDMA - Sets the advanced hard disk Uetra DMA/33 transfer mode. The available options are:

- Auto (default)
- Disabled

On-Chip Primary/Secondary PCI IDE - Enables or Disables the primary/ secondary PCI IDE of IDE controller. Selecting "***Disabled***" can release IRQ14.

- Enabled (default)
- Disabled

USB Keyboard Support -Determines whether to support legacy USB keyboard or not. The available options are:

- Disabled (default)
- Enabled

Onboard FDD Controller - Enables or Disables the FDD on-board controller. The available options are:

- Enabled (default)
- Disabled

Onboard Serial Port 1/2 - Sets the I/O address for serial port 1/2.

- Auto
- 2F8/IRQ3 (default for COM2)
- 3F8/IRQ4 (default for COM1)
- 3E8/IRQ4
- 2E8/IRQ3
- Disabled

UART 2 Mode - Determines which type IR module want to use . The available options are:

- Standard (default)
- ASKIR
- HPSIR

If users set this option to "Standard" (default), the following two options will not be shown on the screen.

ID Duplex Mode - Allows users to control the infrared communication duplex mode.The available options are:

- Half (default)
- Full

RxD, TxD Active - Sets RxD and TxD active levels. The available options are:

- Hi/Hi (default)
- Hi/Lo
- Lo/Hi
- Lo/Lo

Onboard Parallel Port - Sets the I/O address for the parallel port. The available options are:

- 378H/IRQ7 (default)
- Disabled
- 278H/IRQ5
- 3BCH/IRQ7

*If users set this option to "Disabled", the **"Onboard Parallel Mode"** option below will not be shown on the screen.*

Onboard Parallel Mode - Selects the working mode of parallel port. The available options are:

- SPP (default)
- ECP/EPP
- EPP/SPP
- ECP

1. *If users set this option to "SPP" or "EPP/SPP", the "**ECP Mode Use DMA**" option below will not be shown on the screen.*

2. *If users set this option to "SPP" or "ECP", the "**Parallel Port EPP Type**" option below will not be shown on the screen.*

ECP Mode Use DMA - Selects the DMA channel of ECP Mode to transfer your data. The available options are:

- 3 (default)
- 1

Parallel Port EPP Type - Determines what version of EPP protocal to be supported. The available options are:

- EPP 1.9 (default)
- Epp1.7

SUPERVISOR PASSWORD

The SUPERVISOR PASSWORD utility allows you to set, change, and disable the password which is stored in the BIOS. To change the password setting, press <Enter> on the SUPERVISOR PASSWORD option of the main menu and then type the new password.

Configure the Security Option within the BIOS Features Setup corresponding to the setting in this utility. SUPERVISOR PASSWORD access right is higher than USER PASSWORD .

The password can be at most 8 characters long. The program will require you to confirm the new password before it exits and will enable the utility. To disable the SUPERVISOR PASSWORD, press the <F1> when the program asks you to enter the new password.

USER PASSWORD

USER PASSWORD only can be used when the system is booting . Users only can enter SETUP screen to change the USER PASSWORD.

The password can be at most 8 characters long. The program will require you to confirm the new password before it exits and enables the utility. To disable the USER PASSWORD, press the <F1> as the program asks you to enter the new password.

IDE HDD Auto Detection

The IDE HDD Auto Detection provides auto configuration of the hard drive installed in the system. It supports LBA, Large, and Normal modes. If the system's hard disk drive has a capacity of over 528MB and supports LBA functions, you may enable either the LBA mode or the Large mode. On the other hand, if the hard disk drive's capacity is over 528MB but does support LBA functions, you may enable the Large mode in order to use over 528MB.

a. *The LBA and Large modes will only appear on the screen when the installed hard disk drive is specified to support the LBA mode.*

b. *In the case when a hard disk drive's cylinder specification exceeds 1024, and does not support the LBA functions, only the Large mode will be displayed on the screen.*

c. *With a hard disk drive supporting cylinders below 1024, only the Normal mode will appear on the screen. The Normal mode will also be shown on the screen under conditions a & b above.*

d. *Hard disk drives with less than 528MB total capacity must be set to Normal mode when combined with either old BIOS versions or the Award BIOS.*

LBA and Large modes are new specifications which may not be fully supported by all operating systems. An example of which is the current version of UNIX System (R3.2.4) which is still unable to support the LBA function. Therefore, determine the specifications of your hard disk drive and operating system before selecting the drive's mode.

After pressing the <Enter> key on this item of the main menu, the display screen will show the following screen.

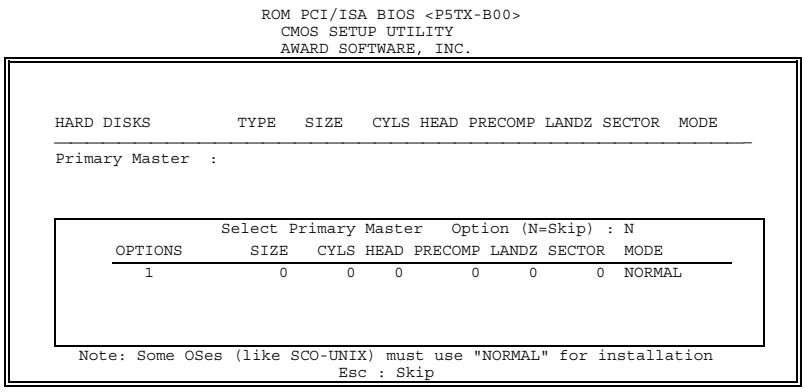


Figure 3 -8. IDE HDD Auto Detection Screen

Once the program detects the type of hard disk installed, it will display the relative information such as the type, cylinders, heads, write pre-compensation, landing zone, number of sectors per track, size and mode. A message asking you to accept the IDE HDD detected will also be flashed on the screen.

Quitting SETUP

After making all modifications in the SETUP program, go to the option "Save & Exit SETUP" then press the <Enter> key. The program will display the following screen.

Press <Y> to confirm the changes made, and the <N> or the <ESC> keys if further modifications are still necessary before exiting the SETUP program. Once the <Y> key is pressed, the system will automatically exit the program and reboot. However, if you want to cancel all changes made under the SETUP program, go to the option "Exit Without Saving".

Press <Y> and the system will exit the SETUP program then reboot without saving any of the changes made.

You may also use the <F10> key to save the new settings.

Appendix A

If users attend to mix 5V SIMMs and 3V DIMMs on the system memory at the same time. There is one assembly rule table for the reference. **It is not recommended to mix the 5V and 3V memory for reliability reason. Not all 3V memory are 5V tolerant.**

Mixed SIMMs and DIMMs Memory Configuration:

SIMM Module		DIMM Module	
SIMM1 / SIMM2	**SIMM3 / SIMM4**	**DIMM1**	**DIMM2**
2MB(S) / 2MB(S)	2MB(S) / 2MB(S)	4MB(S)	4MB(S)
4MB(S) / 4MB(S)	4MB(S) / 4MB(S)	8MB(S)	8MB(S)
8MB(S) / 8MB(S)	8MB(S) / 8MB(S)	16MB(S)	16MB(S)
16MB(S) / 16MB(S)	16MB(S) / 16MB(S)	32MB(S)	32MB(S)
32MB(S) / 32MB(S)	32MB(S) / 32MB(S)	64MB(S)	64MB(S)
64MB(S) / 64MB(S)	64MB(S) / 64MB(S)	128MB(S)	128MB(S)
4MB(D) / 4MB(D)	2MB(S) / 2MB(S)		4MB(S)
8MB(D) / 8MB(D)	4MB(S) / 4MB(S)	**Cannot**	8MB(S)
16MB(D)/ 6MB(D)	8MB(S) / 8MB(S)	**install**	16MB(S)
32MB(D)/32MB(D)	16MB(S) / 16MB(S)		32MB(S)
64MB(D)/64MB(D)	32MB(S) / 32MB(S)		64MB(S)
-----	64MB(S) / 64MB(S)		128MB(S)
2MB(S) / 2MB(S)	4MB(D) / 4MB(D)	4MB(S)	
4MB(S) / 4MB(S)	8MB(D) / 8MB(D)	8MB(S)	**Cannot**
8MB(S) / 8MB(S)	16MB(D /16MB(D)	16MB(S)	**install**
16MB(S) / 16MB(S)	32MB(D)/32MB(D)	32MB(S)	
32MB(S) / 32MB(S)	64MB(D)64MB(D)	64MB(S)	
64MB(S) / 64MB(S)	-----	128MB(S)	
	2MB(S) / 2MB(S)	8MB(D)	4MB(S)
Cannot	4MB(S) / 4MB(S)	16MB(D)	8MB(S)
install	8MB(S) / 8MB(S)	32MB(D)	16MB(S)
	16MB(S) / 16MB(S)	64MB(D)	32MB(S)
	32MB(S) / 32MB(S)	128MB(D)	64MB(S)
	64MB(S) / 64MB(S)	-----	128MB(S)

Continued…..

Appendix A

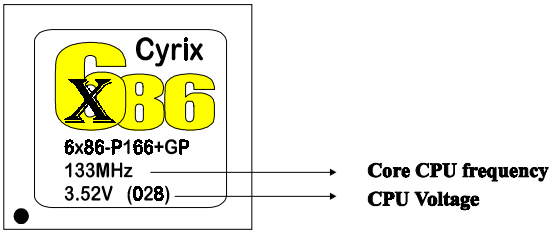
SIMM Module		DIMM Module	
SIMM1 / SIMM2	**SIMM3 / SIMM4**	**DIMM1**	**DIMM2**
2MB(S) / 2MB(S)		4MB(S)	8MB(D)
4MB(S) / 4MB(S)	**Cannot**	8MB(S)	16MB(D)
8MB(S) / 8MB(S)	**install**	16MB(S)	32MB(D)
16MB(S) / 16MB(S)		32MB(S)	64MB(D)
32MB(S) / 32MB(S)		64MB(S)	128MB(D)
64MB(S) / 64MB(S)		128MB(S)	-----

Appendix A table

P5TX-B only can support memory up to 256MB, even though it is possible to populate the memory more than 256MB.

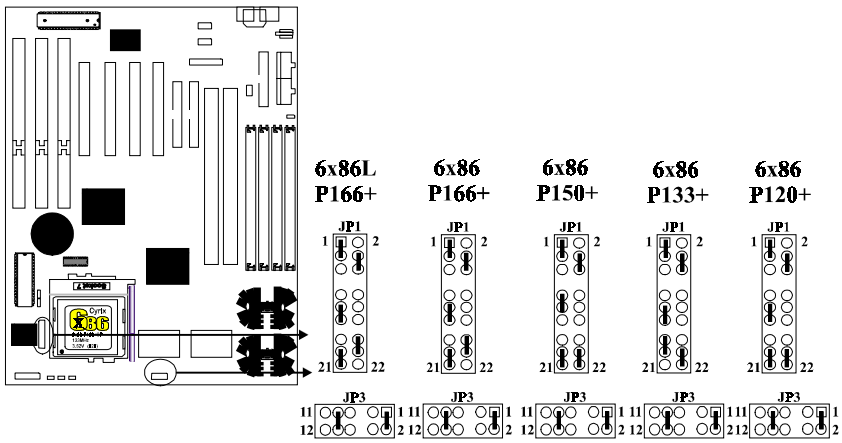
Appendix B

Cyrix or IBM 6x86 CPU:



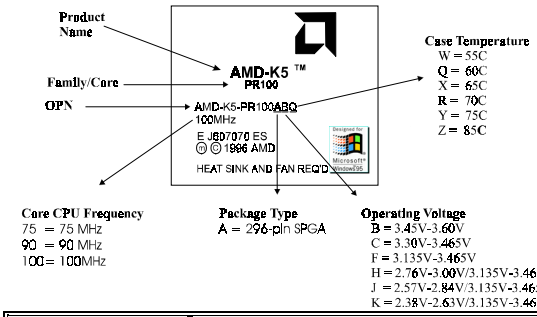
Cyrix / IBM CPU Type	JP1 (CPU Frequency)	JP3 (Voltage)
6x86L - P166+	1 - 3, 4 - 6, 11 - 13, 19 - 21, 18 - 20	1 - 2, 9 - 10
6x86 - P166+	1 - 3 , 4 - 6, 11 - 13, 19 - 21, 18 - 20	1 - 2, 9 - 10
6x86 - P150+	1 - 3, 4 - 6, 9 - 11, 19 - 21, 20 - 22	1 - 2, 9 - 10
6x86 - P133+	1 - 3, 4 - 6, 11 - 13, 17 - 19, 20 - 22	1 - 2, 9 - 10
6x86 - P120+	1 - 3, 4 - 6, 11 - 13, 19 - 21, 20 - 22	1 - 2, 9 - 10

Appendix B table



Appendix C

AMD - PR XXX Series:



AMD CPU Type	JP1 (CPU Frequency)	JP3 (Voltage)
PR150	3 - 5, 4 - 6, 9 - 11, 19 - 21, 20 - 22	1 - 2, 9 - 10
PR133	1 - 3, 4 - 6, 11 - 13, 19 - 21, 18 - 20	1 - 2, 9 - 10
PR120	1 - 3, 4 - 6, 9 - 11, 19 - 21, 20 - 22	1 - 2, 9 - 10
PR100	1 - 3, 2 - 4, 11 - 13, 19 - 21 , 18 - 20	1 - 2, 9 - 10
PR 90	1 - 3, 2 - 4, 9 - 11, 19 - 21, 20 - 22	1 - 2, 9 - 10
PR 75	1 - 3, 2 - 4, 11 - 13, 19 - 21, 20 - 22	1 - 2, 9 - 10

Appendix C table