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### **Version 3.0**

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# Chapter 1: Introduction

## Welcome

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Congratulations on your purchase of the P6SEP-Me mainboard. The P6SEP-Me mainboard is a micro-ATX board measuring 243.8 mm by 200 mm and using a 4-layer printed circuit board. This board features a PGA370 ZIF (Zero Insertion Force) processor socket. This socket can be installed with the latest generation of Intel Celeron processors that are packaged in a Plastic Pin Grid Array (PPGA), just like the original Pentium processors. The mainboard supports a system bus speeds of 100 MHz so you can use high-performance PC-100 memory. The mainboard has integrated 2D/3D graphics, and integrated 3D audio, so a usable system can be created with the addition of just memory modules and a Celeron processor.

This chapter contains the following information:

- **About the Manual** explains how the information in this manual is organized
- **Checklist** comprises a list of the standard and optional components that are shipped with this mainboard,
- **Features** highlights the functions and components that make this one of the best value mainboards on the market

## About the Manual

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The manual consists of the following chapters:

### *Introduction*

Use the **Introduction** Chapter to learn about the features of the mainboard, and the checklist of items that are shipped with the package.

### *Installation*

Use the **Installation** Chapter to learn how to install the mainboard and get your system up and running.

### *Setup*

Use the **Setup** Chapter to configure the mainboard for optimum performance.

### ***Software***

Use the **Software** Chapter to learn how to use the software drivers and support programs that are provided with this mainboard.

## **Checklist**

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Compare the contents of your mainboard package with the standard checklist below. If any item is missing or appears damaged, please contact the vendor of your mainboard package.

### **Standard Items**

- ✓ 1 x P6SEP-Me Mainboard
- ✓ 1 x Cable/Bracket Pack
  - Diskette drive ribbon cable
  - IDE drive ribbon cable
- ✓ This User's Manual
- ✓ Software Support CD-ROM Disc

### **Optional Items**

- 1 x V 9.0 Fax/Modem Card

## **Features**

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This is a powerful platform that combines the low-cost/high-performance features of the new generation of Celeron processors with a 100 MHz system bus so that you can utilize high-performance PC-100 memory modules.

### ***Low-cost/high-performance Processing***

Intel's new generation of Celeron processors are shipped in the familiar PPGA square plastic package that are common to all Pentium and Pentium-compatible processors. The mainboard has a PGA370 ZIF socket for the installation of the Celeron. (*Note that the socket has a different pinout than Pentium/Pentium compatibles and cannot be used by Socket-7 processors.*) The Celeron processor features Pentium-II performance with internal clock speeds of 300, 333, 366, 400, 433, 466 and 500 MHz, 32K of level-1 cache memory, and 128K of level-2 cache memory. This mainboard allows entry-level and business-class users to move up to Pentium-II performance at minimum cost. Configuration for different processor speeds is automatically set by firmware and motherboard switch or jumper settings are not required.

### ***High-performance Memory***

The board has three DIMM sockets for the installation of 168-pin, 3.3V non-buffered DIMM memory modules. The DIMM memory modules must be installed with SDRAM memory chips. The board supports a memory bus of 100 MHz, so you must install high-performance PC-100 memory modules. Each installed memory module can be populated with 16 MB up to 512 MB of memory, so a total of 1.5 GB of memory can be installed. The integrated video system uses a shared memory architecture so that you must reserve some of the installed memory as video memory using the system BIOS. You must install at least one memory module, and the first memory module is installed in DIMM1.

### ***Highly Integrated Design***

This mainboard features a high level of integrated functions provided by the onboard chipsets. The SiS 620 Pentium-II PCI/AGP/3D VGA chipset provides all the north bridge support – Pentium-II CPU and memory addressing, integrated DRAM controller, PCI-IDE controller, AGP 3D graphics sub-system, and PCI-bus interface. The SiS 5595 provides the south bridge support – ACPI-compliant power management, real-time clock, and USB interface. The Winbond W83877TF is a single chip I/O solution, and the CMI8738 provides the onboard 3D audio feature. This highly integrated mainboard ensures stability and allows a fully functional system to be created by adding just a processor and memory.

### ***Built-in AGP 3D-Graphics***

This mainboard features a built-in 3D-graphics controller integrated in the SIS 620 chipset. The graphics controller uses a shared memory architecture that allows it use either 2 MB, 4 MB, or 8 MB of the system's main memory. The graphics controller has hardware accelerators for both 3D and 2D graphics and an MPEG decoder for DVD video playback. The graphics system will support extended high-resolution displays up to 1600 x 1200. At an XGA resolution of 1024 x 768, the graphics system supports a color depth of 16 million colors.

### ***Built-in PCI 3D Sound***

The CMI8738 is a single chip solution for PCI-bus 3D audio. The chip provides Sound Blaster 16-bit-compatible audio, plus support for Microsoft's DirectSound 3D specification and Aureal A3D interface. The sound ports include jacks for speakers, microphone and stereo in, and a game/MIDI port. The audio system supports full duplex operation and drivers are available for WIN 95/98 and WIN NT 4.0. The audio system can output sound to 4 loudspeakers and also supports SPDIF 24-bit digital sound input and output.

### ***Optional Built-in Communications***

The mainboard has an integrated fax/modem connector. As an option, you can purchase a fax/modem extension bracket which connects the line and telephone RJ11

socket s to the board. The fax/modem supports the V.90 protocol that allows transmissions at up to 56Kbps and is fully compatible with earlier transmission and error correction standards. It supports automatic fall back and caller ID.

### ***Solid Expansion Options***

Because this is a highly integrated board with built-in audio and a full set of I/O ports, it does not require a full set of expansion slots. The board provides three usable slots. The board has three 32-bit PCI slots and one 8/16-bit ISA slot. The ISA slot is shared with one of the PCI slots meaning that you can use either the ISA slot or the PCI slot, but not both at the same time.

### ***Integrated I/O***

Using the Winbond W83877TF I/O chip and the SiS 620 chipset, the board has a comprehensive set of integrated I/O ports. The I/O port array features PS/2 keyboard and mouse ports, a parallel port, two USB ports, one serial port, a monitor port, a game/MIDI port, and three audio jacks. Optionally, you can use the built-in mainboard headers to add in an infrared port or a second serial port. The mainboard has two PCI-IDE channels and a floppy disk drive interface.

### ***Keyboard Power On Feature***

Using the system BIOS setup program, you can configure the system to turn on using a keyboard-typed password. A green keyboard is not required.

### ***Programmable Firmware***

The mainboard includes Award BIOS which allows BIOS setting of CPU parameters. The fully programmable firmware enhances the system features and allows users to set power management, CPU and memory timing, LAN and modem wake-up alarms, and so on. The firmware can also be used to set parameters for different Celeron processor clock speeds so that you don't need to change mainboard jumpers and switches.

## Chapter 2: Installation

### Before You Begin

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Before you begin to install your P6SEP-Me mainboard, take some precautions to ensure that you avoid the possibility of damage to the product from static electricity. Ensure too that you are installing the mainboard into a suitable case.

#### ***Static Electricity***

In adverse conditions, static electricity can accumulate and discharge through the integrated circuits and silicon chips on this product. These circuits and chips are sensitive and can be permanently damaged by static discharge.

- ◆ If possible wear a grounding wrist strap clipped to a safely grounded device during the installation.
- ◆ If you don't have a wrist strap, discharge any static by touching the metal case of a safely grounded device before beginning the installation.
- ◆ Leave all components inside their static-proof bags until they are required for the installation procedure.
- ◆ Handle all circuit boards and electronic components carefully. Hold boards by the edges only. Do not flex or stress circuit boards.

#### ***Choosing a Case***

The P6SEP-Me mainboard complies with the specifications for a micro-ATX board. The micro-ATX format features small size, fewer expansion slots and smaller power consumption, so that the system case is less expensive. You can also install this kind of board into a full-size ATX case.

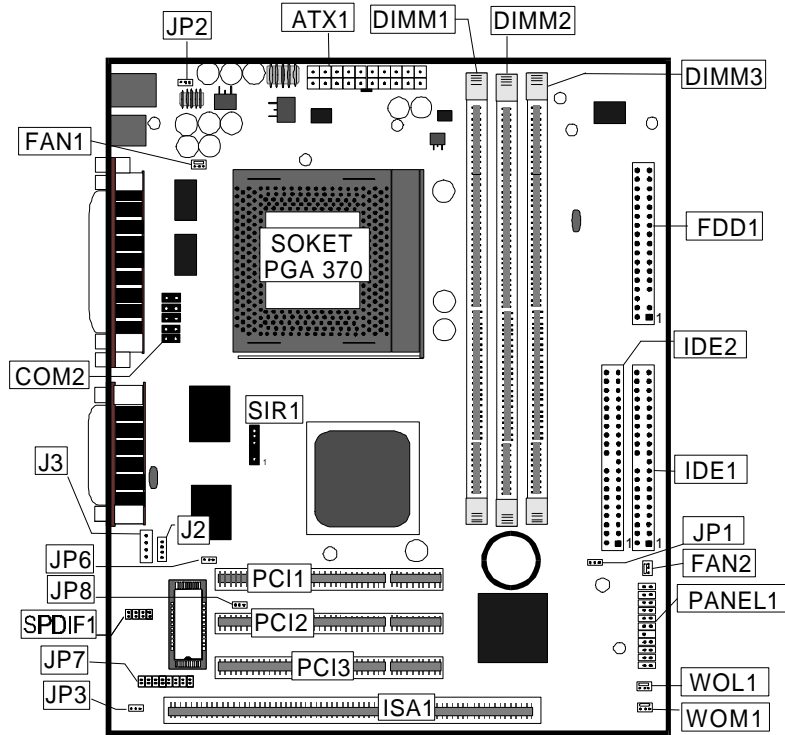
Some features on the mainboard are implemented by cabling connectors on the mainboard to indicators and switches on the system case. Ensure that your case supports all the features required. The P6SEP-Me mainboard can support one or two floppy diskette drives and four enhanced IDE drives. Ensure that your case has sufficient power and space for all the drives that you intend to install.

The mainboard has a set of I/O ports on the rear edge. Ensure that your case has an I/O template that supports the I/O ports and expansion slots.



## Mainboard Guide

Use the following illustration and key to identify the components on your mainboard.

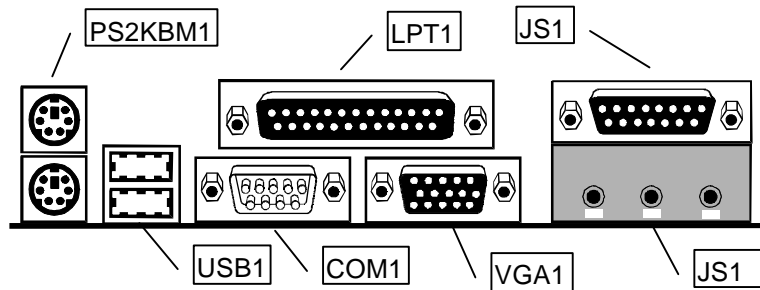


### Key to Mainboard Components

Component	Description
ISA1	1 x 8/16-bit ISA expansion slots
PCI 1,2,3	3 x 32-bit PCI expansion slots
SOCKET PGA 370	Processor socket for Celeron processor
DIMMs 1, 2, 3	Slots for 168-pin memory module
FDD1	Connector for floppy disk drives
IDE1, IDE2	Primary and secondary IDE channels
ATX1	Connector for ATX power supply
SIR1	Connector for optional infrared port
PANEL1	Panel connector for switches and indicators
FAN1	Power connector for CPU cooling fan
FAN2	Power connector for case cooling fan
WOM1	Connector for modem wake up
WOL1	Connector for LAN wake up
SPDIF	SPDIF In/out connector (professional 24-bit digital audio interface)

COM2	Connector for optional second serial port
J2	Auxiliary audio connector for optional CD-ROM drive
J3	Audio connector for optional CD-ROM drive
JP1	Clear CMOS memory jumper
JP2	Keyboard power on jumper
JP3	Flash BIOS enable/disable jumper
JP6	Audio enable/disable jumper
JP7	Connector for fax/modem adapter card
JP8	Enable/disable onboard modem jumper

Side View of the Input/Output Ports



**Key to I/O Ports**

Component	Description
PS2KBM1	PS/2 port for pointing device (upper port) PS/2 port for keyboard (lower port)
LPT1	External parallel port
JS1 (Upper)	External game/MIDI port
JS1 (Lower)	Audio jacks for (from left to right) line out, line in, microphone
VGA1	External monitor port
COM1	External serial port 1/3
USB1	Two stacked Universal Serial Bus ports

## Preparing the Mainboard

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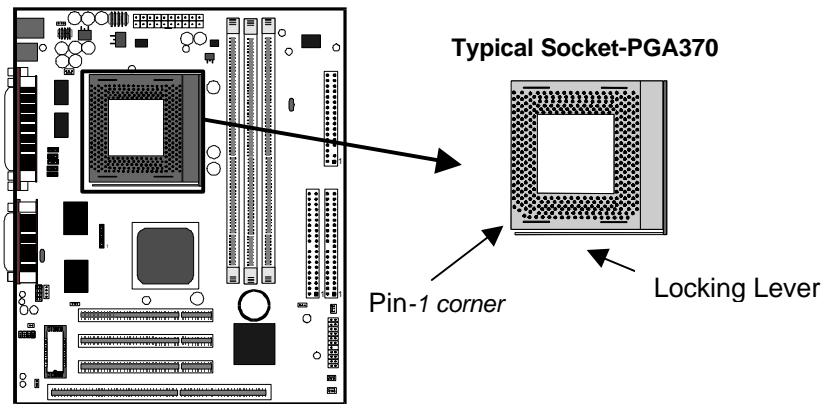
Prepare the main board by installing the Celeron Pentium-II processor and then installing either 1, 2 or 3 memory modules. This board supports the new generation Celeron processor that is packaged in a Plastic Pin Grid Array (PPGA) designed to fit the PGA370 ZIF socket on the mainboard. You can use a Celeron that runs at either 300, 333, 366, 400 or 500 MHz. Next, install one or more memory modules. Finally, review all the important jumper settings to ensure that the board is configured correctly.

### ***Install the Processor***

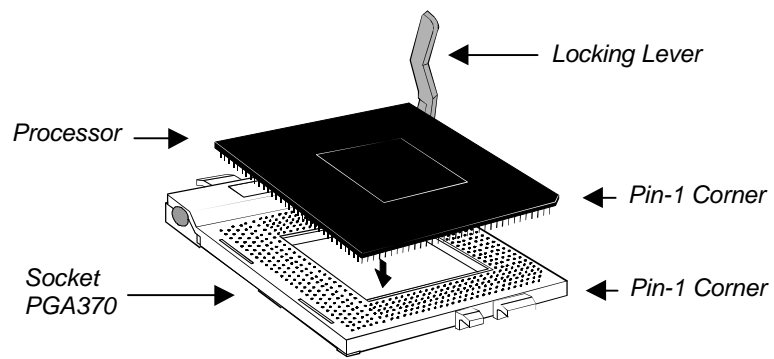
This mainboard is installed with a PGA370 ZIF processor socket. This socket will only support the PPGA Celeron processor. ***Do not try to insert a socket-7 processor such as a Pentium or Pentium-compatible processor.*** The Celeron processors all run over a 66 MHz system bus and have internal clock speeds ranging from 300 to 433 MHz. Configuration of the processor is made automatically using the mainboard BIOS (see the Setup chapter).

Follow the steps below to install the Celeron processor in the PGA370 socket.

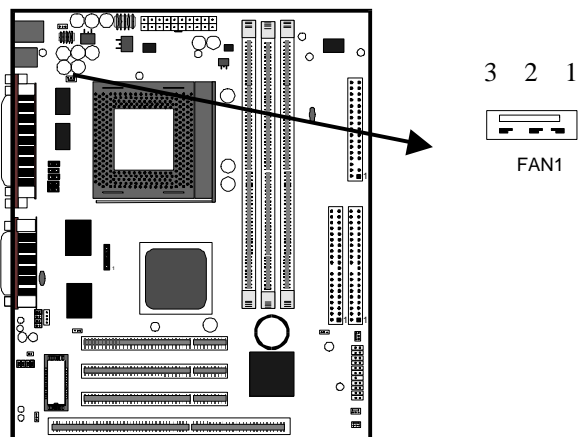
1. Locate the zero insertion force (ZIF) PGA370 socket for the processor.



2. On the socket and on the processor, identify the pin 1 corner. You can identify the pin 1 corner by noting that in the rectangular matrix of holes on the socket, one hole is absent on two corners. The front corner with the absent hole is the pin-1 corner. On the processor, the pin-1 corner is beveled (see the illustration below).
3. Push the socket locking lever away from the socket to unhook it. Swing the lever into the upright position.
4. Insert the processor into the socket taking care that you have matched the pin 1 corners. No force is required, and the processor should seat smoothly into the socket.



5. Swing the locking lever down and hook it under the latch on the side of the socket to lock it in place.
6. Locate the power connector for the processor cooling fan FAN1. If your processor has a cooling fan installed, connect the cable from the cooling fan to FAN1.

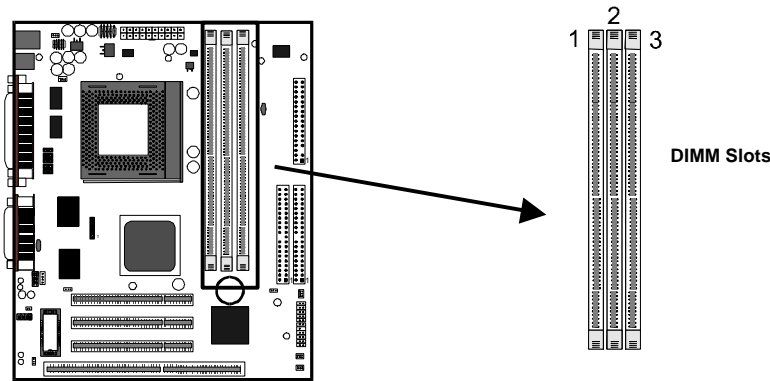


### ***Install the Memory Modules***

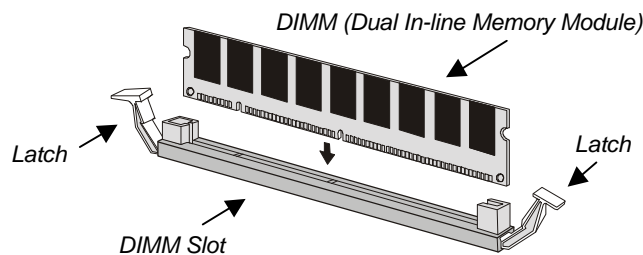
For this mainboard, you must use 168-pin 3.3V non-buffered Dual In-line Memory Modules (DIMMs). The memory chips must be SDRAM (Synchronous Dynamic Random Access Memory). The memory bus can run from 66 MHz through to 100 MHz so you can either use inexpensive 66 MHz memory, or higher performance PC-100 memory. You can use memory modules that have a capacity of 16 MB up to 512 MB. Total installed memory can be up to 1.5 GB.

You must install at least one memory module and the first memory module should be installed in slot DIMM1, the second in slot DIMM2 and the third in slot DIMM3. You can use memory modules which have memory chips on just one side (single-sided) or memory chips on both sides (double-sided).

1. Locate the DIMM slots on the mainboard.



2. The DIMM slots are keyed with notches and the DIMMs are keyed with cut-outs so that they can only be installed correctly. Check that the cut-outs on the DIMM module edge connector match the notches in the DIMM slot.
3. Push the latches on each side of the DIMM slot down.
4. Install the DIMM module into the slot and press it carefully but firmly down so that it seats correctly. The latches at either side of the slot will be levered upwards and latch on to the edges of the DIMM when it is installed correctly.



### **Check all the Jumper Settings**

Check all the mainboard jumpers to ensure that the board is configured correctly.

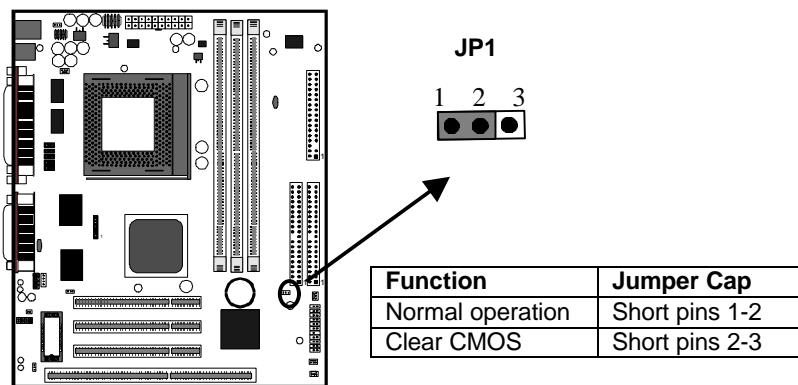
#### ***A Note on Jumpers***

*A jumper consists of two or more pins mounted on the mainboard. Some jumpers might be arranged in a series with each pair of pins numbered differently.*

*Jumpers are used to change the electronic circuits on the mainboard. When a jumper cap is placed on two jumper pins, the pins are **SHORT**. If the jumper cap is removed (or placed on just a single pin) the pins are **OPEN**.*

### **JP1: Clear CMOS Memory Jumper**

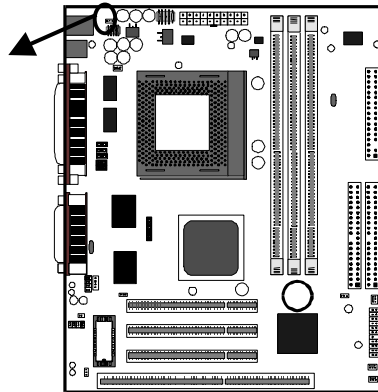
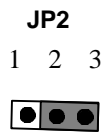
This jumper lets you erase the system setup settings that are stored in CMOS memory. You might need to erase this data if incorrect settings are preventing your system from operating. To clear the CMOS memory, turn off the system, disconnect the power cable from the mainboard, and short the appropriate pins for a few seconds.



### JP2: Keyboard Power On Jumper

This jumper lets you use a typed-in password as a power switch to turn your system on. If you enable this property, you need to define the password or the hot keys using the setup utility. See Chapter 3 for more information.

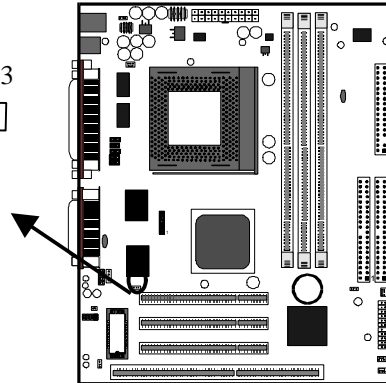
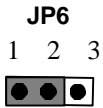
Function	Jumper Cap
Enable keyboard power on	Short pins 2-3
Disable keyboard power on	Short pins 1-2



### JP6: Audio System Enable/disable Jumper

This jumper lets you enable or disable the audio system that is integrated on the mainboard. You must disable the audio system if you install an alternative sound card using one of the expansion slots.

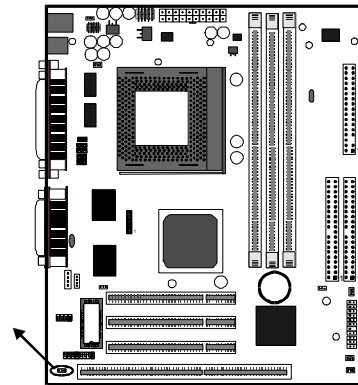
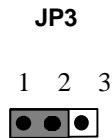
Function	Jumper Cap
Enable audio	Short Pins 1-2
Disable audio	Short pins 2-3



### JP3: Flash BIOS Enable/Disable Jumper

The BIOS on this mainboard is stored on an Erasable Programmable Read Only Memory (EPROM) chip. This means that you can erase the current BIOS and install an updated BIOS whenever new upgrades are released. See Chapter 4 for information on using the Flash BIOS utility. Before erasing the old BIOS and flashing a new BIOS, you must set JP3 to Enable. After the new BIOS is installed, set JP3 to Disable so that the BIOS cannot be erased by accident.

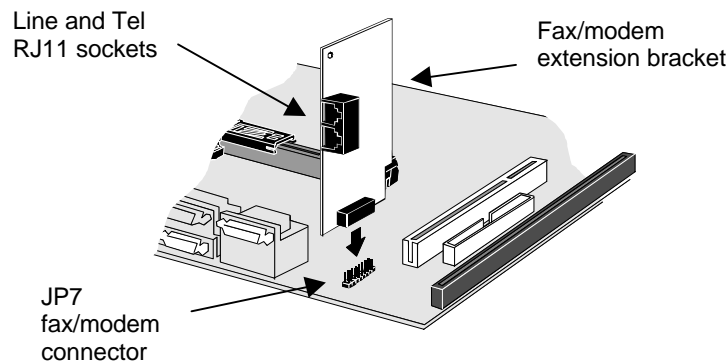
Function	Jumper Cap
Enable Flash BIOS	Short Pins 1-2
Disable Flash BIOS	Short pins 2-3



### JP7: Fax/modem Extension Bracket

The fax/modem extension bracket is supplied with this mainboard.

1. Locate the JP7 fax/modem connector on the mainboard.
2. Remove the expansion slot blanking plate from the system chassis that is adjacent to the fax/modem connector.
3. Install the fax/modem extension bracket on to the MDM1 connector as shown below. The RJ11 Line and Telephone sockets on the bracket are positioned in the expansion slot with the removed blanking plate.

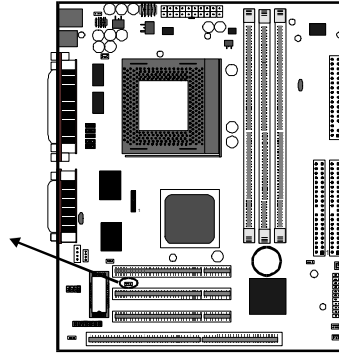
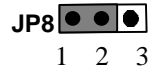




**JP8: Modem enable/disable jumper**

Use this 3-pin jumper to enable or disable the built-in fax/modem.

Function	Jumper Cap
Enable onboard modem	Short pins 1-2
Disable onboard modem	Short pins 2-3



## Install the Mainboard in the System Case

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Use the screws and mounting brackets supplied with your system case to install the mainboard. Follow the instructions provided by the case manufacturer.

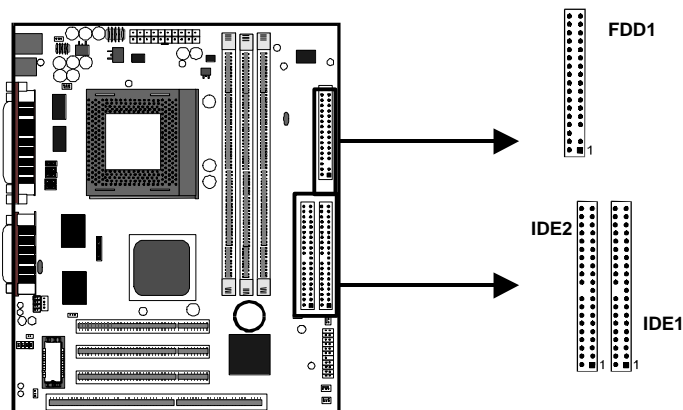
### Connect Devices, Switches and Indicators to the Mainboard

*Note:* You might not need to carry out every step in the following procedure. It depends on the options you are installing, and the features that are supported by your system case.

*Note:* Ribbon cable connectors are usually keyed so that they can only be installed correctly. If the connector is not keyed make sure that you match the pin-1 side of the cable connector with the pin-1 side of the device connector. Each connector has the pin-1 side clearly marked. The pin-1 side of each ribbon cable is always marked with a red stripe on the cable.

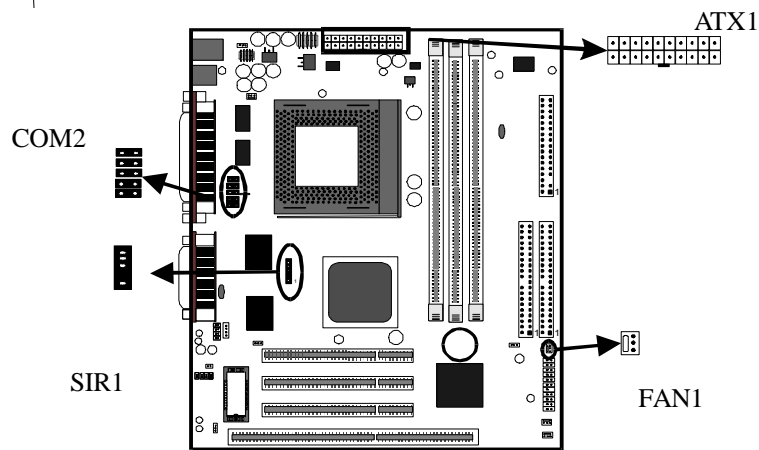
#### Part One – Internal Connections

1. Locate the floppy diskette drive connector FDD1. Use the ribbon cable to connect one or two floppy diskettes to the mainboard.
2. Locate the Enhanced IDE connectors IDE1 (primary) and IDE2 (secondary). A single IDE cable is provided with the mainboard. Connect the cable to IDE1. The cable has two connectors for IDE devices. If you connect two devices, you must configure one device as Master, and one device as Slave. See the documentation provided with the devices for information on this. To install more drives, use another IDE cable and connect one or two devices to IDE2.



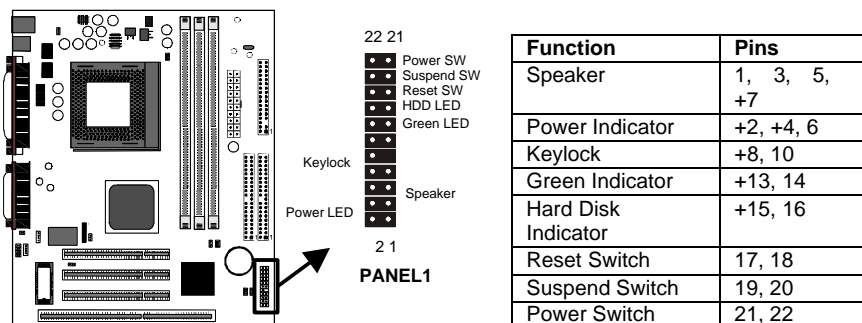
3. Locate the power connector ATX1. Connect the power cable from the power supply unit to ATX1. The connector is keyed so that it can only be installed correctly.

4. If your system case has a built-in cooling fan, you can supply power to the fan from the case fan power connector FAN1. Connect the power cable from the fan to FAN1.
5. If you want to install an optional Serial Infrared Port, connect the cable from the optional IR port to the SIR1 connector on the mainboard.
6. If you want to install a second serial port (COM2) locate the connector COM2 on the mainboard and connect it to the optional serial port.

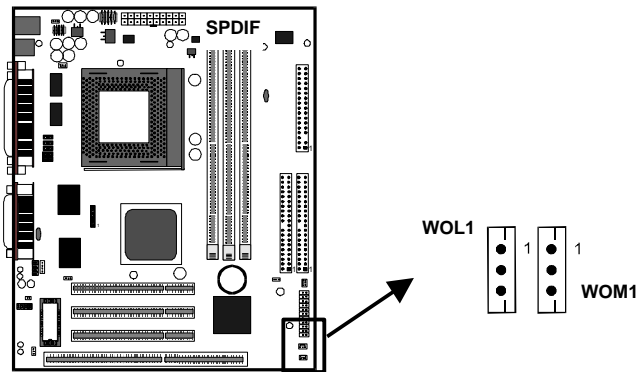


*Note: An infrared port (SIR1) and a second serial port (COM2) share the same resources. If you install both of these options, you cannot use them both at the same time. Use the setup utility to configure the system to use either the infrared port or the second serial port. See Chapter 3 for more information.*

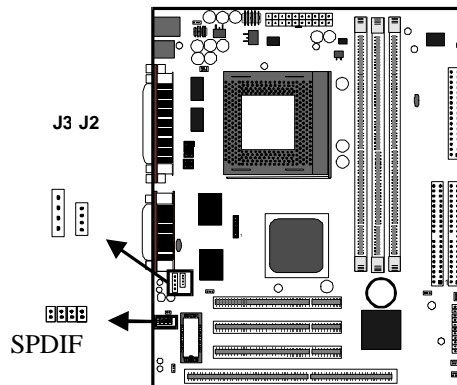
7. Locate the bank of switch and indicator connectors PANEL1. These connectors provide control functions to your system case. Use the table below to make the connections.



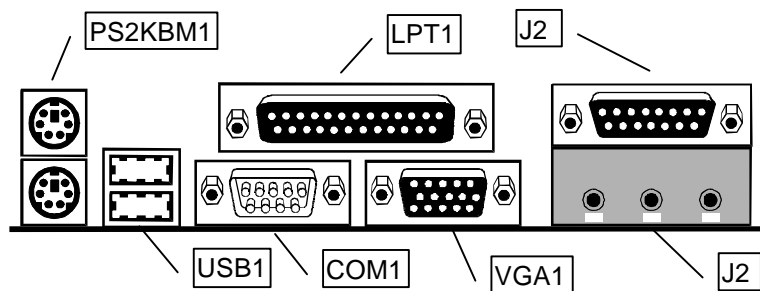
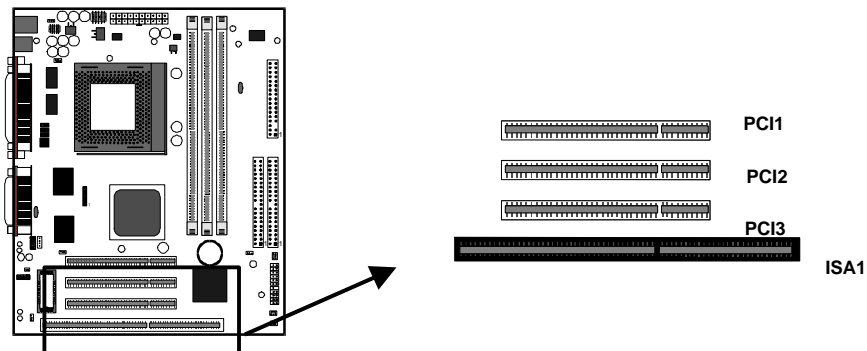
- The mainboard has wake up connectors for an optional network adapter or an optional internal fax/modem card. If you have installed a network adapter expansion card, connect it to the wake on LAN connector WOL1. If you have installed an internal fax/modem expansion card, connect it to the wake on modem connector WOM1.



- The mainboard has three audio connectors. J3 is a 4-pin audio connector which can be used to input the audio from a CD-ROM or DVD drive. J2 is exactly the same, except that it supports an alternative kind of connector. Use either J3 or J2 to connect your CD/DVD drive audio output. If you have installed a device which supports 24-bit SPDIF digital audio, you can connect the device to the SPDIF input/output connector SPDIF.



10. Locate the three 32-bit PCI expansion slots and the 8/16 bit ISA expansion slot. Install optional 32-bit PCI cards into the PCI slots. Install an optional 8/16-bit card into the ISA slot. The ISA slot is shared with the PCI3 slot just above it. This means that you can only use one of these slots, but not both together.



1. PS2KBM1 is a stack of two PS/2 mini-DIN ports. The upper port can be used by a PS/2 mouse or pointing device. The lower port can be used by a PS/2 keyboard.
2. LPT1 is a parallel port that can be used by printers or other parallel communications devices. The system identifies the parallel port as LPT1.
3. The upper 15-pin port J2 is a game/MIDI port. You can use this port to connect a joystick or a MIDI device to your system.
4. The lower part of J2 is three audio jacks. The left side jack is for a stereo line out signal. The middle jack is for a stereo line in signal. The right side jack is for a microphone.
5. VGA1 is an external monitor port. Use this port to connect your system to a monitor that supports VGA or extended VGA resolutions.
6. COM1 is a serial port that can be used by serial devices such as a mouse, a fax/modem and so on. This serial port is identified by the system as COM1/3.
7. USB1 is a stack of two Universal Serial Bus ports. Use these ports to connect to USB devices.

## Chapter 3: Setup

### About the Setup Utility

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This chapter explains how to use and modify the BIOS setup utility that is stored on the mainboard. The setup utility stores information about the mainboard components, and the configuration of other devices that are connected to it. The system uses this information to test and initialize components when it is started up, and to make sure everything runs properly when the system is operating.

The setup utility is installed with a set of default values. The default values are designed to ensure that the system will operate adequately. You will probably have to make changes to the setup utility whenever you add new components to your system such as new disk drives. You may be able to generate increased performance by changing some of the timing values in the setup, but this can be limited by the kind of hardware you are using, for example the rating of your memory chips. In certain circumstances, the system may generate an error message which asks you to make changes to the setup utility. This happens when the system finds an error during the POST (power on self test) that it carries out at start up.

#### ***Starting the Setup Utility***

You can only start the setup utility shortly after the computer has been turned on. A prompt appears on the computer display which says “*Press DEL to run Setup*”. When you see this prompt, press the **Delete** key, and the system will start the setup utility and display the main menu of the utility.

#### ***Using the Setup Utility***

When you press the **Delete** key to start setup, the main menu of the utility appears.

The main menu of the setup utility shows a list of the options that are available in the utility. A highlight shows which option is currently selected. You can use the cursor arrow keys to move the highlight to other options. When an option is highlighted, you can execute the option by pressing the **Enter** key.

Some options lead to dialog boxes which ask you verify that that you wish to execute that option. You usually answer these dialogs by typing **Y** for yes and **N** for no.

Some options lead to dialog boxes which ask for more information. Setting the User Password or Supervisor Password have this kind of dialog box.

ROM PCI/ISA BIOS (P6SEP-ME)  
 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 SETTINGS	
Esc : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	(Shift)F2 : Change Color

Some options lead to tables of items. These items usually have a value on the right side. The value of the first item is highlighted, and you can use the cursor arrow keys to select any of the other values in the table of items. When an item is highlighted, you can change the value by pressing the **PageUp** or **PageDown** keys, or the **Plus** or **Minus** keys. The **PageUp** and **Plus** keys cycle forward through the available values, the **PageDown** and **Minus** keys cycle backwards through the values.

When you are in the main menu, you can exit the utility by pressing the **Escape** key. You can save the current selections and exit the utility by pressing the **F10** key. You can change the color scheme of the utility by pressing the **F2** key while holding down the **Shift** key.

When you are in one of the options that displays a dialog box, you can return to the main menu by pressing the **Escape** key.

When you are in one of the options that displays a table of items, you can return to the main menu by pressing the **Escape** key. For some items, you can display a help message by pressing the **F1** key. You can change the color scheme of the utility by pressing the **F2** key while holding down the **Shift** key. You can press **F5** to discard any changes you have made and return all items to the value that they held when the setup utility was started. You can press **F6** to load the displayed items with a standard list of default values. You can press **F7** to load the displayed items with a high-performance list of default values.

## Standard CMOS Setup Option

This option displays a table of items which defines basic information about your system.

```
ROM PCI/ISA BIOS (P6SEP-ME)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.
```

Date (mm:dd:yy) : Thu, Jan 7 1999								
Time (hh:mm:ss) : 10 : 55 : 53								
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	:	0	0	0	0	0	0	0 NORMAL
Primary Slave	:	0	0	0	0	0	0	0 NORMAL
Secondary Master	:	0	0	0	0	0	0	0 NORMAL
Secondary Slave	:	0	0	0	0	0	0	0 NORMAL
Drive A : 1.44M, 3.5 in.								
Drive B : None								
Floppy 3 Mode Support : Disabled								
Video : EGA/UGA								
Halt On : All Errors								
ESC : Quit		↑ ↓ → ← : Select Item			PU/PD/+/- : Modify			
F1 : Help		(Shift)F2 : Change Color						

### **Date and Time**

The Date and Time items show the current date and time held by your computer. If you are running a Windows operating system, these items will automatically be updated whenever you make changes to the Windows Date and Time Properties utility.

### **Hard Disks**

### **Defaults: None**

These items show the characteristics of any hard disk drives on the four available IDE channels. (Note that SCSI hard disk drives do not appear here.) You can automatically install most modern hard disks using the IDE HDD Auto Detect Option from the main menu. However, if you find that a drive cannot be automatically detected, you can use these items to select USER, and then manually enter the characteristics of the drive. The documentation provided with your drive provides the data you need to fill in the values for CYLS (cylinders), HEAD (read/write heads), and so on.

The documentation provided with the drive may not tell you what value to use under the MODE heading. If the drive is smaller than 528 MB, set MODE to Normal. If the drive is larger than 528 MB and it supports Logical Block Addressing, set MODE to LBA. Very few high-capacity drives do not support Logical Block Addressing. If you have such a drive, you might be able to configure it by setting the MODE to Large. If you're not sure which MODE setting is required by your drive, set MODE to Auto and let the setup utility try to determine the mode automatically.



---

**Drive A and Drive B****Default: 1.44M, 3.5 in., None**

These items define the characteristics of any diskette drive attached to the system. You can connect one or two diskette drives.

---

**Floppy 3 Mode Support****Default: Disabled**

Floppy 3 mode refers to a 3.5" diskette with a capacity of 1.2 MB. Floppy 3 mode is sometimes used in Japan.

---

**Video****Default: EGA/VGA**

This item defines the video mode of the system. This mainboard has a built-in VGA graphics system so you must leave this item at the default value.

---

**Halt On****Default: All Errors**

This item defines the operation of the system POST (Power On Self Test) routine. You can use this item to select which kind of errors in the POST are sufficient to halt the system.

---

## BIOS Feature Setup Option

---

This option displays a table of items which defines more advanced information about your system. You can make modifications to most of these items without introducing fatal errors to your system.

ROM PCI/ISA BIOS (P6SEP-ME)  
BIOS FEATURES SETUP  
AWARD SOFTWARE, INC.

CPU Internal Core Speed	: 300MHz	Report No FDD For WIN 95	: Yes
Anti-Virus Protection	: Disabled	Video BIOS Shadow	: Enabled
CPU Internal Cache	: Enabled	C8000-CBFFF Shadow	: Disabled
External Cache	: Enabled	CC000-CFFFF Shadow	: Disabled
CPU L2 Cache ECC Checking	: Enabled	D0000-D3FFF Shadow	: Disabled
Quick Power On Self Test	: Enabled	D4000-D7FFF Shadow	: Disabled
Boot From LAN First	: Enabled	D8000-DBFFF Shadow	: Disabled
Boot Sequence	: A,C,SCSI	DC000-DFFFF Shadow	: Disabled
Swap Floppy Drive	: Disabled	CPU Clock Failed Reset	: Disabled
Boot Up NumLock Status	: On		
IDE 32-bit Transfer Mode	: Disabled		
Typeomatic Rate Setting	: Disabled		
Typeomatic Rate (Chars/Sec)	: 6		
Typeomatic Delay (Msec)	: 250		
Security Option	: Setup	ESC : Quit	↑↓+ : Select Item
PCI/VGA Palette Snoop	: Disabled	F1 : Help	PU/PD/+/- : Modify
OS Select For DRAM > 64MB	: Non-OS2	F5 : Old Values (Shift)F2 : Color	
HDD S.M.A.R.T. capability	: Disabled	F6 : Load BIOS Defaults	
		F7 : Load OPTIMUM Settings	

---

**CPU Internal Core Speed****Default: 300 MHz**

Use this item to automatically set up the mainboard for the kind of Celeron processor that you have installed. Set this item to the rated internal clock speed of the Celeron processor. If you set this to Manual, two new items appear: CPU Host Bus Frequency and CPU Frequency.

---

**Anti-Virus Protection** **Default: Disabled**

When this item is enabled it provides some protection against viruses which try to write to the boot sector and partition table of your hard disk drive. This item is disabled as a default so that you can install an operating system. We recommend that you enable Anti-Virus Protection as soon as you have installed your disk with an OS.

---

**CPU Internal Cache** **Default: Enabled**

All the Celeron processors that can be installed in this mainboard use internal (level 1) cache memory to improve performance. Leave this item at the default value Enabled for better performance.

---

**External Cache** **Default: Enabled**

All the Celeron processors that can be installed in this mainboard use external (level 2) cache memory to improve performance. Leave this item at the default value Enabled for better performance.

---

**CPU L2 Cache ECC Checking** **Default: Enabled**

When this item is enabled, it allows the system to carry out cache memory error checking if the cache memory chips support ECC (Error Correction Code).

---

**Quick Power On Self Test** **Default: Enabled**

You can enable this item to shorten the power on testing and have your system start up a little faster. You might like to enable this item after you are confident that your system hardware is operating smoothly.

---

**Boot From LAN First** **Default: Enabled**

Enable this item if the system is part of a network and you want the machine to remote boot an OS from a network server.

---

**Boot Sequence** **Default: A,C,SCSI**

This item defines where the system will look for an operating system, and the order of priority. You can boot an operating system from many locations including a SCSI device, a ZIP drive, a floppy diskette drive or an LS-120 high-capacity diskette drive.

---

**Swap Floppy Drive** **Default: Disabled**

If you have two floppy diskette drives in your system, this item allows you to swap around the assigned drive letters so that drive A becomes drive B, and drive B becomes drive A.

---

**Boot Up NumLock Status** **Default: On**

This item defines if the keyboard Num Lock key is active when your system is started.

---

**Typematic Rate Setting** **Default: Disabled**

If this item is enabled, you can use the following two items to set the typematic rate and the typematic delay settings for your keyboard.

---

**Typematic Rate (Chars/Sec)** **Default: 6**

If the item Typematic Rate Setting is enabled, you can use this item to define how many characters per second are generated by a held-down key.

---

**Typematic Delay (Msec)****Default: 250**

If the item Typematic Rate Setting is enabled, you can use this item to define how many milliseconds must elapse before a held-down key begins generating repeat characters.

---

**Security Option****Default: Setup**

If you have installed password protection, this item defines if the password is required at system start up, or if it is only required when a user tries to enter the setup utility.

---

**PCI/VGA Palette Snoop****Default: Disabled**

This item is designed to overcome some problems that can be caused by some non-standard VGA cards. This board includes a built-in VGA system that does not require palette snooping so you must leave this item disabled.

---

**OS Select For DRAM > 64 MB****Default: Non-OS2**

This item is only required if you have installed more than 64 MB of memory and you are running the OS/2 operating system. Otherwise, leave this item at the default Non-OS2.

---

**HDD S.M.A.R.T capability****Default: Disabled**

SMART is an industry acronym for Self-monitoring, Analysis and Reporting Technology. If the documentation of your hard disk states that SMART is supported, you can enable this item.

---

**Report No FDD For WIN95****Default: Yes**

This item allows IRQ6 to be released for Windows 95 if floppy is absent.

---

**Video BIOS Shadow****Default: Enabled**

This item allows the video BIOS to be copied to system memory for faster performance.

---

**XXXXX-XXXXX Shadow****Default: Disabled**

These items allow the BIOS of other devices to be copied to system memory for faster performance.

## Chipset Features Option

This option displays a table of items that define critical timing parameters of the mainboard components including the CPU, the memory, and the system logic.

As a general rule, you should leave the items on this page at their default values unless you are very familiar with the technical specifications of your system hardware. If you change the values, or load the optimum settings, you may introduce fatal errors or recurring instability into your system. The item list below shows only the default values for some items.

ROM PCI/ISA BIOS (P6SEP-ME)  
CHIPSET FEATURES SETUP  
AWARD SOFTWARE, INC.

Auto Configuration : Enabled	DRAM Controller 1 T WR : Disabled
RAS Pulse Width Refresh : 6T	DRAM Controller 1 T RD : Disabled
RAS Precharge Time : 4T	Concurrent function(MEM): Disabled
RAS to CAS Delay : 4T	CPU Pipeline Control : Enabled
ISA Bus Clock Frequency : PCICLK/4	PCI Peer Concurrency : Enabled
Starting Point of Paging: 2T	PCI Delay Transaction : Enabled
SDRAM CAS Latency : 3T	Auto Detect DIMM/PCI Clk: Disabled
SDRAM WR Retire Rate : X-2-2-2	Spread Spectrum : Disabled
SDRAM Wait State Control: 1WS	
SDRAM Input Signals : Lead 0.0ns	
SDRAM Output Signals : Lead 0.0ns	
RAMW# Assertion Timing : 3T	
CPU to PCI Post Write : Disabled	
CPU to PCI Burst Mem. WR: Disabled	
System BIOS Cacheable : Enabled	
Video BIOS Cacheable : Enabled	
Memory Hole at 15M-16M : Disabled	
AGP Aperture Size : 64MB	
VGA Shared Memory Size : 8 MB	
	ESC : Quit      ↑↓←→ : Select Item
	F1 : Help      PU/PD/+/- : Modify
	F5 : Old Values (Shift)F2 : Color
	F6 : Load BIOS Defaults
	F7 : Load OPTIMUM Settings

---

### **Auto Configuration**

**Default: Enabled**

Leave this item at the default value enabled. Auto configuration installs preset default values for many of the timing parameters for the system.

---

### **RAS Pulse Width Refresh**

**Default: 6T**

### **RAS Precharge Time**

**Default: 4T**

### **RAS to CAS Delay**

**Default: 4T**

These items install the settings for the Row Address Strobe (RAS) and the Column Address Strobe (CAS). The RAS and CAS determine the timing of the system's access to the main memory. We recommend that you leave these items at the default values.

---

### **ISA Bus Clock Frequency**

**Default: PCICLK/4**

This item sets the timing for the ISA bus by dividing the frequency of the PCI bus. The PCI bus is usually set to 33 MHz, and we recommend that you divide this by four to set the ISA bus frequency.

---

**Starting Point of Paging** **Default: 2T**

This item controls the start timing of memory paging operations. We recommend that you leave this item at the default setting.

---

<b>SDRAM CAS Latency</b>	<b>Default: 3T</b>
<b>SDRAM WR Retire Rate</b>	<b>Default: X-2-2-2</b>
<b>SDRAM Wait State Control</b>	<b>Default: 1WS</b>
<b>SDRAM Input Signals</b>	<b>Default: Lead 0.0ns</b>
<b>SDRAM Output Signals</b>	<b>Default: Lead 0.0ns</b>

These items set the timing parameters for the installed SDRAM (Synchronous Dynamic Random Access Memory). We recommend that you leave these items at the default values.

---

**RAMW# Assertion Timing** **Default: 3T**

RAMW is an output signal to enable local memory writes. We recommend that you leave this item at the default value 3T.

---

**CPU to PCI Post Write** **Default: Disabled**

When this field is enabled, writes from the CPU to the PCI bus are buffered, to compensate for the difference in speed between the CPU and the PCI bus. When the item is Disabled, the writes are not buffered and the CPU must wait until the write is complete before starting another write cycle. We recommend that you leave this item at the default value Disabled.

---

**CPU to PCI Burst Mem. WR** **Default: Disabled**

When this item is enabled, the chipset is permitted to assemble long PCI bursts from the data held in its buffers. We recommend that you leave this item at the default value Disabled.

---

**System BIOS Cacheable** **Default: Enabled**

This item allows the system BIOS to be cached for faster performance. We recommend that you leave this item at the default value Enabled.

---

**Video BIOS Cacheable** **Default: Enabled**

This item allows the video BIOS to be cached for faster performance. We recommend that you leave this item at the default value Enabled.

---

**Memory Hole at 15M-16M** **Default: Disabled**

This item can be used to reserve memory space for some ISA cards that require it. We recommend that you leave this item at the default value Disabled.

---

**AGP Aperture Size** **Default: 64MB**

This item defines the size of the aperture if you use an AGP graphics adapter. It refers to a section of the PCI memory address range dedicated for graphics memory.

---

**VGA Shared Memory Size** **Default: 8MB**

This item defines how much of the main memory is reserved for use as video memory by the onboard graphics adapter. We recommend that you leave this item at the default value 4 MB.

---

<b>DRAM Controller 1 T WR</b>	<b>Default: Disabled</b>
<b>DRAM Controller 1 T RD</b>	<b>Default: Disabled</b>
<b>Concurrent function(MEM)</b>	<b>Default: Disabled</b>

These three items define the properties and the operation of the system memory controller. We recommend that you leave these items at the default value.

---

<b>CPU Pipeline Control</b>	<b>Default: Enabled</b>
-----------------------------	-------------------------

Pipelining allows the system controller to signal the CPU for new memory addresses even before all data transfers for the current cycle are complete, resulting in increased throughput.

---

<b>PCI Peer Concurrency</b>	<b>Default: Enabled</b>
-----------------------------	-------------------------

This item defines the operation of devices on the PCI bus. Leave this item at the default value Enabled.

---

<b>PCI Delay Transaction</b>	<b>Default: Enabled</b>
------------------------------	-------------------------

If the chipset has an embedded 32-bit write buffer to support delay transaction cycles, you can enable this item to provide compliance with PCI Ver. 2.1 specifications. We recommend that you leave this item at the default value Enabled.

---

<b>Auto Detect DIMM/PCI Clk</b>	<b>Default: Disabled</b>
---------------------------------	--------------------------

When this item is enabled, BIOS will disabled the clock signal of free DIMM and PCI slots.

---

<b>Spread Spectrum</b>	<b>Default: Disabled</b>
------------------------	--------------------------

When this item is enabled, it can significantly reduce the EMI (electromagnetic interference) that your system generates by modulating the extreme values of the clock generator pulses. Enabling this item might cause problems with timing-critical devices such as SCSI adapters. We recommend that you leave this item at the default value Disabled.

## Power Management Setup Option

This option displays a table of items which lets you control the power management of the system. Modern operating systems take care of much of the routine power management. This mainboard supports ACPI (advanced configuration and power interface).

This system supports three levels of power-saving modes; doze mode, standby mode, and suspend mode. Standby mode uses less power than doze mode and suspend mode uses the least power.

### PM Timers

The power management in the setup utility lets you specify a timeout for each of the power-saving modes, and a timeout for a hard disk drive power down. A timeout, means a period of time when the system (or the hard disk drive) is inactive. If the timeout completes, the system power-saving mode will execute, or the hard disk drive will power down.

### PM Events

The Power Management Setup page includes a list of items named **\*\* PM Events \*\***. The first six items on this list show system events. If these events are set to Enabled, then any activity on that event will reset the system timeout counters for the power saving modes. The remaining items include wake-up alarms and other means of resuming the system from a software powerdown.

ROM PCI/ISA BIOS (P6SEP-ME)  
POWER MANAGEMENT SETUP  
AWARD SOFTWARE, INC.

Power Management : User Define	IRQ 8 Break Suspend : Disabled
PM Control by APM : Yes	Power Button Over Ride : Instant Off
Video Off Option : Susp,Stby -> Off	LAN/Ring Wake Up : Enabled
Video Off Method : DPMS Supported	Modem Wake Up : Enabled
Switch Function : Break/Wake	PME# Wake Up : Disabled
Doze Speed (div by): 2/8	AC Resume : Disabled
Stdby Speed(div by): 1/8	KB Power ON Password : Enter
MODEM Use IRQ : 3	Power Up by Alarm : Disabled
Hot Key Function As: Power Off	
<b>** PM Timers **</b>	
HDD Off After : Disable	
Doze Mode : Disable	
Standby Mode : Disable	
Suspend Mode : Disable	
<b>** PM Events **</b>	
HDD Ports Activity : Enabled	ESC : Quit      ↑↓←→ : Select Item
COM Ports Activity : Enabled	F1 : Help      PU/PD/+/- : Modify
LPT Ports Activity : Enabled	F5 : Old Values (Shift)F2 : Color
VGA Activity : Disabled	F6 : Load BIOS Defaults
IRQ [3-7,9-15],NMI : Enabled	F7 : Load OPTIMUM Settings

---

**Power Management****Default: User Define**

This item acts like a master switch for the power-saving modes and hard disk timeouts. If this item is set to Max Saving, doze, standby, and suspend mode, will occur after a timeout of 10 seconds. If this item is set to Min Saving, doze, standby, and suspend mode will occur after a timeout of 4 hours. If the item is set to User Define, you can insert your own timeouts for the power-saving modes.

---

**PM Control by APM****Default: Yes**

Windows 95 and 98 have built-in power management capabilities called APM (Advanced Power Management). When you enable this item, you allow the APM routines in Windows to operate on your system.

---

**Video Off Option****Default: Susp,Stby -> Off**

This option defines which level of power-saving mode is required in order to power down the video display. As a default, the video powers down both in suspend mode and standby mode.

---

**Video Off Method****Default: DPMS Supported**

This item defines how the video is powered down to save power. As a default, this is set to DPMS (display power management software).

---

**Switch Function****Default: Break/Wake**

If this item is enabled, it permits the use of a suspend switch (connected to PANEL1 – See Chapter 2). If the item is set to Break, the suspend switch puts the system in suspend mode. If the item is set to Break/Wake, you can press the suspend switch a second time to wake up the system. If the item is set to Disabled, the suspend switch does not function.

---

**Doze Speed (div by)****Default: 2/8**

This item determines the processor clock speed when the system is in the power-saving doze mode. It is expressed as a fraction (2/8) of normal full speed.

---

**Standby Speed (div by)****Default: 1/8**

This item determines the processor clock speed when the system is in the power-saving standby mode. It is expressed as a fraction (1/8) of normal full speed.

---

**Modem Use IRQ****Default: 3**

If you would like an incoming call on a fax/modem to automatically resume the system from suspend mode, use this item to specify the interrupt request line (IRQ) that is used by the modem. You must connect the fax/modem to the mainboard Wake On Modem connector for this feature to work.

---

**Hot Key Function As****Default: Power Off**

This item defines the operation of the keyboard hot keys (CTRL+ALT+BACKSPACE). You can disable the hot keys, make the hot keys cause a suspend mode, or make the hot keys cause a power off.



---

**HDD Off After****Default: Disabled**

If you have selected User Define for the Power Management item, you can set this item to a selection of timeouts from 1 to 15 minutes. The hard disk drive will power down if the selected timeout passes without any activity on the hard disk.

---

**Doze Mode****Default: Disabled**

If you have selected User Define for the Power Management item, you can set this item to a selection of timeouts from 10 seconds to 4 hours. The system will go into the power-saving doze mode if the selected timeout passes without any system activity.

---

**Standby Mode****Default: Disabled**

If you have selected User Define for the Power Management item, you can set this item to a selection of timeouts from 10 seconds to 4 hours. The system will go into the power-saving standby mode if the selected timeout passes without any system activity.

---

**Suspend Mode****Default: Disabled**

If you have selected User Define for the Power Management item, you can set this item to a selection of timeouts from 10 seconds to 4 hours. The system will go into the power-saving suspend mode if the selected timeout passes without any system activity.

---

**HDD Ports Activity****Default: Enabled**

When this item is Enabled, any activity on the hard disk drive will automatically reset the timeout counters for the power-saving modes, or resume the system from a power-saving mode.

---

**COM Ports Activity****Default: Enabled**

When this item is Enabled, any activity through the serial ports (COM1/3, COM2/4, or an Infrared Port) will automatically reset the timeout counters for the power-saving modes, or resume the system from a power-saving mode.

---

**LPT Ports Activity****Default: Enabled**

When this item is Enabled, any activity through the parallel port (LPT1) will automatically reset the timeout counters for the power-saving modes, or resume the system from a power-saving mode.

---

**VGA Activity****Default: Disabled**

When this item is Enabled, any activity on the graphics sub-system will automatically reset the timeout counters for the power-saving modes, or resume the system from a power-saving mode.

---

**IRQ[3-7, 9-15],NMI****Default: Enabled**

When this item is Enabled, if any activity is detected on the system interrupts (IRQs) and the non-masked interrupt (NMI), the system will automatically reset the timeout counters for the power-saving modes, or resume the system from a power-saving mode.

---

**IRQ 8 Break Suspend****Default: Disabled**

When this item is enabled, any activity through the system interrupt request line 8 can reset power-saving mode timeouts to zero, or resume the system from a power saving mode. IRQ 8 is normally used by the system realtime clock.

---

**Power Button Over Ride****Default: Instant Off**

Under ACPI (advanced configuration and power interface) the system can be turned off mechanically (by the power button) or it can undergo a software power off. If the system has been turned off by software, the system can be resumed by a LAN, MODEM or ALARM wake up signal. This item allows you to define a software power off using the power button. If the value is set to Instant-Off, the power button will automatically cause a software power off. If the value is set to Delay 4 Sec. the power button must be held down for a full four seconds to cause a software power off.

---

**LAN /ring Wake Up****Default: Enabled**

If this item is enabled, it allows the system to resume from a software powerdown whenever there is incoming traffic or call to an installed network adapter or external Modem. For this feature to operate, the network adapter card must be connected to the Wake On LAN connector on the mainboard.

---

**Modem Wake Up****Default: Enabled**

If this item is enabled, it allows the system to resume from a software powerdown whenever there is an incoming call to an internal fax/modem card. For this feature to operate, the fax/modem card must be connected to the Wake On Modem connector on the mainboard.

---

**PME# Wake Up****Default: Disabled**

If this item is enabled, it allows the system to resume from a software powerdown whenever there is incoming traffic to an installed network adapter. For this feature to operate, the network adapter card must support PCI 2.2 specification.

---

**AC Resume****Default: Disabled**

If this item is enabled, it allows the system to resume operation automatically whenever the system is halted by an unexpected interruption in the supply of AC power (for example a power blackout).

---

**KB Power ON Password****Default: Enter**

You can use this item to install a password that you can type on the system keyboard in order to start the system.

---

**Power Up By Alarm****Default: Disabled**

If this item is Enabled, it allows you to set a date and time alarm that will automatically resume the system from a software power down. When you enable this feature, new setup items appear to let you set the alarm. *Month Alarm* lets you select a month from 1 to 12. *Day of the Month Alarm* lets you select a day from 1 to 31. *Week Alarm* lets you select a recurring alarm for any day of the week. *Time Alarm* lets you select a time for the alarm in hours, minutes, and seconds.

## PNP/PCI Configuration Option

This option displays a table of items that configures how PNP (Plug and Play) and PCI expansion cards operate in your system. If you have not installed PCI cards in the expansion slots, you do not need to make any changes to this option.

ROM PCI/ISA BIOS (P6SEP-ME)  
PNP/PCI CONFIGURATION  
AWARD SOFTWARE, INC.

PNP OS Installed	: No	PCI IRQ Activated By	: Level
Resources Controlled By	: Manual	PCI IDE IRQ Map To	: PCI-AUTO
Reset Configuration Data	: Disabled	Primary IDE INT#	: A
		Secondary IDE INT#	: B
		Assign IRQ For USB	: Enabled
IRQ-3 assigned to	: PCI/ISA PnP		
IRQ-4 assigned to	: PCI/ISA PnP		
IRQ-5 assigned to	: Legacy ISA		
IRQ-7 assigned to	: PCI/ISA PnP		
IRQ-9 assigned to	: PCI/ISA PnP		
IRQ-10 assigned to	: PCI/ISA PnP		
IRQ-11 assigned to	: PCI/ISA PnP		
IRQ-12 assigned to	: PCI/ISA PnP		
IRQ-14 assigned to	: PCI/ISA PnP		
IRQ-15 assigned to	: PCI/ISA PnP		
DMA-0 assigned to	: PCI/ISA PnP		
DMA-1 assigned to	: PCI/ISA PnP		
DMA-3 assigned to	: PCI/ISA PnP		
DMA-5 assigned to	: PCI/ISA PnP		
DMA-6 assigned to	: PCI/ISA PnP		
DMA-7 assigned to	: PCI/ISA PnP		
		ESC : Quit	↑↓←→ : Select Item
		F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values (Shift)	F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load OPTIMUM Settings	

### **PNP OS Installed**

**Default: No**

If you have installed a Plug and Play operating system such as Windows 95 or 98, you can change this item to Yes. When the item is set to Yes you can use the Device Manager utility in the operating system to make changes to the configuration of expansion cards.

### **Resources Controlled By**

**Default: Manual**

This item is set at the default Manual. If you find that you cannot get a particular expansion card to work properly, you might be able to solve the problem by setting this item to Manual, and defining the characteristics of the card in the new items which appear.

If you change this item to Manual, the display will list a series of items that allow you to define the assignments of the system interrupt lines (IRQs) and Direct Memory Access (DMA) channels. As a default, these items are set to PCI/ISA PnP. If you install an ISA-bus card that does not support PNP, and it requires a special IRQ and DMA, you can modify the list of assignments. Change the values of the IRQ and DMA that are required to Legacy ISA.

### **Reset Configuration Data**

**Default: Disabled**

If you enable this item and restart the system, any PNP configuration data stored in the BIOS setup will be cleared from memory. New updated configuration data will be created.

---

**PCI IRQ Activated By****Default: Level**

This item defines the way that signals on the PCI bus generate interrupts to the processor. We recommend that you leave this item at the default value Level.

---

**PCI IDE IRQ Map To****Default: PCI-AUTO****Primary IDE INT#****Default: A****Secondary IDE INT#****Default: B**

These items select if you are using PCI IDE channels or ISA-bus IDE channels. If you are using PCI IDE, two other fields appear which show the mapping of the primary and secondary channels. Leave this item at the default value unless you have disabled the onboard IDE channels and are using an ISA bus IDE card.

---

**Assign IRQ For USB****Default: Enabled**

When this item is enabled, the system can assign an IRQ to devices connected on the USB port.

---

## Load BIOS Defaults Option

---

This option displays a dialog box which allows you to install BIOS defaults for all appropriate items in the whole setup utility. Press the **Y** key and then the **Enter** key to install the defaults. Press the **N** key and then **Enter** to not install the defaults. The BIOS defaults do not place great demands on the system and are generally very stable. If your system is not functioning correctly, you might like to install the BIOS defaults as a first step in getting your system working properly again. If you only want to install BIOS defaults for a specific option, select and display that option, and then press the **F6** key.

---

## Load Optimum Settings Option

---

This option displays a dialog box which allows you to install optimum defaults for all appropriate items in the whole setup utility. Press the **Y** key and then the **Enter** key to install the defaults. Press the **N** key and then **Enter** to not install the defaults. The optimum defaults can place some demands on the system that are greater than the performance level of the components, such as the processor and the memory. You could cause fatal errors or recurring instability if you install the setup defaults when your hardware does not support it. If you only want to install setup defaults for a specific option, select and display that option, and then press the **F7** key.

## Integrated Peripherals Option

This option displays a list of items which defines the operation of some peripheral items on the system's input/output ports.

ROM PCI/ISA BIOS (P6SEP-ME)  
INTEGRATED PERIPHERALS  
AWARD SOFTWARE, INC.

Internal PCI/IDE	: Both	ECP Mode Use DMA	: 3
IDE Primary Master PIO	: Auto	Parallel Port EPP Type	: EPP1.9
IDE Primary Slave PIO	: Auto	PS/2 mouse function	: Enabled
IDE Secondary Master PIO	: Auto	USB Controller	: Enabled
IDE Secondary Slave PIO	: Auto	USB Keyboard Support	: Disabled
Primary Master UltraDMA	: Auto	Init Display First	: PCI Slot
Primary Slave UltraDMA	: Auto	Current CPU Temperature	:
Secondary Master UltraDMA	: Auto	Current CPUFAN1 Speed	:
Secondary Slave UltraDMA	: Auto	Current CPUFAN2 Speed	:
IDE Burst Mode	: Enabled	+ 5 (V):	I/O (V):
IDE HDD Block Mode	: Enabled	+2.5(V):	CPU (V):
Onboard FDD Controller	: Enabled		
Onboard Serial Port 1	: 3F8/IRQ4	ESC : Quit	↑↓←→ : Select Item
Onboard Serial Port 2	: 2F8/IRQ3	F1 : Help	PU/PD/+/- : Modify
UART 2 Mode	: HPSIR	F5 : Old Values (Shift)	F2 : Color
IR Function Duplex	: Half	F6 : Load BIOS Defaults	
RxD , TxD Active	: Hi,Hi	F7 : Load OPTIMUM Settings	
Onboard Parallel Port	: 378/IRQ7		
Onboard Parallel Mode	: ECP		

### **Internal PCI/IDE**

**Default: Both**

This item lets you enable or disable the two PCI IDE channels (primary and secondary) that are integrated on this motherboard. As a default, both channels are enabled.

### **IDE Primary Master PIO**

**Default: Auto**

### **IDE Primary Slave PIO**

**Default: Auto**

### **IDE Secondary Master PIO**

**Default: Auto**

### **IDE Secondary Slave PIO**

**Default: Auto**

Each IDE channel supports a master device and a slave device. These four items let you assign which kind of PIO (Programmed Input/Output) is used by IDE devices.

You can choose Auto, to let the system auto detect which PIO mode is best, or you can install a PIO mode from 0-4.

### **IDE Primary Master UDMA**

**Default: Auto**

### **IDE Primary Slave UDMA**

**Default: Auto**

### **IDE Secondary Master UDMA**

**Default: Auto**

### **IDE Secondary Slave UDMA**

**Default: Auto**

Each IDE channel supports a master device and a slave device. This motherboard supports UltraDMA. UltraDMA technology provides faster access to IDE devices. If you install a device which supports UltraDMA, change the appropriate item on this list to Auto. You may have to install the UltraDMA driver supplied with this motherboard in order to use an UltraDMA device.

---

**IDE Burst Mode** **Default: Enabled**

Burst mode transfers can improve the access to IDE devices. Enable this item if your IDE devices support burst mode transfers.

---

**IDE HDD Block Mode** **Default: Enabled**

Block mode transfers can improve the access to IDE devices. Enable this item if your IDE devices support block mode transfers.

---

**Onboard FDC Controller** **Default: Enabled**

Use this item to turn on or off the floppy disk controller that is built into this mainboard.

---

**Onboard Serial Port 1** **Default: 3F8/IRQ4**

This item lets you disable the built-in serial port 1, or enable it by assigning an I/O address and an Interrupt Request Line (IRQ).

---

**Onboard Serial Port 2** **Default: 2F8/IRQ3**

This item lets you disable the built-in serial port 2, or enable it by assigning an I/O address and an Interrupt Request Line (IRQ).

---

**UART 2 Mode** **Default: Standard**

This item defines the operation of serial port 2. In the Normal setting, serial port 2 is assigned to the connector on the mainboard. If you have installed an optional infrared port, you must change the setting of this item to one of the Infrared settings (usually IrDA, FIR and HPSIR). These settings will disable the mainboard serial port connector and assign serial port 2 to the infrared device. If you have selected an IR mode, two items appear, *IR Function Duplex* and *RxD, TxD Active*, which let you set the duplex and transmission parameters for the Infrared port. See the documentation of your infrared port for help on these items.

---

**Onboard Parallel Port** **Default: 378/IRQ7**

This item lets you disable the built-in parallel port, or enable it by assigning an I/O address and an Interrupt Request Line (IRQ).

---

**Parallel Port Mode** **Default: SPP**

This item defines the operation of the parallel port. It can be set to SPP (standard parallel port). If you are connected to a parallel device that supports the higher-performance EPP (enhanced parallel port) or the ECP (extended capabilities port) make the appropriate changes to this item. If you change the parallel port to EPP or ECP, new items appear to let you configure the EPP and ECP modes.

---

**PS/2 mouse function** **Default: Enabled**

Use this item to enable or disable the built-in PS/2 mouse port. If you are using a serial port mouse, you can conserve system resources by disabling the PS/2 mouse port.

---

**USB Controller** **Default: Enabled**

Use this item to enable or disable the built-in Universal Serial Bus ports. If you are not using any USB devices, you can conserve system resources by disabling the USB ports.

---

**USB Keyboard Support****Default: Disabled**

Enable this item if you are using a keyboard connected through the USB interface.

---

**Init Display First****Default: PCI Slot**

Use this item to define if your graphics adapter is installed in one of the PCI slots.

---

**Current CPU Temperature, Current CPUFAN1 Speed, etc.**

If you are using the hardware monitoring features of this system, you can use these items to set thermal parameters for the system.

---

## Password Settings

---

This item can be used to install a password. To install a password, follow these steps:

1. Highlight the item Password Settings on the main menu and press **Enter**.
2. The password dialog box will appear.
3. If you are installing a new password, carefully type in the password. You cannot use more than 8 characters or numbers. The password will differentiate between upper case and lower characters. Press **Enter** after you have typed in the password. If you are deleting a password that is already installed just press **Enter** when the password dialog box appears.
4. The system will ask you to confirm the new password by asking you to type it in a second time. Carefully type the password again and press **Enter**, or just press **Enter** if you are deleting a password that is already installed.
5. If you typed the password correctly, the password will be installed.

---

## IDE HDD Auto Detection Option

---

This item automatically detects and installs any hard disk drives installed on the primary and secondary IDE channel. Most modern drives can be detected. If you are using a very old drive that can't be detected, you can install it manually using the Standard CMOS Setup option.

Setup will check for two devices on the primary IDE channel and then two devices on the secondary IDE channel. At each device, the system will flash an N in the dialog box. Press **Enter** to skip the device and proceed to the next device. Press **Y**, then **Enter** to tell the system to auto-detect the device.

## Save And Exit Setup Option

---

Highlight this item and press **Enter** to save the changes that you have made in the setup utility and exit the setup program. When the Save and Exit dialog box appears, press **Y** to save and exit, or press **N** to return to the setup main menu.

## Exit Without Saving Option

---

Highlight this item and press **Enter** to discard any changes that you have made in the setup utility and exit the setup program. When the Exit Without Saving dialog box appears, press **Y** to discard changes and exit, or press **N** to return to the setup main menu.



## Chapter 4: Software

### About the Software

---

The software for this mainboard is supplied on a CD-ROM. The disk has some folders that can be used by many different mainboards, for example the **UTILITY** and **PERIPHERAL** folders. Some folders can only be used by mainboards which have certain brands of chipsets, for example the **INTEL** and **VIA** folders. In addition, software that is specifically intended for one kind of mainboard is stored in a folder with the name of that board. The folder for this mainboard is stored in the **P6SEP-Me** folder.

***Note:** Never try to install software from a folder that is not specified for use with your mainboard.*

### Folders for this Mainboard

---

For this board, you can install software from the following folders:

#### Utility Folder

You can use the software in the following sub-folders:

- AWDFLASH:** Software to erase and install new revisions of the system BIOS
- DIRECTX5:** Software display drivers for Microsoft's DirectX Rev. 5 specification
- PC-CILLIN:** Anti-virus software
- BITWARE:** Software for the built-in fax/modem
- GAMUT:** Audio rack for built-in sound system

#### CMI8X38 Folder

You can use the software from the following sub-folders:

- AUDIO:** Drivers and software for the built-in audio system
- MODEM:** Drivers and software for the built-in fax/modem

## Peripheral Folder

You can use the software in the following sub-folders:

- KEYBOARD, CD-ROM, MOUSE:** These three folders have drivers for accessories manufactured by BTC. Some system assemblers ship these accessories with complete systems based on this mainboard.

## SiS\_IDE Folder

- WIN9x:** Bus mastering Ultra DMA drivers for Windows 95/98
- NT4.0:** Bus mastering Ultra DMA drivers for Windows NT4.0

## SiS620\_VGA Folder

- Drivers and software for the built-in graphics adapter

## P6SEP-Me Folder

You can use the software in the following sub-folders:

- MONITOR :** Hardware monitoring software for Windows 95/98, and Windows NT4.0/5.0
- SiS\_IRQ :** Miniport drivers for Windows 95
- AUDIO, IDE, LAN, MODEM, VGA:** These folders are empty. A readme file directs you to alternate location with the required software.

**Note:** Some folders are subdivided into different operating systems such as DOS, Windows 95, Windows NT, and so on. Always make sure that you are installing the correct software for the operating system on your computer. Some folders are also subdivided into different language versions, such as English, French, German and so on.

**Note:** Before installing any software, always inspect the folder for files named README.TXT, INSTALL.TXT, or something similar. These files may contain important information that is not included in this manual.

---

## Running the Support CD-ROM

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1. Place the disk in your CD-ROM drive. If you are running Windows with Autoplay enabled, the opening screen of the CD appears automatically. Click on READ ME to read the latest instructions.
2. Click on the item BROWSE THE CD TITLE. This uses Windows Explorer to show the contents of the support CD.
3. Double click on a folder to display the sub-folders.
4. Before installing the software, look for a file named README.TXT, or something similar. This file may contain important information to help you install the software correctly.
5. Some software is installed in separate folders for different operating systems, such as DOS, WIN NT, WIN95/98, and so on. Always log on to the correct folder for the kind of OS you are using.
6. To install the software, you usually execute a file named SETUP.EXE or INSTALL.EXE by double clicking on the filename.

---

## Utility Folder Installation Notes

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### Award Flash Memory Utility

This utility lets you erase the system BIOS stored on a Flash Memory chip on the mainboard, and lets you copy an updated BIOS to the chip. Take care how you use this program. If you erase the current BIOS and fail to write a new BIOS, or write a new BIOS that is incorrect, your system will malfunction.

There are two flash memory utilities called **AWD66.EXE** and **AWD712.EXE**. For this mainboard you must use the **AWD66.EXE** utility. To use the utility, you must be in real-mode DOS (not the DOS box that is available in Windows 95/98/NT). If you are using WINDOWS 95/98, shut down your computer and select the option Restart in DOS in the shut-down dialog box. If you are running Windows NT, shut down your computer and boot from a DOS diskette temporarily in order to run the flash memory utility.

### DirectX5 Drivers

The DirectX drivers are for installation only in Windows 95/98. The directX drivers need to be installed before you install an AGP driver. You may be able to get more up-to-date directX drivers from the Microsoft web site. Start the installation by clicking on the file DX5CORE.EXE.

### PC-Cillin Anti-Virus Utility

Anti-virus software is provided for DOS, for WIN95, and WIN 98. Log on to the appropriate directory for your operating system. For DOS, copy all the files in the

DOS folder to your hard disk drive. For Windows 95, log on to the Disk 1 folder and run SETUP. For Windows 98, run SETUP.

## CMI8X38 Folder Installation Notes

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### Audio Software

This folder has software and drivers for the sound system that is integrated on this mainboard. Drivers are provided for Windows 95/98, Windows NT, and DOS. An MS-WORD format manual is stored in the MANUAL folder.

### DOS Installation

Log on to the DOSDRV folder and run the program INSTALL.EXE

### Windows 95/98 Installation

Please specify the path to the CD-ROM\CMI8X38\AUDIO\W95-98\DRV when your system detects the installed audio system. To install the audio applications, log on to the W95-98 folder, and then log on to the APPS folder. Run the SETUP program.

### Windows NT 4.0 Installation

1. Press the "Start" button.
2. Move the highlight to "Settings" and select "Control Panel".
3. Double click on the "Multimedia" icon.
4. Select the "Devices" tab.
5. Press the "Add..." button.
6. Select item "Unlisted or Updated Driver" in the "List of Drivers" list box.
7. Specify the path to the PCI audio NT drivers.
8. Select "C-Media CM8738 PCI Device" and press the "OK" button.
9. Choose proper I/O or the "OK" button for the default setting.
10. Restart the Windows NT system.

To install the audio applications, log on to the NT4 folder, and then log on to the APPS folder. Run the SETUP program.

### Modem Driver and Software

Install the Modem driver from the sub-folders for Windows 95/98 or Windows NT4.0.

### Windows 95/98

The modem is a plug and play device so Windows 95/98 will automatically detect the presence of your modem. When the Plug and Play wizard begins to look for modem drivers, click on the button that says **Have Disk** and then browse or type in the pathname to the CMI8x38\modem\win9x folder.

## **Windows NT 4.0**

Follow the instructions in the README file in the WINNT4 sub-folder.

## **SiS\_IDE Folder Installation Notes**

---

### **Ultra DMA Drivers**

This folder has bus mastering IDE drivers that will improve the performance of IDE devices if you are running Windows 95/98 or Windows NT4.0.

For a Windows 95/98 installation, log on to the WIN9X sub-folder and run SETUP. For a Windows NT4.0 installation, log on to the NT sub-folder and follow the installation instructions contained in the README.TXT file.

## **SiS620\_VGA Folder Installation Notes**

---

This folder has drivers and software for the built-in graphics adapter. The sub-folder Win9X has the drivers for Windows 95/98. The sub-folder Winnt4.0 has the drivers for Windows NT4.0. The sub-folder Winnt5.0 has drivers that can be used by varieties of Windows 2000. Follow the installation instructions that are stored in the README.TXT file in the SiS620\_VGA folder.

## **Mainboard (P6SEP-Me) Installation Notes**

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Most of the sub-folders in this folder are empty, with a short README file giving directions to alternate folders for the appropriate software. Two folders contain software that you can install.

### **Monitor Sub-folder**

The software in this folder provides a graphical interface to the hardware monitoring feature of this mainboard. The software will run under Windows 95/98 or Windows NT4.0. Follow the installation instructions contained in the file INSTALL.TXT.

### **SiS\_IRQ Sub-folder**

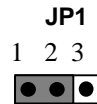
This folder has Miniport drivers. You only need to install these drivers if you are using a legacy Windows 95 operating system. Follow the installation instructions given in the REA

## Appendix 1: Quick Jumper Setting Reference

### **JP1: Clear CMOS memory jumper**

Use this 3-pin jumper to clear all the current data stored in the CMOS memory.

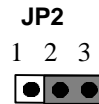
Function	Jumper Cap
Normal operation	Short pins 1-2
Clear CMOS	Short pins 2-3



### **JP2: Keyboard power on jumper**

Use this 3-pin jumper to enable keyboard power on with hot keys or password.

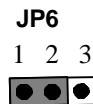
Function	Jumper Cap
Enable keyboard power on	Short pins 2-3
Disable keyboard power on	Short pins 1-2



### **JP6: Audio enable/disable jumper**

Use this jumper to enable or disable the audio system integrated on the mainboard.

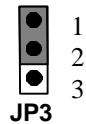
Function	Jumper Cap
Enable audio	Short Pins 1-2
Disable audio	Short pins 2-3



### **JP3: Flash BIOS enable/disable jumper**

Use this jumper to allow a new BIOS to be flashed to the mainboard BIOS chip.

Function	Jumper Cap
Enable Flash BIOS	Short Pins 1-2
Disable Flash BIOS	Short pins 2-3



### **JP7: SPDIF output signal level jumper**

Use this 2-pin jumper to set an SPDIF output signal of 0.5V or 5V

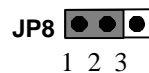
Function	Jumper Cap
5 volts	Short pins 1-2
0.5 volts	Open pins 1-2



### **JP8: Modem enable/disable jumper**

Use this 3-pin jumper to enable or disable the built-in fax/modem.

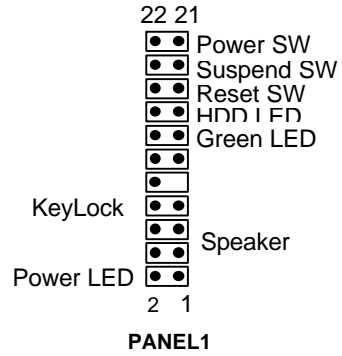
Function	Jumper Cap
Enable onboard modem	Short pins 1-2
Disable onboard modem	Short pins 2-3



**PANEL1: Panel connectors for switches and indicators**

Use the panel connector to implement the switches and indicators on your system case.

Function	Pins
Speaker	1, 3, 5, +7
Power Indicator	+2, +4, 6
Keylock	+8, 10
Green Indicator	+13, 14
Hard Disk Indicator	+15, 16
Reset Switch	17, 18
Suspend Switch	19, 20
Power Switch	21, 22



## **Safety Compliance**

### ***Federal Communications Commission (FCC)***

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ◆ Reorient or relocate the receiving antenna.
- ◆ Increase the separation between the equipment and the receiver.
- ◆ Connect the equipment onto an outlet on a circuit different from that to which the receiver is connected.
- ◆ Consult the dealer or an experienced radio/TV technician for help.

Shielded interconnect cables and shielded AC power cable must be employed with this equipment to insure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.

### **Declaration of Conformity**

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions:

- ◆ This device may not cause harmful interference, and
- ◆ This device must accept any interference received, including interference that may cause undesired operation.

### ***Canadian Department of Communications***

This class B digital apparatus meets all requirements of the Canadian Interference-causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.