

PT-2006



MAINBOARD MANUAL

DOC No. : 15289

Rev. : A0

Date : 7, 1996

Part No. : 25-10526-00

Handling Precautions

Warning :

1. Static electricity may cause damage to the integrated circuits on the mainboard.
Before handling any mainboard outside of its protective packaging, ensure that there is no static electric charge in your body.
2. There is a danger of explosion if the battery is incorrectly replaced.
Replace only with the same or an equivalent type recommended by the manufacturer.
3. Discard used batteries according to the manufacturer's instructions.

Observe the following basic precautions when handling the mainboard or other computer components:

- Wear a static wrist strap which fits around your wrist and is connected to a natural earth ground.
- Touch a grounded or anti-static surface or a metal fixture such as a water pipe.
- Avoid contacting the components on add-on cards, boards and modules and with the “gold finger” connectors plugged into the expansion slot. It is best to handle system components by their mounting bracket.

The above methods prevent static build-up and cause it to be discharged properly.

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Overview

The PT-2006 mainboard combines the advanced capabilities of the Intel 82430VX PCIset with a high-performance concurrent PCI local bus architecture to provide the ideal platform for unleashing the unsurpassed speed and power of the Intel Pentium processor.

This highly-flexible mainboard is designed to run a full range of Intel Pentium, Cyrix 6x86, IBM 6x86 and AMD-K5 processors, and can be easily upgraded using its 321-pin ZIF socket. The processor's advanced performance is complemented by a second level write back Pipeline Burst SRAM cache of up to 512KB and main memory of up to 128MB DRAM. The main memory is installed using the board's four 72-pin SIMM sockets and one 168-pin DIMM socket that accept a choice of lightning-fast synchronous DRAM (SDRAM), high-speed EDO, or standard Fast Page Mode DRAM.

The PT-2006 integrates a full set of I/O features onboard, including two 16550A UART compatible serial ports, one EPP/ECP capable parallel port, and one Floppy Disk Drive controller. It also comes with a built in Enhanced IDE controller that provides convenient, high-speed PCI Bus Master connections with up to four IDE devices, including Hard Disk and CD-ROM drives. Three 16-bit ISA slots and four 32-bit PCI slots provide ample room for further expansion. The mainboard also features support for the state-of-the-art Universal Serial Bus (USB) that provides ease-of-use and high-speed Plug & Play connections to future USB compliant peripheral devices. The IrDA compliant serial port and optional onboard SIR support further enhance system I/O connectivity.

This chapter gives you a brief overview of the PT-2006 mainboard. In addition to basic information on the board's main components and features, it also provides advice on how to upgrade and expand it. For updated BIOS, drivers, or product release information, please visit FIC's home page at: <http://www.fic.com.tw>.

Congratulations on your decision to adopt the PT-2006 mainboard. With its high-speed PCI local bus architecture and ultra-fast I/O connections, the PT-2006 provides the ultimate solution for optimizing the performance of your high-end system.

Main Features

The PT-2006 mainboard comes with the following high-performance features:

■ Easy Installation

Award BIOS with support for Plug and Play, auto detection of Hard Drive and IDE features, and MS Windows 95 compatible.

■ Flexible Processor Support

The onboard 321-pin ZIF socket supports Intel Pentium (P54C) CPU speed 75/90/100/120/133/150/166/200 MHz processors/P54CT / P55C (optional by splitting the voltage regulator).

Cyrix 6x86-P120+ (100 MHz) / 6x86-P133+ (110 MHz) / 6x86-P150+ (120 MHz) / 6x86-P166+ (133 MHz) processors / M2 series processors upgrade.

IBM 6x86-P120+ (100 MHz) / 6x86-P133+ (110 MHz) / 6x86-P150+ (120 MHz) / 6x86-P166+ (133 MHz) processors / M2 series processors upgrade.

AMD K5-PR75 (75 MHz) / K5-PR90 (90 MHz) / K5-PR100 (100 MHz) / AMD K5-PR75 (75 MHz) / K5-PR90 (90 MHz) / K5-PR100 (100 MHz) / K5-PR120 (90 MHz) / K5-PR133 (100 MHz) / K5-PR150 (120 MHz) / K5-PR166 (133 MHz) processors.

■ Leading Edge Chipset

Intel 82430VX chipset, including a CPU interface controller, advanced cache controller, integrated DRAM controller, synchronous ISA bus controller, PCI local bus interface, integrated power management unit.

■ Ultra-fast Level II Cache

Supports onboard 256KB/512KB synchronous PBSRAM direct-mapped write-back cache memory and one SRAM module slot for expansion.

■ Versatile Main Memory Support

Accepts up to 128MB RAM in two banks using 72-pin SIMMs of 4, 8, 16, 32, 64, 128MB or using a 168-pin DIMM with support for SDRAM, EDO, or Fast Page Mode memory.

■ **ISA & PCI Expansion Slots**

Three 16-bit ISA and four 32-bit non-shared PCI expansion slots provide all the room you need to install a full range of add-on cards.

■ **USB Support**

Onboard support for two Universal Serial Bus connectors via a plug-in connector.

■ **Enhanced PCI Bus Master IDE Controller**

Integrated Enhanced PCI local bus IDE controller with two connectors supports up to four IDE devices such as Hard Disk, CD-ROM or Tape Backup drives via two channels for high speed data throughput. This controller supports PIO Modes 3 and 4, and DMA Mode 2 for optimized system performance.

■ **Super Multi I/O**

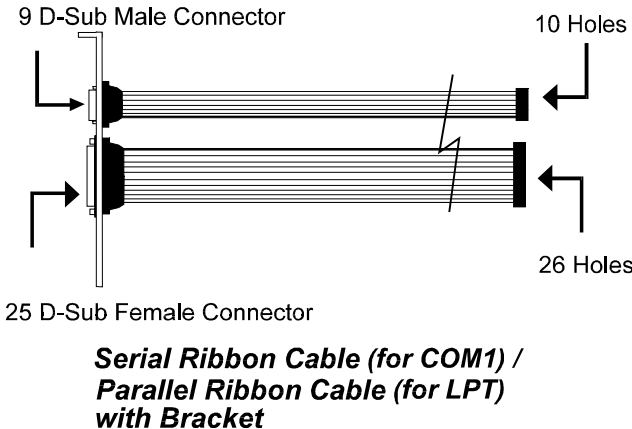
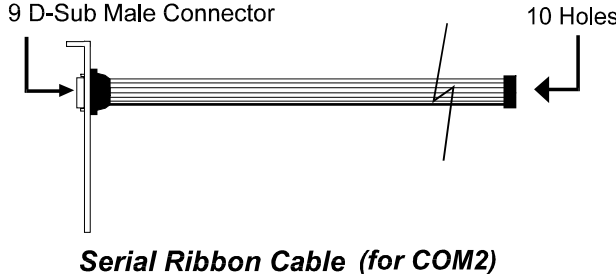
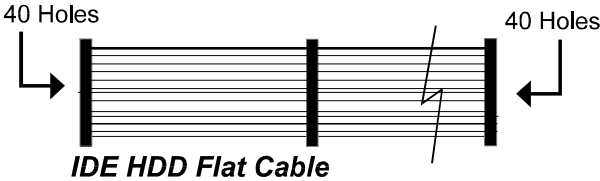
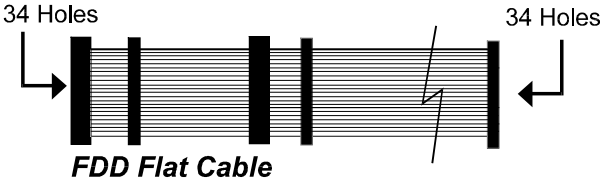
Integrated WB83877 Plug and Play Super I/O chipset features two 16550 UART compatible serial ports, one EPP/ECP capable parallel port, one IR port, and one Floppy Disk Drive connector.

Package Checklist

Please check that your package contains all the items listed below. If you discover any item is damaged or missing, please contact your vendor.

- The PT-2006 mainboard
- Serial port/parallel port cables with bracket
- Seriall port cable with bracket
- One IDE cable
- One floppy drive cable
- One SIR cable
- This user manual
- PS/2 mouse cable with bracket (Optional)

Cables



This User Manual

This manual is designed to guide you and facilitate your use of the PT-2006 mainboard. It contains a description of the design and features of the mainboard, and also includes useful information for changing the configuration of the board and the system it is installed in. The manual is divided into three chapters, which contain the main body of information normally referred to by users.

■ Chapter 1 - Overview

gives an overview of the mainboard and describes its major components and features.

■ Chapter 2 - Installation Procedures

gives instructions on how to set up the mainboard, including jumper settings and CPU installation guide.

■ Chapter 3 - Award BIOS Setup

briefly explains the mainboard's BIOS system setup in general and tells you how to run it and change the system configuration settings.

NOTE : The material in this manual is for information only and is subject to change without notice. We reserve the right to make changes in the product design without reservation and without notification to its users. We shall not be liable for technical or editorial omissions made herein; nor for incidental or consequential damages resulting from the furnishing, performance, or use of this material.

Something Interesting

This section provides useful information that you will need to know should you decide to modify or upgrade the configuration of the mainboard and the system it is installed in. If you do not have the confidence to upgrade the mainboard yourself, we advise that you consult a qualified service technician for assistance.

The BIOS Setup Utility

The BIOS (Basic Input Output System) is the basic firmware that instructs the computer how to operate. For the BIOS to work properly, there must be a record of the computer's hardware and configuration settings for it to refer to. This record is created using the Setup Utility, a program that is stored permanently in the BIOS ROM chip on the mainboard.

The system configuration record created by the Setup Utility is also stored on the mainboard, but not permanently. This section of the memory it is stored in is the NVRAM.

When you buy your computer, the system configuration record will already be set and may in some cases differ from the basic defaults. The first time you use your computer or when you need to re-configure your system, you should run the Setup Utility and write down the settings.

IRQ Functionality

As you read through this manual, you will see the term **IRQ** on a number of occasions. It is important for you to know what this term means, particularly if you intend to upgrade your system.

IRQ stands for Interrupt Request, the process in which an input or output device tells the processor to temporarily interrupt its current task and immediately process something from the source of the interrupt. When it has completed this, the processor returns to the task it was already processing. Devices that need an **IRQ** line to operate sometimes need to have exclusive use of that line.

A large number of add-on cards, such as sound cards and LAN cards, require the use of an **IRQ** line to function. There is a total of 16 **IRQs** (**IRQ0** to **IRQ15**) available in a system, although some of them may already be in use by components in the system such as the keyboard and mouse. Add-on cards that need to use an **IRQ** draw from the unused group of **IRQs**. When installing a card that uses an **IRQ**, it will have a default **IRQ** setting which you might have to change if that **IRQ** is already in use and cannot be shared.

Both **ISA** and **PCI** add-on cards may need to use **IRQs**. System **IRQs** are available to add-on cards installed on the **ISA** bus first; the remaining ones can be used by cards installed on the **PCI** bus. There are two categories of **ISA** add-on cards: so-called Legacy **ISA** cards, which need to be configured manually and then installed in any available **ISA** slot; and Plug and Play (**PnP**) **ISA** cards, which are configured automatically by the system. As a result, when you install Legacy **ISA** cards, you have to carefully configure the system to ensure that the installed cards do not conflict with each other by having the same **IRQ**. With **PnP** cards, on the other hand, **IRQs** are assigned automatically from the ones available in the system. In the case of **PCI** add-on cards, the **BIOS** automatically assigns an **IRQ** card to the **PCI** slot the card is installed in.

DMA Channels of ISA Cards

Some Legacy and PnP ISA add-on cards may also need to use a Direct Memory Access (DMA) channel. DMA assignments for this mainboard are handled in the same way as the IRQ assignment process outlined above. For more information, please refer to Chapter 3 of this manual.

Enhanced IDE

This mainboard features an integrated Enhanced IDE controller that provides convenient, high-speed connections with up to four IDE devices, such as Hard Disk, CD-ROM and Tape Backup Drives. Enhanced IDE is an upgrade of the original IDE specification and provides increased capabilities and performance in a number of areas, including support for Hard Disk Drives of over 528MB and faster data transfer rates utilizing the PIO Mode 4 timing scheme.

With the integrated IDE controller you can connect up to four IDE peripheral devices to your system. All devices are categorized in the same way that IDE Hard Disks were configured in the past, with one device set as the Master device and the other as the Slave device. We recommend that Hard Disk Drives use the Primary IDE connector and that CD-ROM drives utilize the Secondary IDE connector for improved system performance.

Serial Infrared (SIR) Connections

This mainboard features support for highly-sophisticated SIR technology, which allows bi-directional and cordless data transactions with other IrDA compliant computers and peripheral devices using infrared as a medium. This transmission is carried out in either Full Duplex Mode or Half Duplex Mode. The former allows simultaneous data transmission and reception, while the latter disables the reception when transmission occurs. The SIR becomes active at a speed of 3/16 bauds or 16ns.

The I/O chipset on this mainboard features a SIR interface that is fully compliant with the IrDA standard. An IrDA device can be installed via a 9-pin D-SUB connector in the rear panel of the computer which is linked by a cable to the onboard IrDA pinhead.

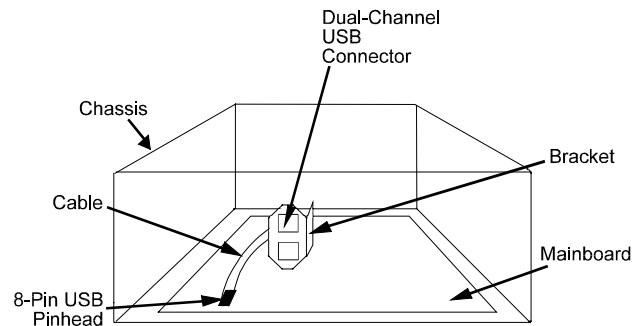
The serial port COM2 on this mainboard is designed to be an SIR compliant port. If you wish to install the SIR connection feature, you need to adjust the BIOS option for high-speed performance.

Universal Serial Bus (USB) Functionality

This mainboard features integrated support for state-of-the-art USB technology, which provides high-speed and easy-to-use Plug & Play connections to the future generation of external peripherals, such as keyboards, mouse, monitors, game devices, scanners, printers, and fax/modems.

USB overcomes conventional I/O bottlenecks by combining the I/O ports into a single dual-channel connector that supports up to 120 devices. For optimum ease of use and flexibility, USB not only allows the automatic detection and configuration of peripherals after installation, but also enables the simultaneous connection of up to 63 devices.

This mainboard features an optional USB connector bracket that is connected by a cable to the onboard USB pinheads. The bracket can be installed in one of the I/O expansion slots on the rear panel of the system, as shown in the illustration below.



It provide fast and convenient Plug and Play peripheral connections outside your computer, allowing you take full advantage of the universal functionality and flexibility of USB technology.

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Installation Procedures

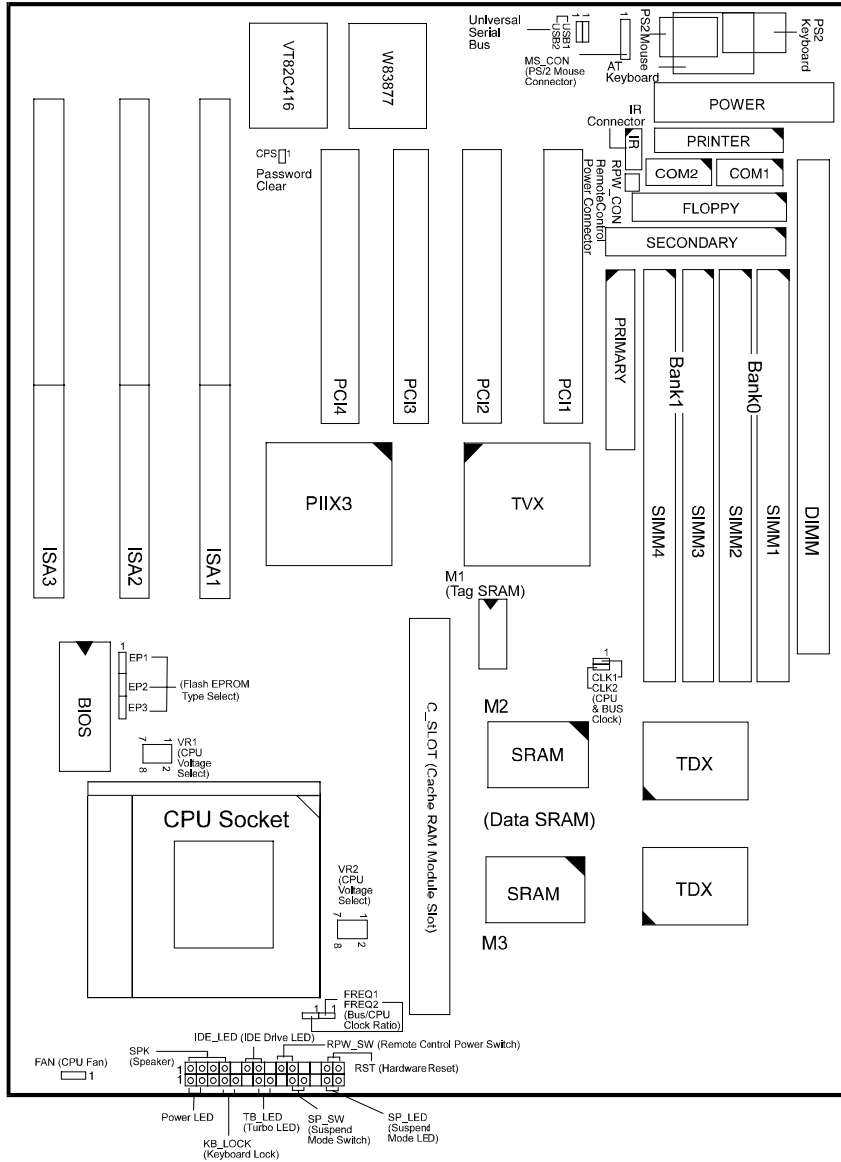
The PT-2006 has several user-adjustable jumpers on the board that allow you to configure your system to suit your requirements. This chapter contains information on the various jumper settings on your mainboard.

To set up your computer, you should follow these installation steps:

- Step 1 -
Set system jumpers
- Step 2 -
Install RAM modules
- Step 3 -
Install the CPU
- Step 4 -
Install expansion cards
- Step 5 -
Connect cables and power supply
- Step 6 -
Set up BIOS feature (Please read Chapter Three.)

CAUTION : If you use an electric driver to install this mainboard on your chassis, please wear a static wrist strap and the recommended electric driver torque is from 5.0 to 8.0 kg/cm to avoid damaging chips' pins.

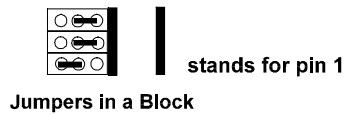
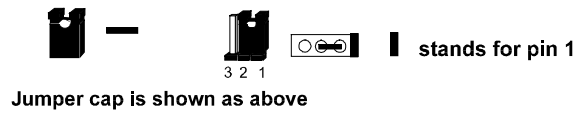
Mainboard Layout



1). Set System Jumpers

Jumpers

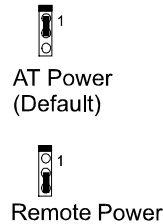
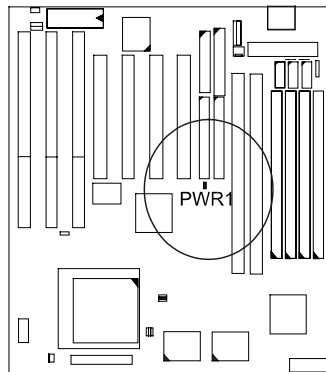
Jumpers are used to select the operation modes for your system. Some jumpers on the board have three metal pins with each pin representing a different function. To set a jumper, a black cap containing metal contacts is placed over the jumper pins according to the required configuration. A jumper is said to be shorted when the black cap has been placed on one or two of its pins. The types of jumpers used in this manual are shown below:



NOTE : Users are not encouraged to change the jumper settings not listed in this manual. Changing the jumper settings improperly may adversely affect system performance.

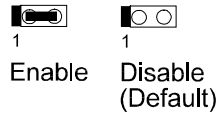
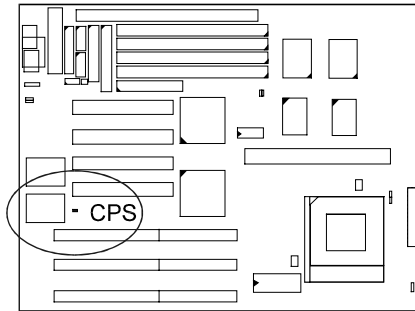
Power Supply Type Selection: PWR1

This jumper allows you to select your power supply type: an AT power supply or remote power supply.



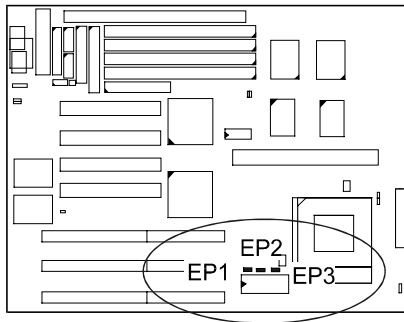
Clear Password: CPS

This jumper allows you to set the password configuration to Enabled or Disabled. You may need to enable this jumper if you forget your password.



Flash ROM Type Selection: EP1, EP2, EP3

These jumpers allow you to select the flash ROM type.



	EP1	EP2	EP3
Intel 28F001	1	1	1
SST 29EE010	1	1	1
AMD 28F020	1	1	1
SST 29EE020	1	1	1

2). Install System RAM Modules

DRAM and SDRAM

The working space of the computer is the Random Access Memory (RAM). The system cannot act upon data unless it is loaded into RAM. When more memory is added, the working memory of the computer is larger, thereby increasing total performance.

The PT-2006's RAM is comprised of four industry standard 72-pin Single In-line Memory Modules (SIMMs) and one Dual In-line Memory Modules (DIMMs). Each SIMM socket supports from 4 to 64MB FPM (Fast Page Mode) and high-speed EDO (Extended Data Out) DRAM. Each DIMM socket is able to support up to 64MB EDO DRAM or lightning-fast SDRAM.

SDRAM is an advanced new memory technology that boosts overall system performance with its ability to synchronize all operations with the processor clock signal. This makes the implementation of control interfaces easier, and speeds up column access time. SDRAM features an on-chip burst counter that can be utilized to increment column addresses for very fast burst access, which means that SDRAM allows new memory access to be initiated before the preceding access has been finished.

Before making DRAM upgrades you should verify the type and speed of the RAM currently installed from your dealer. Installing mixtures of RAM types other than those described in this manual will have unpredictable results.

RAM Module Configuration

SIMMs and DIMMs in Bank 0 and Bank 1 can be installed in many combinations. Some of them are listed in the following table.

(Unit : MB)

TOTAL MEMORY	SIMM (Bank 0)	SIMM (Bank 1)	DIM (Bank 1)
8	4 & 4		
			8
16	8 & 8		
			16
32	16 & 16		
			32
64	32 & 32		
			64*
128	64 & 64		
			64*

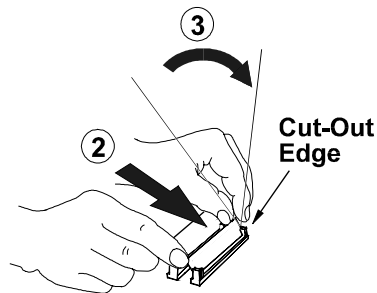
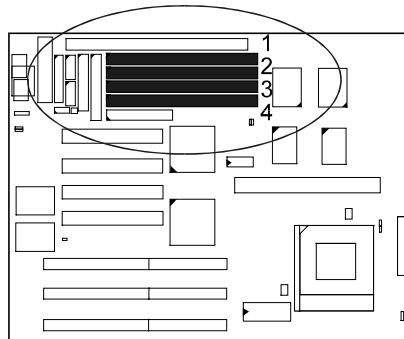
NOTE : * RAM module of this size was not available for testing at press time. Also, the DIMM and SIMMs are not recommended install on the mainboard at the same time

Install SIMMs

Complete the following procedures to install SIMMs:

CAUTION : Always turn the system power off before installing or removing any device; and see “Handling Precautions” at the start of this manual.

1. Locate the SIMM slots on the mainboard. (See figure below.)



NOTE : SIMMs in each bank must be of the same type; and the BIOS automatically configures the memory size.

2. Carefully fit a SIMM at a 45 degree angle into each empty socket to be populated. All the SIMMs must face the same direction.
3. Swing each SIMM into its upright, locked position.
When locking a SIMM in place, push on each end of the SIMM - do not push in the middle, as shown above.

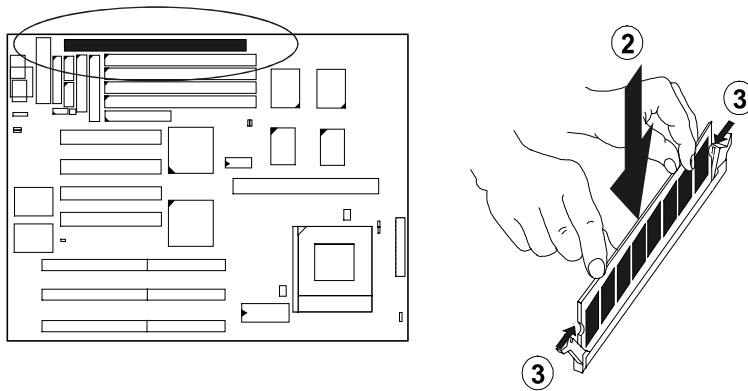
Remove SIMMs

To remove the SIMMs, pull the retaining latch on both ends of the socket and reverse the procedure above.

Install DIMMs

Complete the following procedures to install DIMMs:

1. Locate the DIMM slots on the mainboard. (See figure below.)



2. Install the DIMM straight down into the DIMM slot with both hands.
3. The clips of the slot will close up to hold the DIMM in place when the DIMM touches the slot's bottom.

Remove DIMMs

Press the clips with both hands to remove the DIMM.

Cache Memory

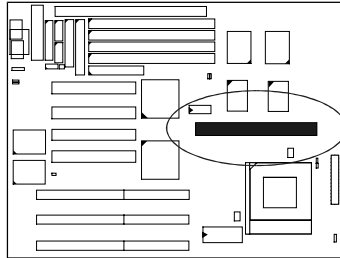
Cache memory access is very fast compared to main memory access. The cache holds data for imminent use. Since cache memory is five to more than ten times faster than main memory, the CPU's access time is reduced, giving you better system performance.

The PT-2006 comes with onboard 256/512KB synchronous 3V Pipeline Burst SRAMs and one cache SRAM module slot which allows you to expand the cache RAM size. The specification of the cache SRAM module requires Intel Coast. Standard version 3.X, such as FIC PB512K-3.0.

Please note that for 256K secondary cache, M2 and M3 should be mounted with 32Kx32 Pipeline Burst SRAM. (Please refer to your dealer for the 512KB cache upgraded and the appropriate SRAM type).

Install Cache SRAM Module

1. Locate the C_SLOT on the mainboard. (See figure below.)

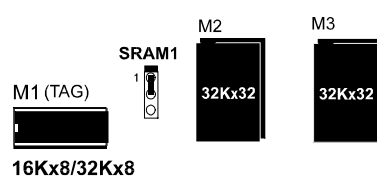


2. Insert the cache SRAM module straight down onto the slot.

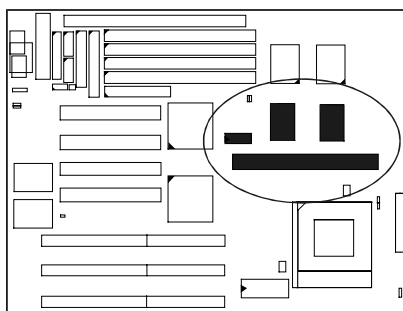
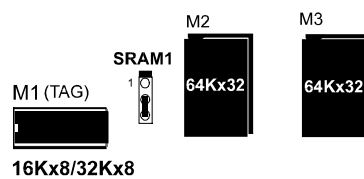
256/512KB Cache SRAM (Onboard)

NOTE : Use the correct chips for the amount of cache memory you want to add. Install both the correct Cache and Tag SRAM.

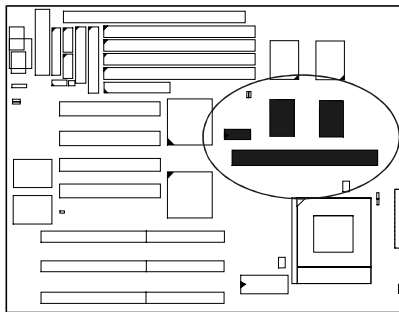
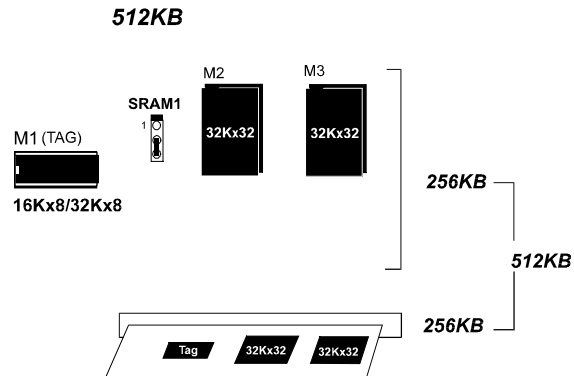
256KB



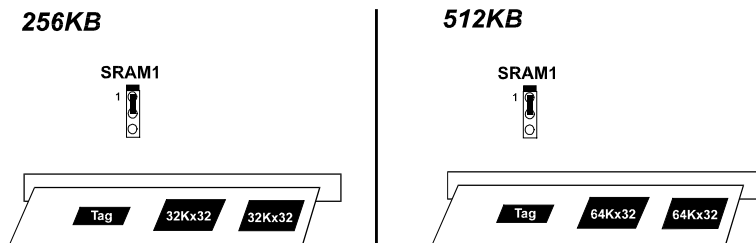
512KB



512KB Cache RAM (Onboard and SRAM Module)

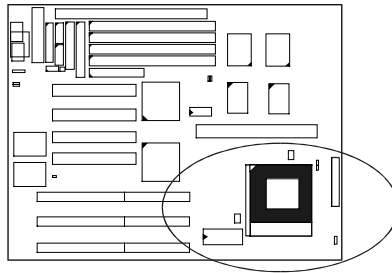


256/512KB Cache RAMh (SRAM Module)



3). Install the CPU

The CPU module resides in the Zero Insertion Force (ZIF) socket on the mainboard.



CAUTION :

1. Always turn the system power off before installing or removing any device.
2. Always observe static electricity precautions.
See "Handling Precautions" at the start of this manual.
3. Inserting the CPU chip incorrectly may damage the chip.

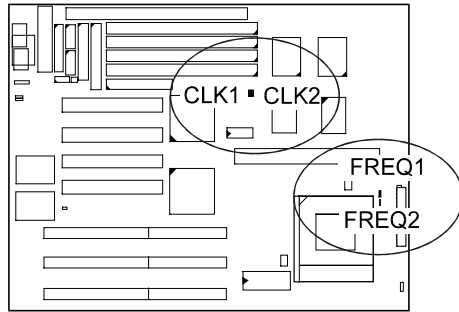
To install the CPU, do the following:

1. Lift the lever on the side of the CPU socket.
2. Handle the chip by its edges and try not to touch any of the pins.
3. Place the CPU in the socket. The chip has a notch to correctly orientate the chip. Align the notch with pin one of the socket. Pin one is located in the blank triangular area. Do not force the chip. The CPU should slide easily into the socket.
4. Swing the lever to the down position to lock the CPU in place.
5. See the following sections for information on the CPU jumpers settings.

CPU External Clock (BUS)

Frequency: CLK1, CLK2

The table below shows the jumper settings for the different CPU speed configurations.



CLK1	CLK2
1 	1
66 MHz	66 MHz
1 	1
60 MHz	60 MHz
1 	1
55 MHz	55 MHz
1 	1
50 MHz	50 MHz

CPU to Bus Frequency

































Ratio:FREQ1 and FREQ2

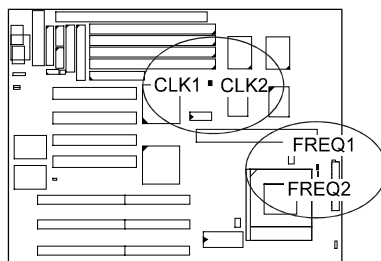
These two jumpers are used in combination to decide the ratio of internal frequency of the CPU to bus clock.

FREQ1	FREQ2
1 	1
3 x Ext.	3 x Ext.
1 	1
2.5 x Ext.	2.5 x Ext.
1 	1
2 x Ext.	2 x Ext.
1 	1
1.5 x Ext.	1.5 x Ext.

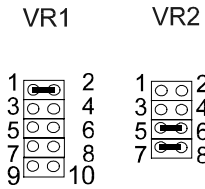
Intel Pentium CPUs

Frequency

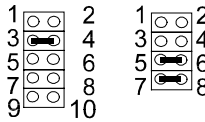
CPU Speed	External (CPU/CLK)	CLK1	CLK2	CPU Clock Rate		
				Internal	FREQ1	FREQ2
200 MHz	66 MHz			3 x Ext.		
166 MHz	66 MHz			2.5 x Ext.		
150 MHz	60 MHz			2.5 x Ext.		
133 MHz	66 MHz			2 x Ext.		
120 MHz	60 MHz			2 x Ext.		
100 MHz	66 MHz			1.5 x Ext.		
90 MHz	60 MHz			1.5 x Ext.		
75 MHz	50 MHz			1.5 x Ext.		



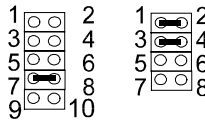
Voltage



Core : 3.4V-3.6V
IO : Same
P54C VRE

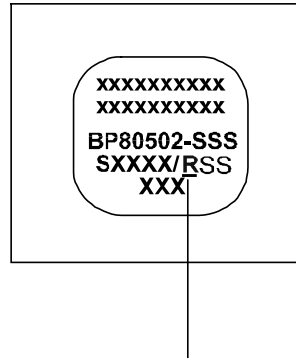


Core : 3.3V
IO : Same
P54C STD

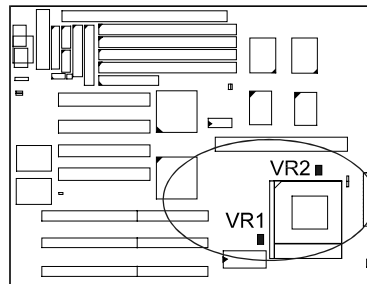


Core : 2.8V
IO : 3.3V
P55C

**Intel Pentium CPU
 Bottom Side Marking**



R (Identifier for Voltage Range) :
 V for VRE Voltage Range
 or
 S for Standard Voltage Range



AMD-K5 CPUs

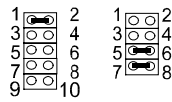
Frequency

Model Name	CPU Speed	External (CPU/CLK)	CLK1	CLK2	CPU Clock Rate		
					Internal	FREQ1	FREQ2
K5-PR166 *	133 MHz	66 MHz	1	1	2 x Ext.	1	1
K5-PR150 *	120 MHz	60 MHz	1	1	2 x Ext.	1	1
K5-PR133 *	100 MHz	66 MHz	1	1	1.5 x Ext.	1	1
K5-PR120 *	90 MHz	60 MHz	1	1	1.5 x Ext.	1	1
K5-PR100 *	100 MHz	66 MHz	1	1	1.5 x Ext.	1	1
K5-PR90	90 MHz	60 MHz	1	1	FREQ1 1.5 x Ext.	1	1
K5-PR75	75 MHz	50 MHz	1	1	FREQ2 1.5 x Ext.	1	1

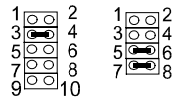
NOTE : * This CPU had not yet been tested when this manual was printed.

Voltage

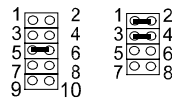
VR1 VR2



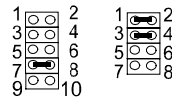
Core : 3.4V-3.6V
IO : Same
AMD-K5 - B



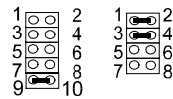
Core : 3.3V
IO : Same
AMD-K5 - C, F



Core : 2.9V
IO : 3.3V
AMD-K5 - H

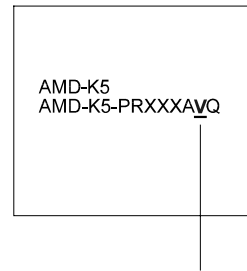


Core : 2.8V
IO : 3.3V
AMD-K5 - J



Core : 2.5V
IO : 3.3V
AMD-K5 - K

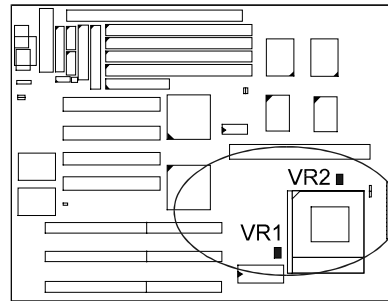
AMD-K5 CPU Top Side Marking



V (Identifier for Operation Voltage) :
































































B
C
F
H
J
K

Please refer to
the left-hand-side table

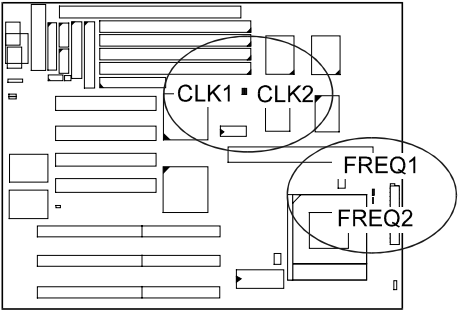


Cyrix 6x86 CPUs

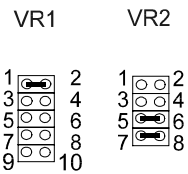
Frequency

Model	CPU Speed (MHz)	External (CPU/CLK) (MHz)	Clock Generator						Internal	CPU Clock Rate		
			IMI 652			ICS 9147				FREQ1	FREQ2	FREQ3
			CLK1	CLK2	CLK3	CLK1	CLK2	CLK3				
M2*	233	66	 1	 1	 1	 1	 1	 1	3.5 x	 1	 1	 1
M2*	200	66	 1	 1	 1	 1	 1	 1	3 x	 1	 1	 1
M2*	166	66	 1	 1	 1	 1	 1	 1	2.5 x	 1	 1	 1
M2*	150	60	 1	 1	 1	 1	 1	 1	2.5 x	 1	 1	 1
6x86-PR166+ 6x86L-PR166+	133	66	 1	 1	 1	 1	 1	 1	2 x	 1	 1	 1
6x86-PR150+ 6x86L-PR150+	120	60	 1	 1	 1	 1	 1	 1	2 x	 1	 1	 1
6x86-PR133+ 6x86L-PR133+	110	55	 1	 1	 1	 1	 1	 1	2 x	 1	 1	 1

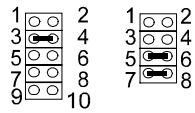
NOTE : * This CPU had not been tested when this manual was printed.



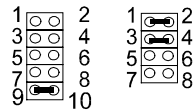
Voltage



Core : 3.4V-3.6V
 IO : Same
 Cyrix 6x86-028

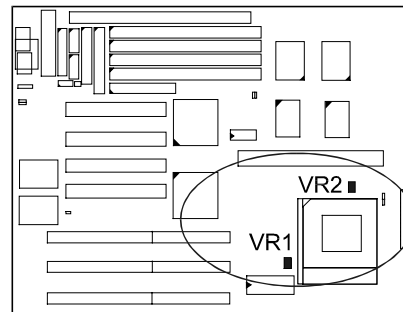
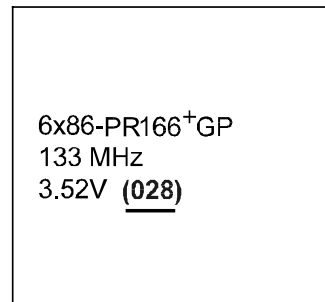


Core : 3.3V
 IO : Same
 Cyrix 6x86-016


































































Core : 2.5V
 IO : 3.3V
 Cyrix 6x86L *

**Cyrix 6x86 CPU
 Top Side Marking**

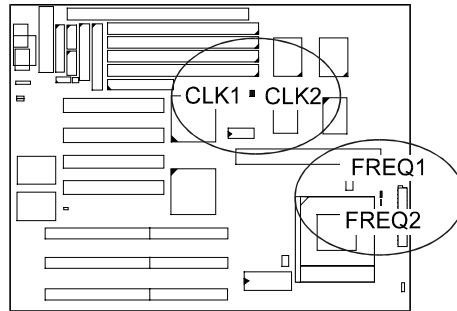


IBM 6x86 CPUs

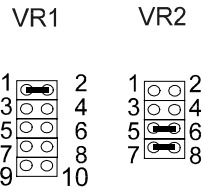
Frequency

Model	CPU Speed (MHz)	External (CPU/CLK) (MHz)	Clock Generator						Internal	CPU Clock Rate		
			IMI 652			ICS 9147				FREQ1	FREQ2	FREQ3
			CLK1	CLK2	CLK3	CLK1	CLK2	CLK3				
M2*	233	66							3.5 x			
M2*	200	66							3 x			
M2*	166	66							2.5 x			
M2*	150	60							2.5 x			
6x86-PR166+ 6x86L-PR166+	133	66							2 x			
6x86-PR150+ 6x86L-PR150+	120	60							2 x			
6x86-PR133+ 6x86L-PR133+	110	55							2 x			

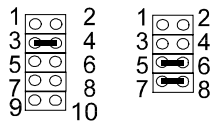
NOTE : * This CPU had not been tested when this manual was printed.



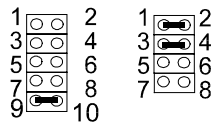
Voltage



Core : 3.4V-3.6V
 IO : Same
 Cyrix 6x86-028

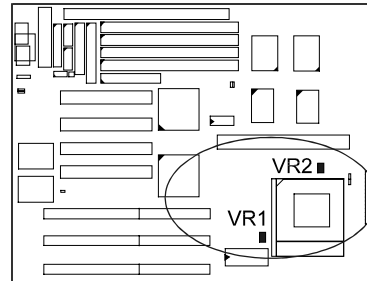
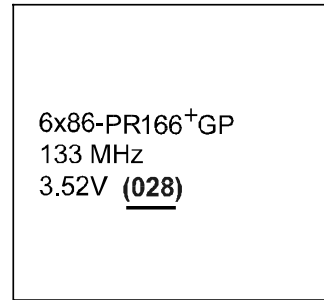


Core : 3.3V
 IO : Same
 Cyrix 6x86-016

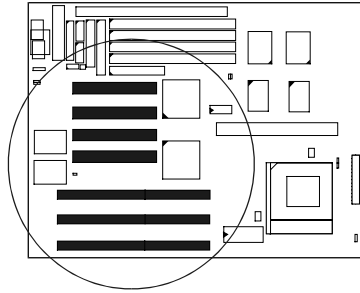


Core : 2.5V
 IO : 3.3V
 Cyrix 6x86L *

**IBM 6x86 CPU
 Top Side Marking**



4). Install Expansion Cards



Your PT-2006 features three 16-bit ISA Bus and four 32-bit PCI Bus expansion slots.

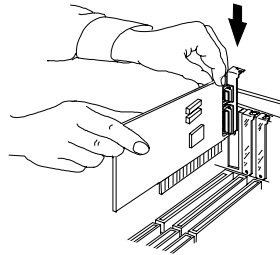
This section describes how to connect an expansion card to one of your system's expansion slots. Expansion cards are printed circuit boards that, when connected to the mainboard, increase the capabilities of your system. For example, expansion cards can provide video and sound capabilities.

CAUTION :

1. Always turn the system power off before installing or removing any device.
2. Always observe static electricity precautions. See "Handling Precautions" at the start of this manual.

To install an expansion card, do the following:

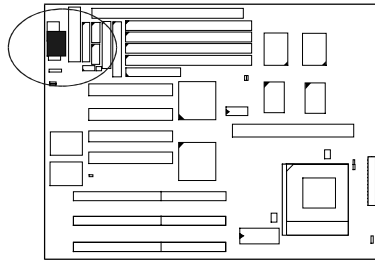
1. Remove the chassis cover and select an empty expansion slot.
2. Remove the corresponding slot cover from the chassis. Unscrew the mounting screw that secures the slot cover and pull the slot cover out from the chassis. Keep the slot cover mounting screw nearby.
3. Holding the edge of the peripheral card, carefully align the edge connector with the expansion slot.
4. Push the card firmly into the slot. Push down on one end of the expansion card, then the other. Use this "rocking" motion until the add-in card is firmly seated inside the slot.
5. Secure the board with the mounting screw removed in Step 2. Make sure that the card has been placed evenly and completely into the expansion slot.



5). Connect Cables and Power Supply

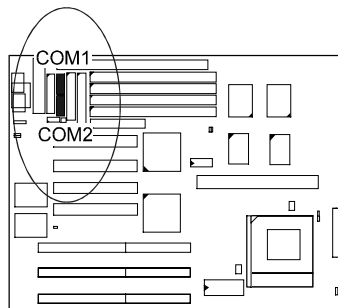
Keyboard Connector: AT_KB

The cable of your 101-key enhanced keyboard or 106-key Windows 95 keyboard is plugged into this connector.



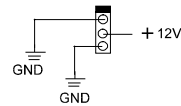
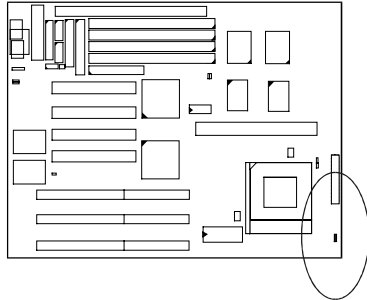
Serial Port Connectors: COM1, COM2

These two connectors allow you to connect with your devices that take serial ports, such as a serial mouse or a modem. Usually, it is recommended to connect your serial mouse to COM1 and your fax/modem to COM2. Because COM2 and IR utilizes the same IRQ, COM2 will not work if an IR device is connected to the IR connector.



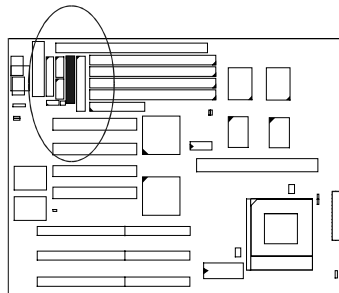
CPU Fan Connector: FAN

This connector is linked to the CPU fan for cooling the processor temperature.



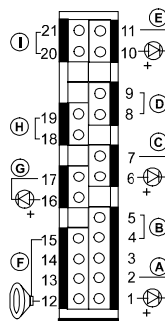
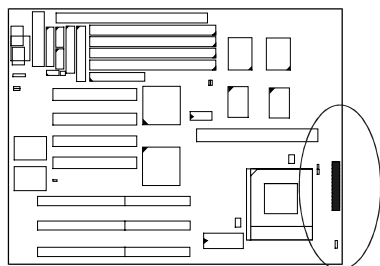
Floppy Diskette Drive Connector: FLOPPY

This connector provides the connection with your floppy disk drive.



Front Panel Block Connector: F_PNL

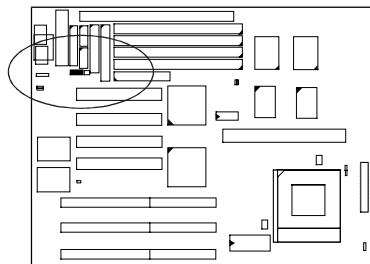
This block connector concludes : PW_LED, KB_LOCK, TB_LED, SP_SW, SPK, SP_LED, IDE_LED, RPW_SW, and RST connectors.



Item	Connector	Pin Type	Feature
A	PW_LED	2-pin male	indicates the system power status
B	KB_LOCK	2-pin male	allows the keyboard to access the system
C	TB_LED	2-pin male	indicates the system speed is in normal or turbo speed
D	SP_SW	2-pin male	Suspend Mode switch
E	SP_LED	2-pin male	indicates the system into Suspend Mode when LED lit
F	SPK	4-pin male	connects to speaker
G	IDE_LED	2-pin male	indicates the IDE HDD I/O access LED lit
H	RPW_SW	2-pin male	Remote Power switch
I	RST	2-pin male	allows you to reset the system

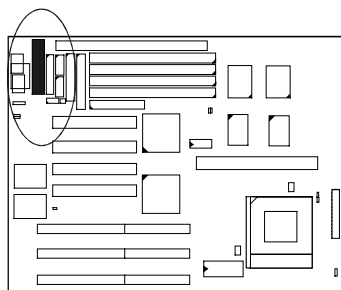
Infrared Connector: IR

This connector supports the connection to your IR device. The IR port uses the same IRQ as COM2 port, therefore you need to adjust this BIOS option when an IR device is installed.



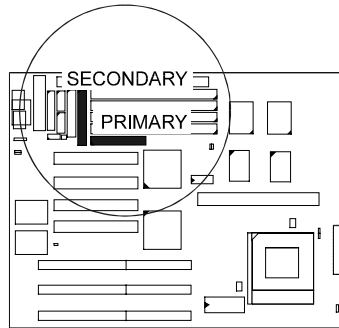
Standard Power Supply Connector: POWER

This 12-pin block connector is used for connecting to the standard 5V power supply. In the picture below, notice that, in most cases, there are two marks “P8” and “P9” on the surface of the connector. You have to insert the “P8” plug into the “P8” section of the connector, and so forth for “P9”. Two black wires must be in the middle.



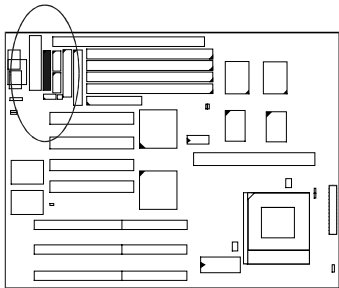
IDE HDD Device Connectors: PRIMARY, SECONDARY

These two connectors are used for your IDE hard disks. If you have one IDE hard disk, connect it to the PRIMARY connector using the IDE HDD flat cable provided with the mainboard. The BIOS auto detection sets it to be a “Primary Master” disk. If you want to install another IDE hard disk or CD-ROM, please use the SECONDARY connector.



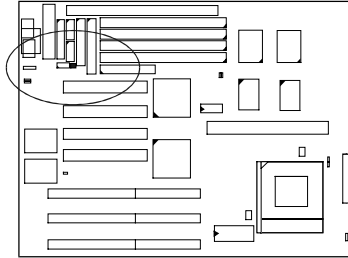
Printer Connector: PRINTER

This connector is featured onboard for the connection with your printer.



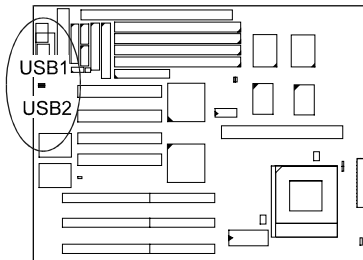
Remote Power Supply Connector: RPW_CON

This 3-pin male connector allows you to enable (or disable) the system power if the RPW_SW is on (or off).



Universal Serial Bus Connectors: USB1, USB2

These two connectors link with USB peripheral devices via an optional USB riser card.



NOTE : If the USB riser card is installed and the USB feature is enabled. The PCI4 Slot will utilized by the USB function; in such a case, no add-on card is allowed at PCI4 Slot, since PCI4 Slot is dedicated to the USB function when the USB function enabled.

Award BIOS Setup

The PT-2006 comes with the Award BIOS chip that contains the ROM Setup information of your system. This chip serves as an interface between the processor and the rest of the mainboard's components. This chapter explains the information contained in the Setup program and tells you how to modify the settings according to your system configuration.

CMOS Setup Utility

ROM PCI/ISA BIOS (2A59GF09) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP PNP/PCI CONFIGURATION LOAD BIOS DEFAULTS LOAD SETUP DEFAULTS	INTEGRATED PERIPHERALS SUPERVISOR PASSWORD USER PASSWORD IDE HDD AUTO DETECTION SAVE & EXIT SETUP EXIT WITHOUT SAVING
ESC : Quit F10 : Save & Exit Setup	↑ ↓ → ← : Select Item (Shift) F2 : Change Color
Time, Date, Hard Disk Type...	

A Setup program, built into the system BIOS, is stored in the CMOS RAM. This Setup utility program allows changes to the mainboard configuration settings. It is executed when the user changes system configuration; user changes system backup battery; or the system detects a configuration error and asks the user to run the Setup program. Use the arrow keys to select and press <<Enter>> to run the selected program.

Standard CMOS Setup

ROM BIOS (2A59GF09) STANDARD CMOS SETUP AWARD SOFTWARE, INC.								
Date (mm:dd:yy) : Mon, Jan 24 1994 Time (hh:mm:ss) : 15 : 38 : 55								
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	: User	541	1409	16	65535	1408	63	Normal
Primary Slave	: None	0	0	0	0	0	0	-----
Secondary Master	: None	0	0	0	0	0	0	-----
Secondary Slave	: None	0	0	0	0	0	0	-----
Drive A : 1.44M, 3.5 in. Drive B : 1.2M, 5.25 in.						Base Memory: 640K Extended Memory: 7168K Other Memory: 384K Total Memory: 8192K		
Video : EGA/VGA Halt On : All Errors			ESC : Quit F1 : Help			↑ ↓ ← → : Select Item (Shift)F2 : Change Color PU/PD/+/- : Modify		

The Standard CMOS Setup screen is displayed above. Each item may have one or more option settings. The system BIOS automatically detects memory size, thus no changes are necessary. Use the arrow keys to highlight the item and then use the <<PgUp>> or <<PgDn>> keys to select the value you want in each item.

Hard Disk Configurations

TYPE:

Select from 1 to 45 to fill remaining fields with predefined values of disk drives. Select User to fill the remaining fields. Select Auto to detect the HDD type automatically.

SIZE:

The hard disk size. The unit is Mega Bytes.

CYLS:

The cylinder number of the hard disk.

HEAD:

The read/write head number of hard disk. The range is from 1 to 16.

PRECOMP:

The cylinder number at which the disk drive changes the write timing.

LANDZ:

The cylinder number that the disk drive heads (read/write) are seated when the disk drive is parked.

SECTOR:

The sector number of each track defined on the hard disk. The range is from 1 to 64.

MODE:

Select Auto to detect the mode type automatically. If your hard disk supports the LBA mode, select LBA or Large. However, if your hard disk cylinder is more than 1024 and does not support the LBA function, you have to set at Large.

Select Normal if your hard disk supporting cylinders is below 1024.

Software Turbo Speed

The BIOS supports Software Turbo Speed feature. Instead of pressing the Turbo Speed Button on the front panel, simply press the <<Alt>>, <<Ctrl>>, and <<+>> keys at the same time to enable the Turbo Speed feature; and press the <<Alt>>, <<Ctrl>>, and <<->> keys at the same time to disable the feature.

BIOS Features Setup

ROM PCI/ISA BIOS (2A59GF09) BIOS FEATURES SETUP AWARD SOFTWARE, INC.	
Virus Warning : Enabled	Video BIOS Shadow : Enabled
CPU Internal Cache : Enabled	C8000 - CBFFF : Disabled
External Cache : Enabled	CC000 - CFFFF : Disabled
Quick Power On Self Test : Disabled	D0000 - D3FFF : Disabled
Boot Sequence : A, C	D4000 - D7FFF : Disabled
Swap Floppy Drive : Disabled	D8000 - DBFFF : Disabled
Boot Up Floppy Seek : Enabled	DC000 - DFFFF : Disabled
Boot Up NumLock Status : On	
Boot Up System Speed : High	
Gate A20G Option : Fast	
Typematic Rate Setting : Disabled	
Typematic Rate (Chars/Sec) : 6	
Typematic Delay (Msec) : 250	
Security Option : Setup	
PS/2 mouse function control : Enabled	
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 Setup Defaults

Moving around the BIOS Features Setup program shown above works the same way as moving around the Standard CMOS Setup program.

Users are not encouraged to run the BIOS Features Setup program. Your system should have been fine-tuned before shipping. Improper Setup may cause the system to fail, consult your dealer before making any changes.

Virus Warning

When enabled, assigns the BIOS to monitor the master boot sector and the DOS boot sector of the first hard disk drive.

The options are: Enabled (Default), Disabled.

CPU Internal Cache

When enabled, improves the system performance. Disable this item when testing or trouble-shooting.

The options are: Enabled (Default), Disabled.

External Cache

When enabled, supports an optional cache SRAM.

The options are: Enabled (Default), Disabled.

Quick Power On Self Test

When enabled, allows the BIOS to bypass the extensive memory test.

The options are: Enabled, Disabled (Default).

Boot Sequence

Allows the system BIOS to first try to boot the operating system from the selected disk drive.

The options are: A, C (Default); C, A; C, CDROM, A; CDROM, C, A.

Swap Floppy Drive

Allows you to switch the order in which the operating system accesses the floppy drives during boot up.

The options are: Enabled, Disabled (Default)

Boot Up Floppy Seek

When enabled, assigns the BIOS to perform floppy diskette drive tests by issuing the time-consuming seek commands.

The options are: Enabled (Default), Disabled.

Boot Up Numlock Status

When set to On, allows the BIOS to automatically enable the Num Lock Function when the system boots up.

The options are: On (Default), Off.

Boot Up System Speed

Allows you to adjust the system speed when the system boots up.

The options are: High (Default), Low.

Gate A20 Option

When set at Fast, allows a faster access response under Protected mode.

The options are: Fast (Default), Normal.

Typematic Rate Setting

The term typematic means that when a keyboard key is held down, the character is repeatedly entered until the key is released. When this item is enabled, you may change the typematic repeat rate.

The options are: Disabled (Default), Enabled.

Typematic Rate (Chars/Sec)

Sets the rate of a character repeat when the key is held down.

The options are: 6 (Default), 8, 10, 12, 15, 20, 24, 30.

Typematic Delay (Msec)

Sets the delay time before a character is repeated.
The options are: 250 (Default), 500, 750, 1000 millisecond.

Security Option

Allows you to set the security level of the system.
The options are: Setup (Default), System.

PS/2 Mouse Function Control

When enabled, allows you to release IRQ12 for using the PS/2 mouse.
The options are: Enabled (Default), Disabled.

OS Select For DRAM >> 64MB

If your operating system (OS) is OS2, MS Windows NT, or MS Windows 95, select the option OS2. Otherwise, stay with the default setting Non-OS2.
The options are: Non-OS2 (Default), OS2.

Video BIOS Shadow

Allows the BIOS to copy the video ROM code of the add-on video card to the system memory for faster access.
The options are: Enabled (Default), Disabled.

C8000-CBFFF to DC000-DFFFF Shadow

Allows the BIOS to copy the BIOS ROM code of the add-on card to system memory for faster access. It may improve the performance of the add-on card.

Some add-on cards will not function properly if its BIOS ROM code is shadowed. To use these options correctly, you need to know the memory address range used by the BIOS ROM of each add-on card.

The options are: Enabled, Disabled (Default).

Chipset Features Setup

ROM PCI/ISA BIOS (2A59GF09) CHIPSET FEATURES SETUP AWARD SOFTWARE, INC.	
Auto Configuration	: Enabled
DRAM Timing	: 60 ns
Fast RAS To CAS Delay	: 2
DRAM Read Burst (EDO/FP)	: x222/x333
DRAM Write Burst Timing	: x222
Fast MA to RAS# Delay CLK	: 2
Fast EDO Path Select	: Enabled
Refresh RAS# Assertion	: 5 Clks
SDRAM (CAS Lat/RAS-to-CAS)	: 3/3/5/8
System BIOS Cacheable	: Disabled
Video BIOS Cacheable	: Disabled
8 Bit I/O Recovery Time	: 1
16 Bit I/O Recovery Time	: 1
Memory Hole At 15M-16M	: Disabled
Peer Concurency	: Enabled
ESC : Quit ↑ ↓ → ← : Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Values (Shift) F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults	

Auto Configuration

When set at Enabled, it allows you to configure the features that from the third one, Fast RAS To CAS Delay, to the eighth one, Refresh RAS# Assertion. This is for technician use only.

The options are: Enabled (Default), Disabled.

DRAM Timing

Allows you to select the speed of data access to EDO DRAM. This is for technician use only.

The options are: 60 ns (Default), 70 ns.

Fast RAS To CAS Delay

Allows you to define the delay time that from DRAM RAS# active to CAS# active. This is for technician use only.

The options are: 3 (Default), 2.

Unit: Clock T.

DRAM Read Burst (EDO/FP)

Allows you to define DRAM read burst timing. This is for technician use only.

The options are: x222/x333 (Default), x332/x333, x444/x444, x333/x444.

RAM Write Burst Timing

Allows you to define DRAM write burst timing. This is for technician use only.

The options are: X-3-3-3, X-2-2-2 (Default), X-4-4-4.

Fast MA to RAS# Delay CLK

Allows you to select the clock of the memory address (MA) to RAS# delay. This feature is for technician use. This is for technician use only.

The options are: 1, 2 (Default).

Fast EDO Path Select

When enabled, it allows you to select a fast path for CPU to DRAM read cycles for the leadoff. This is valid for EDO DRAMs only. This is for technician use only.

The options are: Disabled, Enabled (Default).

Refresh RAS# Assertion

This feature allows you to control the number of clocks RAS# is asserted for Refresh cycles. This is for technician use only.

The options are: 4 Clks, 5 Clks (Default).

SDRAM (CAS Lat/RAS-to-CAS)

If you install a DIMM, this feature allows you to select the ratio of CAS Latency to RAS-to-CAS. The default setting is slowest. The 2|3/4/7 is fastest. The second one is 2|3/5/8, then is 3|3/4/7. This is for technician use only.

The options are: 3|3/5/8 (Default), 3|3/4/7, 2|3/5/8, 2|3/4/7.

System BIOS Cacheable

When enabled, allows the ROM area F000H-FFFFH to be cacheable when cache controller is activated.

The options are: Disabled (Default), Enabled .

Video BIOS Cacheable

When enabled, allows the system to use the video BIOS codes from SRAMs, instead of the slower DRAMs or ROMs.

The available options are: Enabled, Disabled (Default).

8 Bit I/O Recovery Time

Allows you to set the 8-bit ISA I/O recovery time. This is for technician use only.

The options are: 1 (Default), 2, 3, 4, 5, 6, 7, 8.

Unit: Bus clock.

16 Bit I/O Recovery Time

Allows you to set the 16-bit ISA I/O recovery time. This is for technician use only.

The options are: 1 (Default), 2, 3, 4.

Unit: Bus clock.

Memory Hole At 15M-16M

When enabled, the memory hole at the 15MB address will be relocated to the 15~16MB address range of the ISA cycle when the processor accesses the 15~16MB address area.

When disabled, the memory hole at the 15MB address will be treated as a DRAM cycle when the processor accesses the 15~16MB address area. This is for technician use only.

The available options are: Enabled, Disabled (Default).

Peer Concurrency

Enable this item to allow the processor to continue its operation while another PCI Bus is active. This is for technician use only.

The options are: Enabled (Default), Disabled.

Power Management Setup

ROM PCI/ISA BIOS (2A59GF09) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.		
Power Management	: Disable	** Power Down & Resume Events **
PM Control by APM	: No	IRQ3 (COM 2) : ON
Video Off Method	: DPMS	IRQ4 (COM 1) : ON
MODEM Use IRQ	: NA	IRQ5 (LPT 2) : OFF
		IRQ6 (Floppy Disk) : OFF
Doze Mode	: Disable	IRQ7 (LPT 1) : OFF
Standby Mode	: Disable	IRQ8 (RTC Alarm) : OFF
Suspend Mode	: Disable	IRQ9 (IRQ2 Redir) : OFF
HDD Power Down	: Disable	IRQ10 (Reserved) : OFF
		IRQ11 (Reserved) : OFF
		IRQ12 (PS/2 Mouse) : ON
** Wake Up Events In Doze & Standby **		IRQ13 (Coprocessor) : OFF
IRQ3 (Wake-Up Event) :	ON	IRQ14 (Hard Disk) : ON
IRQ4 (Wake-Up Event) :	ON	IRQ15 (Reserved) : OFF
IRQ8 (Wake-Up Event) :	OFF	
IRQ12 (Wake-Up Event) :	ON	
		ESC : Quit ↑ ↓ → ← : Select Item
		F1 : Help PU/PD,+/- : Modify
		F5 : Old Values (Shift) F2 : Color
		F6 : Load BIOS Defaults
		F7 : Load Setup Defaults

Power Management

This item allows you to adjust the power management features. Select Disable for disabling global power management features. Select User Defined for configuring your own power management features. MIN Saving initiates all predefined timers in their minimum values. MAX Saving, on the other hand, initiates maximum values.

The options are: Disable (Default), User Defined, MIN Saving, MAX Saving.

PM Control by APM

The option No allows the BIOS to ignore the APM (Advanced Power Management) specification. Selecting Yes will allow the BIOS wait for APM's prompt before it enters Doze mode, Standby mode, or Suspend mode. If the APM is installed, it will prompt the BIOS to set the system into power saving mode when all tasks are done.

The options are: No (Default), Yes .

Video Off Method

The option V/H SYNC+Blank allows the BIOS to blank off screen display by turning off the V-Sync and H-Sync signals sent from add-on VGA card. DPMS Supported allows the BIOS to blank off screen display by your add-on VGA card which supports DPMS (Display Power Management Signaling function). Blank Screen allows the BIOS to blank off screen display by turning off the red-green-blue signals.

The options are: V/H SYNC+Blank, DPMS (Default), Blank Screen.

MODEM Use IRQ

This feature allows you to select an available IRQ# to meet your modem use (i.e. same IRQ# as your modem use).

The options are: NA (Default), 3, 5, 7, 9, 10, 11.

Doze Mode

When disabled, the system will not enter Doze mode. The specified time option defines the idle time the system takes before it enters Doze mode.

The options are: Disabled(Default), 1, 2, 4, 6, 8, 10, 20, 30, 40 Min, 1 Hr.

Standby Mode

When disabled, the system will not enter the Standby mode. The specified time option defines the idle time the system takes before it enters Standby mode.

The options are: Disabled (Default), 1, 2, 4, 6, 8, 10, 20, 30, 40 Min, 1 Hr.

Suspend Mode

When disabled, the system will not enter Suspend mode. The specified time option defines the idle time the system takes before it enters Suspend mode.

The options are: Disabled (Default), 1, 2, 4, 6, 8, 10, 20, 30, 40 Min, 1 Hr.

HDD Power Down

Selecting Disable will turn off the hard disk drive (HDD) motor. Selecting 1 Min..15 Min allows you to define the HDD idle time before the HDD enters the Power Saving Mode. The option When Suspend lets the BIOS turn the HDD motor off when system is in Suspend mode.

The options 1 Min..15 Min and When Suspend will not work concurrently. When HDD is in the Power Saving Mode, any access to the HDD will wake the HDD up.

The options are: Disable (Default), 1 Min..15 Min, When Suspend.

IRQ3, 4, 8, 12 (Wake-Up Event)

Selecting OFF allows the BIOS to refrain from waking up the system. Selecting ON allows the BIOS to wake up the system from Doze mode, Standby mode, or Suspend mode.

The options are: OFF, ON.

The default of IRQ3, 4, 12 (Wake-Up Event): ON.

The default of IRQ8 (Wake-Up Event): OFF.

Power Down Activities / IRQ3 - IRQ15

Selecting ON will enable the power management timers when a no activity event is detected in the specified I/O port or component.

Selecting OFF will disable the PM timer even if a no activity event is detected.

The options are: ON, OFF.

The default value of IRQ3 (COM2), IRQ4 (COM1), IRQ12 (PS/2 Mouse), IRQ14 (Hard Disk) : ON.

The default setting of other IRQs: OFF.

PNP/PCI Configuration Setup

ROM PCI/ISA BIOS (2A59GF09) PNP/PCI CONFIGURATION AWARD SOFTWARE, INC.	
PNP OS Installed : No Resource Controlled By : Auto Reset Configuration Data : Disabled	PCI IRQ Activated By : Level
ESC : Quit ↑ ↓ → ← : Select Item F1 : Help PU/PD +/- : Modify F5 : Old Values (Shift) F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults	

PNP OS Installed

If your operating system is a Plug-and-Play one, such as Windows NT, Windows 95, select Yes.

The options are: No (Default), Yes.

Resources Controlled By

If you set at Auto, the BIOS automatically arranges all system resources for you. If there exists conflict or you are not satisfy with the configuration, simply set all the resources listed in the above figure by selecting Manual.

The options are: Auto (default), Manual.

The manual options of IRQ- / DMA- assigned to are: Legacy ISA, PCI/ISA PnP.

Reset Configuration Data

When enabled, allows the system to clear the last BIOS configuration data and reset them with the default BIOS configuraton data.

The options are: Enabled, Disabled (default).

PCI IRQ Activated By

We suggest that you set this to its default configuration unless you are a qualified technician.

The options are: Level (Default), Edge.

Load BIOS Defaults

BIOS defaults contain the most appropriate values of the system parameters that allow minimum system performance. The OEM manufacturer may change the defaults through MODBIN before the binary image burns into the ROM.

Load Setup Defaults

Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.

Integrated Peripherals

ROM PCI/ISA BIOS (2A59GF09) INTEGRATED PERIPHERALS AWARD SOFTWARE, INC.	
IDE HDD Block Mode	: Enabled
IDE Primary Master PIO	: Auto
IDE Primary Slave PIO	: Auto
IDE Secondary Master PIO	: Auto
IDE Secondary Slave PIO	: Auto
On-Chip Primary PCI IDE	: Enabled
On-Chip Secondary PCI IDE	: Enabled
USB Controller	: Enabled
Onboard FDD Controller	: Enabled
Onboard Serial Port 1	: 3F8/IRQ4
Onboard Serial Port 2	: 2F8/IRQ3
UART 2 Mode	: Standard
Onboard Parallel Port	: 378H/IRQ7
Onboard Parallel Mode	: SPP
ESC : Quit ↑ ↓ → ← : Select Item F1 : Help PU/PD +/- : Modify F5 : Old Values (Shift) F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults	

IDE HDD Block Mode

When enabled, allows the system to execute read/write requests to hard disk in block mode.

The options are: Enabled (Default), Disabled.

IDE Primary Master PIO

Allows an automatic or a manual configuration of the PCI primary IDE hard disk (master) mode.

The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

IDE Primary Slave PIO

Allows an automatic or a manual configuration of the PCI primary IDE hard disk (slave) mode.

The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

IDE Secondary Master PIO

Allows an automatic or a manual configuration of the PCI secondary IDE hard disk (master) mode.

The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

IDE Secondary Slave PIO

Allows an automatic or a manual configuration of the PCI secondary IDE hard disk (slave) mode.

The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

On-Chip Primary PCI IDE

When enabled, allows you to use the onboard primary PCI IDE.
The available options are: Enabled (Default), Disabled.

On-Chip Secondary PCI IDE

When enabled, allows you to use the onboard secondary PCI IDE.
The options are: Enabled (Default), Disabled.

USB Controller

If you do not use the onboard USB feature, this option allows you to disable it.
The options are: Enabled, Disabled (Default).

Onboard FDD Controller

When enabled, the floppy diskette drive (FDD) controller is activated.
The options are: Enabled (Default), Disabled.

Onboard Serial Port 1

If the serial port 1 uses the onboard I/O controller, you can modify your serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed.
The options are: 3F8/IRQ4 (Default), 3F8/IRQ4, 2E8/IRQ3, 2F8/IRQ3, Disabled.

Onboard Serial Port 2

If the serial port 2 uses the onboard I/O controller, you can modify your serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed.
The options are: 2F8/IRQ3 (Default), 3E8/IRQ4, 2E8/IRQ3, 3F8/IRQ4, Disabled.

Onboard Parallel Port

Allows you to select from a given set of parameters if the parallel port uses the onboard I/O controller.
The options are: 378H/IRQ7 (Default), 278H/IRQ5, 3BCH/IRQ7, Disabled.

UART 2 Mode

Allows you to select the IR modes if the serial port 2 is used as an IR port.
Set at Standard, if you use COM2 as the serial port as the serial port, instead as an IR port.
The options are: HPSIR, ASKIR, Standard (Default).

IR Function Duplex

This feature allows you to select the infrared data transaction way.
The options are: Half (Default), Full, HPKIR, ASKIR.

RxD , TxD Active

The feature allows you to select the active signals of the reception end and the transmission end. This is for technician use only.
The options are: Hi, Hi (Default); Hi, Lo; Lo, HI; Lo, Lo.

Onboard Parallel Port

Select from a given set of parameters if the parallel port uses the onboard I/O controller.
The options are: Disabled, 278H/IRQ5, 3BCH/IRQ7, 378H/IRQ7 (Default).

Onboard Parallel Mode

Allows you to connect with an advanced printer. Select SPP for standard parallel port (SPP) used on IBM PC/XT, PC/AT and bi-directional parallel port found on PS/2 system. Select Extended for extended parallel port. Select EPP Mode for enhanced parallel port. Select ECP Mode for Microsoft and HP Extended Capabilities Parallel Port. Select ECP+EPP Mode for both ECP and EPP Modes ports.
The options are: SPP (Default), Extended, EPP Mode, ECP Mode, ECP+EPP Mode.

ECP Mode Use DMA

If you select ECP mode to be the parallel port mode, this feature allows you to select Direct Memory Access (DMA) channel.
The options are: 3 (Default), 1.

Parallel Port EPP Type

If you select EPP/SPP mode to be the parallel port mode, this feature allows you to select the EPP type version.
The options are: EPP1.9 (Default), EPP1.7.

Supervisor/User Password

To enable the Supervisor/User passwords, select the item from the Standard CMOS Setup. You will be prompted to create your own password. Type your password up to eight characters and press <<Enter>>. You will be asked to confirm the password. Type the password again and press <<Enter>>. You may also press <<Esc>> to abort the selection and not enter a password. To disable password, press <<Enter>> when you are prompted to enter password. A message appears, confirming the password is disabled.

Under the BIOS Feature Setup if System is selected under the Security Option field and the Supervisor Password is enabled, you will be prompted for the Supervisor Password every time you try to enter the CMOS Setup Utility. If System is selected and the User Password is enabled, you will be requested to enter the User Password every time you reboot the system. If Setup is selected under the Security Option field and the User Password is enabled, you will be prompted only when you reboot the system.

IDE HDD Auto Detection

ROM PCI/ISA BIOS (2A5L9F09) STANDARD CMOS SETUP AWARD SOFTWARE, INC.								
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master :								
Select Primary Master Option (N=Skip) : N								
OPTIONS	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE	
2 (Y)	851	825	32	0	1650	63	LBA	
1	852	1651	16	65535	1650	63	NORMAL	
3	851	825	32	65535	1650	63	LARGE	

Note : Some OSes (like SCO-UNIX) must use "NORMAL" for installation

The IDE Hard Disk Drive Auto Detection feature automatically configures your new hard disk. Use it for a quick configuration of new hard drives. This feature allows you to set the parameters of up to four IDE HDDs. The option with (Y) are recommended by the system BIOS. You may also keys in your own parameters instead of setting by the system BIOS. After all settings, press Esc key to return the main menu. For confirmation, enter the Standard CMOS Setup feature.

Save and Exit Setup

ROM PCI/ISA BIOS (2A59GF09) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP PNP/PCI CONFIGURATION LOAD BIOS	INTEGRATED PERIPHERALS SUPERVISOR PASSWORD USER PASSWORD IDE HDD AUTO DETECTION SAVE & EXIT SETUP
SAVE to CMOS and EXIT (Y/N)? Y	
LOAD SETUP DEFAULTS	
ESC : Quit F10 : Save & Exit Setup	↑ ↓ → ← : Select Item (Shift) F2 : Change Color
SAVE DATA TO CMOS and EXIT SETUP	

After you have made changes under Setup, press <<Esc>> to return to the main menu. Move cursor to Save and Exit Setup or press F10 and then press Y to change the CMOS Setup. If you did not change anything, press <<Esc>> again or move cursor to Exit Without Saving and press Y to retain the Setup settings. The following message will appear at the center of the screen to allow you to save data to CMOS and exit the setup utility: SAVE to CMOS and EXIT (Y/N)?

Exit Without Saving

If you select this feature, the following message will appear at the center of the screen to allow you to exit the setup utility without saving CMOS modifications: Quit Without Saving (Y/N)?

NOTE : Default values of the various Setup items on this chapter may not necessarily be the same ones shown on your screen.