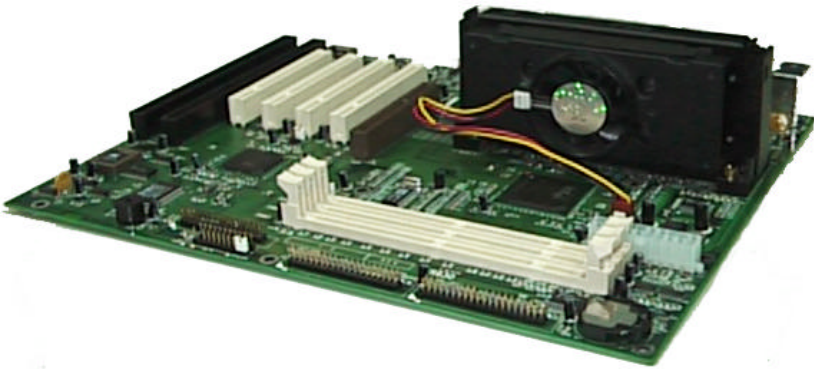


# KR630 Pentium II

## Mainboard

*User's Manual*





## ***User's Notice***

### **Static Electricity Precaution**

Static electricity can easily damage your KR630 mainboard. Observing a few basic precautions can help you safeguard against damage that could result in expensive repairs. Follow the simple measures below to protect your equipment from static electricity damage: Keep the mainboard and other system components in their anti-static packaging until you are ready to install them. Touch a grounded surface before you remove any system component from its protective anti-static packaging. Unpacking and installation should be done on a grounded, anti-static mat. The operator should be wearing an anti-static wristband, grounded at the same points as the anti-static mat.

After removing the mainboard from its original packing, only place it on a grounded, anti-static surface component side up. Immediately inspect the board for damage. Due to shifting during shipping, it is suggested that the installer press down on all of the socket IC's to ensure they are properly seated. Do this only with the board placed on a firm flat surface.

During configuration and installation, touch a grounded surface frequently to discharge any static electrical charge that may have built up in your body. The best precaution is to wear a grounded wrist strap. When handling the mainboard or an adapter card avoid touching its components. Handle the mainboard and adapter cards either by the edges or by the adaptercard's case mounting bracket.

The information presented in this publication has been carefully screened for reliability. The manufacturer provides this manual "As is" without warranty of any kind, either express or implied, including but not limited to the implied warranties or conditions of this product's fitness for any particular purpose. In no event shall the manufacturer be liable for any loss of profits, loss of business, loss of use or data, interruption of business, or for indirect, special, incidental, or consequential damages of any kind, even if the manufacturer has been advised of the possibility of such damages arising from any defect or error in this manual or product.

The manufacturer has the right to change this specification without pre-notice. Trademarks and product names appearing in this manual is may or may not be registered with their respective holders.



# Table of Contents

<b>1</b>	<b>INTRODUCTION</b> .....	<b>1-1</b>
1.1	OVERVIEW.....	1-1
1.2	ITEM CHECKLIST .....	1-1
<b>2</b>	<b>FEATURES</b> .....	<b>2-1</b>
2.1	PRODUCT SPECIFICATION .....	2-1
2.2	MAINBOARD LAYOUT.....	2-3
<b>3</b>	<b>INSTALLATION PREVIEW</b> .....	<b>3-1</b>
3.1	JUMPER SETTINGS.....	3-1
3.2	INSTALLATION OF DRAM MODULES (DIMM) .....	3-3
3.3	INSTALLATION OF THE CPU.....	3-6
3.4	INSTALLATION OF EXPANSION SLOTS.....	3-7
3.5	INSTALLATION OF IDE, I/O CABLES CONNECTION.....	3-8
3.6	INSTALLATION OF AUDIO CONNECTOR(THE FOLLOWING SECTIONS ARE AVAILABLE WITH OPTIONAL AUDIO ONLY).....	3-15
<b>4</b>	<b>BIOS SETUP</b> .....	<b>4-1</b>
4.1	STARTING SETUP .....	4-1
4.2	MAIN SETUP MENU .....	4-3
4.3	STANDARD CMOS SETUP MENU.....	4-4
4.4	BIOS FEATURES SETUP MENU.....	4-8
4.5	CHIPSET FEATURES SETUP MENU.....	4-11
4.6	POWER MANAGEMENT SETUP MENU.....	4-13
4.7	PCI CONFIGURATION SETUP MENU.....	4-16
4.8	INTEGRATED PERIPHERALS MENU .....	4-18
4.9	IDE HDD AUTO DETECTION.....	4-20
4.10	PASSWORD SETTING.....	4-20



# 1 Introduction

## 1.1 Overview

The KR630 mainboard integrates the Pentium II microprocessor, memory, I/O and Sound technologies and is designed to fit into a standard ATX form factor chassis. Page 2-3 illustrates the mechanical form factor for the KR630 mainboard.

This manual describes all of the functional blocks for the KR630 Pentium® II (Klamath) motherboard. The board is based on the “ATX” form factor and it provides flexibility to support Commercial and Consumer (Multimedia) markets. This motherboard incorporates Intel’s new advanced PCI chipset code-named “440LX”. Providing features like; Accelerated Graphics Port (AGP) connector, “Ultra-DMA-33” IDE Interface, ACPI power management and Hardware System Monitor support. The KR630 Accelerated Graphics Port (AGP) allows for fast 3D, 2D and multimedia acceleration, as well as DVD playback using the optional AC-3 PCI Audio decoder and software based MPEG-2 decoder. The KR630 based system incorporates the recommended functionality to support PC ‘97.

## 1.2 Item Checklist

The KR630 mainboard should contain following items (√). Immediately, contact your retailer if you discover any missing items, or any damage

- This KR630 user’s manual
- 1 Retention Mechanism
- 1 IDE ribbon cable
- 1 floppy ribbon cable
- 1 Diskette of PIIX4 BUS MASTER Driver
- Infrared (IrDA) module with ribbon cable (optional)





# 2 Features

## 2.1 Product Specification

### Processor/Cache

Processor	Intel "Klamath" Pentium II 233-366 MHz Operation
Upgrades	Slot 1 (ODP4Klamath)
Cache	CPU Cartridge Integrated; Write Back and Write Through, direct mapped organization "BSB" Cache Size 256KB or 512KB

### System Memory

Memory Size	8MB Min up to 384MB with Unbuffered SDRAM or/and Unbuffered EDO DRAM
Memory Sites	3 DIMM Sockets. SDRAM and EDO. Autodetect w/Table Free Configuration Double Density DIMMs. EDO Symmetric and Asymmetric support
ECC/EC	ECC; single bit Error Correction and multiple bit Error Detection DIMM Type 8, 16, 32, 64 and 128MB. 64/72-bit non-parity & ECC bits Memory Speed 50/60ns asynchronous and equivalent EDO DRAM. SDRAM 66Mhz parameter for synchronous memory.

### Chipset

ISA/PCI Bus	82440LX AGP/PCI/ISA Chipset PCI Level 2.1. 33 MHz Zero Wait State (120MB PCI to Memory Data Transfers)
-------------	---

### Graphics Support

PCI "AGP"	Accelerated Graphics Port Interface supporting transfers at 66Mhz or 133Mhz with full side-band signals
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### Integrated I/O

Infrared Interface	I/O Controller SMC FDC37C675 (Plug & Play Compliant) Serial Ports two 9 pin connectors for dual asynchronous serial ports. High speed 16C550 compatible serial ports with 16-byte FIFOs Infrared port with FIR, IrDA and ASKIR
Parallel Port	One 25 pin supporting EPP, ECP and Centronics Interface
Hard Disk Controller	PCI Bus Mastering IDE. Native and Compatible Mode Support. IDE Transfer with Scatter Gather. "Ultra 33" Synchronous DMA. Enhanced IDE PIO mode 4 (16MB/s) Independent IDE timing. FIFOs for PCI Burst Transfers. Swap-Bay Support. Integrated 8x32-bit buffer for IDE PCI Burst Transfers
Hard Disk Connector	2 PCI IDE Connectors for 4 Drives Support
Floppy Controller	1.2, 1.44 and 2.88 MB support in non-FIR mode
Keyboard Port	PS/2 (Integrated in the FDC37C675)

Mouse Port	PS/2 (Integrated in the FDC37C675)
Real Time Clock	Integrated in the PIIx4 (DS1287 Compatible)
System Monitor	LM78; Voltage/Temperature/Fan Speed/Chassis Intrusion

### External Communication Ports

Serial Bus	Universal Serial Bus (USB), integrated with Core Logic
------------	--

### System BIOS

BIOS Type	AWARD BIOS based on 2Mbit Flash
Hard Disk Driver	IDE, Auto-configuring
Plug&Play Support	Steerable DMA Channels and Interrupts. ISA Plug&Play
Special Features	<b>PC-97 ready. Multi-Boot. PCI Add-In card auto-config.</b>

### Plug & Play Sup.

Green Features	Steerable DMA Channels & Interrupts. ISA Plug & Play
Power Management	APM 1.2, Meets EPA Mod 2.0. ( SMI, Stop Clock, HDD and Monitor Shutdown).
Advanced Features	ACPI (Advanced Configuration and Power Interface) compliant hardware for use with <b>APM &amp; PNP-BIOS APIs</b>

### Jumpers and Front Panel Connectors

Connectors	Reset switch. Suspend/Resume Button. Speaker. HD & PWR LED. Power Button. IR
Jumpers	CPU Speed Multiplier. Password/CMOS Clear.

### Headers and Rear Panel Connectors

Connectors	Parallel and Serial 1&2 Ports. Keyboard. Mouse. Line-In. Line-Out. Mic. Game. USB 1&2
Headers	Floppy. IDE 1&2. CD-Audio. Modem Audio.

### Mechanical

Board Style	ATX Form Factor
Board Size/Type	9.6" x 12.0", Four Layer Board

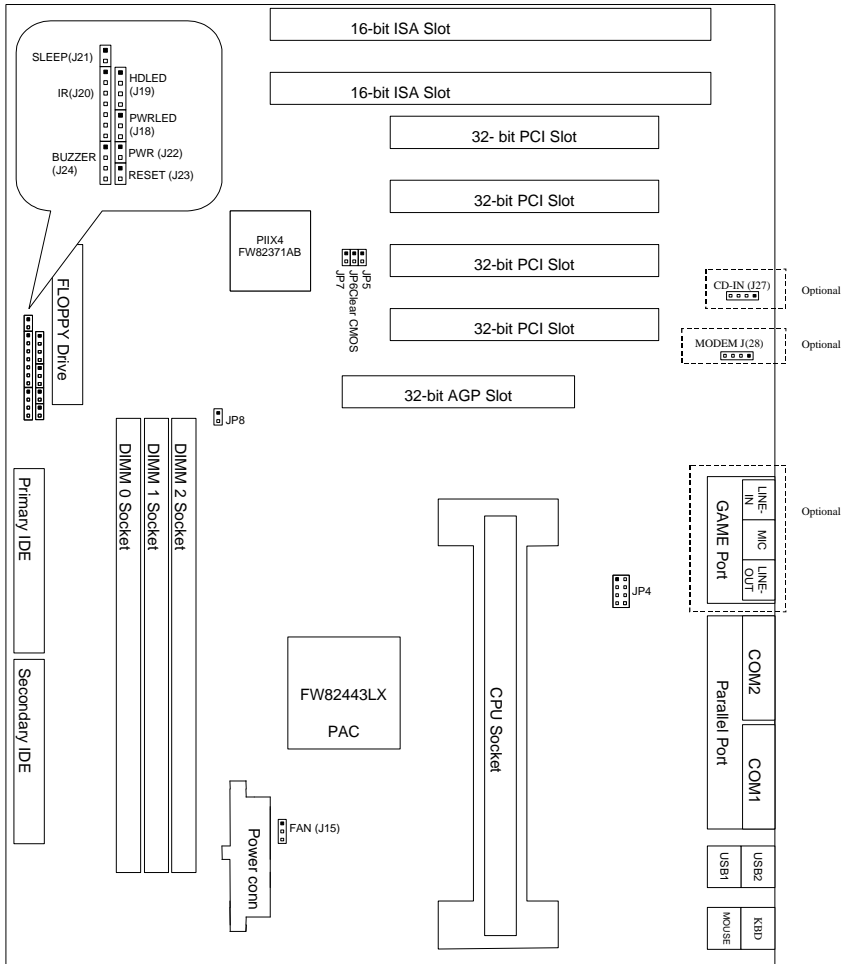
### Expansion Slots

Description	Four PCI and Two ISA bus slots (One slot is shared) and one AGP slot
-------------	--

### Integrated Sound (Option)

Sound Chip	Crystal CS4237B, Enhanced Audio single chip solution
CODEC	16-bit Stereo
FM Synthesis	Yamaha OPL3 compatibility (Included with CS4237B)
Wavetable	CS9236 Single Chip Wavetable (Socket Upgrade Option)
Sound Effects	SRS Labs. 3D sound solution uses the CS4237B
PCI Audio	Crystal's CS4610 PCI Audio Acceleration (Manuf. Option)

## 2.2 Mainboard Layout





# 3 Installation Preview

Before you install the KR630 mainboard into the system chassis you may find it convenient to first configure the mainboard hardware. This section describes how to configure the jumper settings, install memory modules, and how to attach the various system components. Before using your computer you must review the following 7 steps:





1. Jumper settings
2. Installation of DRAM modules (DIMM)
3. Installation of the Slot1 Retention Module, Installation of the CPU SEC (Single Edge Contact) Cartridge
4. Installation of expansion cards
5. Installation of IDE, I/O cables connection., and Power connection
6. Installation of the Power Core to the System.
7. Setup of the system BIOS software

## 3.1 Jumper Settings

You can configure the hardware options by setting jumpers on the mainboard. A jumper is a set of two or more metal pins in a plastic base attached to the mainboard. A plastic “jumper cap” with a metal (conductive) plate inside fits over two pins to create an electrical contact or short between them. This contact establishes a hardware setting and is referred to as a “closed” jumper setting.

Some jumpers have two pins while others may have three or more. Jumpers are sometimes combined to sets called jumper blocks where all the jumpers in the block must be set together to establish a hardware setting. In this manual, the jumper settings will be described graphically using a triangle (▲) always marking pin 1. Those jumpers with two pins will be shown as closed or open. A jumper is closed by placing the plastic jumper cap over the two jumper pins and is opened by removing the jumper cap. Some jumpers are oriented vertically and others horizontally with pin 1 marked as (▲=P1)

### 3.1.1 Jumpers, Jumper caps, and Jumper blocks

Jumper cap	2-pin jumper	3-pin jumper	Jumper block
			

### 3.1.2 Setting 2-pin jumpers





Jumper Pins 1 & 2 are closed with a jumper cap



Jumper Pins 2 & 3 are closed with a jumper cap

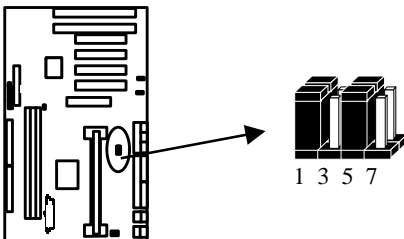
### 3.1.3 CPU External (BUS) Frequency Selection (JP8)






CPU External (BUS) Frequency Selection	JP8
60MHz	
66MHz (Manufacturer default)	

### 3.1.4 Processor Speed setting(JP4)

The processor speed depends upon the frequency of the CLOCK GENERATOR which is determined by jumpers. These jumpers tell the system what speed to run at. Currently, this mainboard speed range is from 233MHz to 366MHz. The CPU input frequency must match the frequency of CLOCK GEN or it will cause the system to malfunction.

The Jumper located As below:



Pentium II CPU Setting	JP4
233MHz (66MHz x 3.5)	
266MHz (66MHz x 4) (Manufacturer default)	
300MHz (66MHz x 4.5)	
333MHz (66MHz x 5)	
366MHz (66MHz x 5.5)	

### 3.1.5 Clear CMOS(JP6)

The KR630 has a Jumper JP6, which allows you to clear the CMOS memory and Real Time Clock (RTC) data, the CMOS memory maintains the system configuration information and RTC provides the system with the date and time. Make sure this jumper is open for normal operation.

Clear CMOS procedure:1.) Set JP6 to Close;2.) Power On your system; 3.) The CMOS RAM data will be clear after POST; 4.) Power Off your system; 5.) Remove the Jumper cap; 6.) Resetting your.

### 3.1.6 JP5, JP7 Reserved

## 3.2 Installation of DRAM modules (DIMM)

### 3.2.1 DIMM (Dual Inline Memory Module)

The KR630 mainboard features three 168-pin DIMM sockets with each supporting 8MB to 64MB of SDRAM/EDO using 1MBx64, 2MBx64 and 8MBx64 DIMM

(Asymmetrical single and double sided). The DRAM interfaces on a 64-bit wide, data path. Also supported is 3.3 volts 66.67MHz unbuffered Synchronous DRAM(SDRAM) and 3.3V volts 60ns or faster unbuffered EDO DRAM. The EDO DRAM and SDRAM are defined below.

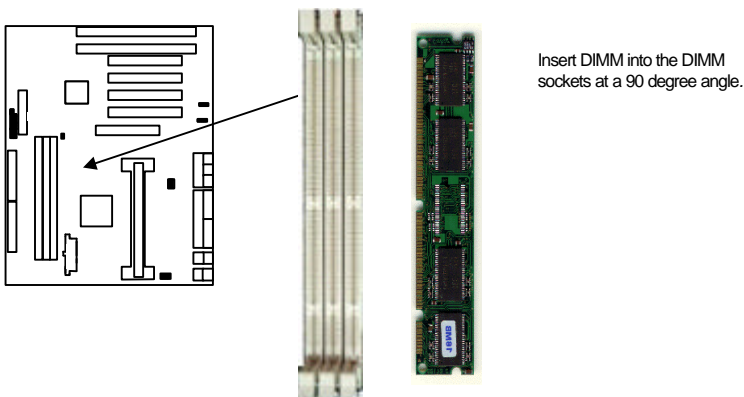
### 3.2.2 DIMM Combinations

DIMM0	DIMM1	DIMM2	Total Memory
8MB	EMPTY	EMPTY	8MB
8MB	8MB	EMPTY	16MB
8MB	8MB	8MB	24MB
16MB	EMPTY	EMPTY	16MB
16MB	8MB	EMPTY	24MB
16MB	8MB	8MB	32MB
16MB	16MB	EMPTY	32MB
16MB	16MB	8MB	40MB
16MB	16MB	16MB	48MB
32MB	EMPTY	EMPTY	32MB
32MB	8MB	EMPTY	40MB
32MB	8MB	8MB	48MB
32MB	16MB	EMPTY	48MB
32MB	16MB	8MB	56MB
32MB	16MB	16MB	64MB
32MB	32MB	EMPTY	64MB
32MB	32MB	8MB	72MB
32MB	32MB	16MB	80MB
32MB	32MB	32MB	96MB
64MB	EMPTY	EMPTY	64MB
64MB	8MB	EMPTY	72MB
64MB	8MB	8MB	80MB
64MB	16MB	8MB	88MB
64MB	16MB	16MB	96MB
64MB	32MB	8MB	104MB
64MB	32MB	16MB	112MB
64MB	32MB	32MB	128MB
64MB	64MB	EMPTY	128MB
64MB	64MB	8MB	136MB
64MB	64MB	16MB	144MB
64MB	64MB	32MB	160MB
64MB	64MB	64MB	172MB
128MB	EMPTY	EMPTY	128MB
128MB	8MB	EMPTY	136MB
128MB	8MB	8MB	144MB
128MB	16MB	8MB	152MB
128MB	16MB	16MB	160MB
128MB	32MB	8MB	168MB
128MB	32MB	16MB	176MB
128MB	64MB	EMPTY	192MB



DIMM0	DIMM1	DIMM2	Total Memory
128MB	64MB	8MB	200MB
128MB	64MB	16MB	208MB
128MB	64MB	32MB	224MB
128MB	64MB	64MB	256MB
128MB	128MB	EMPTY	256MB
128MB	128MB	8MB	264MB
128MB	128MB	16MB	272MB
128MB	128MB	32MB	288MB
128MB	128MB	64MB	320MB
128MB	128MB	128MB	384MB

### 3.2.3 Installation Procedure for DIMM



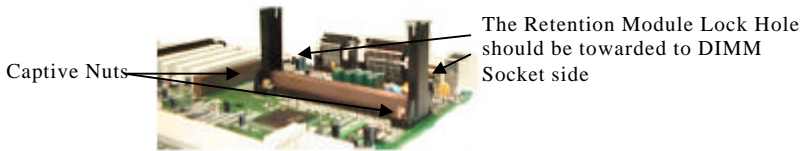
- 1) Pin 1 of the DIMM must match with pin 1 of the DIMM socket.
- 2) The module will only insert into the socket one way. An orientation cut-out will prevent you from inserting it the wrong way.
- 3) Insert the DIMM into the DIMM socket at a 90 degree angle. If pin 1 of the DIMM does not line up with pin 1 of the socket, the DIMM will not insert into the socket. After inserting the DIMM module completely into the socket, push the DIMM module into a vertical position.
- 4) The module should click into place with the retaining clips at each end of the socket snapping behind the module to secure it
- 5) To release the memory module push both retaining clips outwards and carefully rock the module forward.

**IMPORTANT:** Do not use DIMM that use an extra TTL chip to convert the memory module from asymmetric to symmetric.

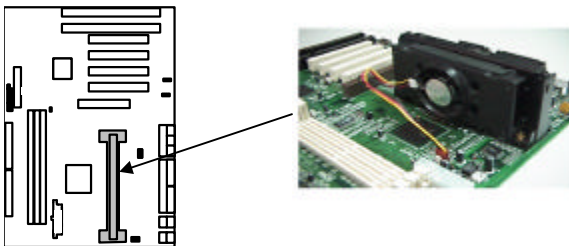
### 3.3 Installation of the CPU

The KR630 comes with Slot1 connector installing the Pentium II CPU cartridge. Before you plug in the Pentium II CPU Cartridge, please mount the CPU Cartridge Retention module (Packed with your mainboard) first as following step.

1. Place the Retention module over the Slot 1 connector, the Lock Holes should toward to the DIMM socket side as following picture.
2. Tighten the 4 Captive Nuts in using a Philips or flat screw drive



To install a CPU, flip the Pentium II CPU Cartridge locks outwards tenderly so that the lock shows through the retention module's side Lock Hole, and do remember to plug the CPU FAN cable to J15.



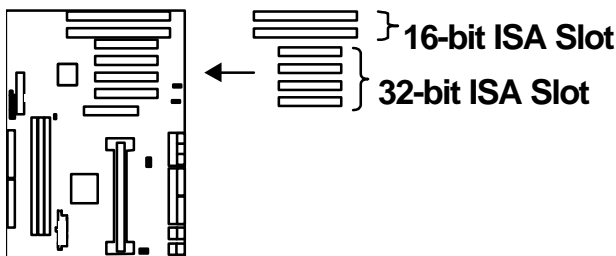
Please reference Intel Pentium II BOXed CPU Installation guide to install CPU Heat Sink Mechanism.

**WARNING:** Without a fan, the Pentium II CPU Cartridge can overheat and will cause damage to both the CPU and the KR630 mainboard. The insufficient air flow will also damage to both the CPU and the KR630 mainboard.

## 3.4 Installation of Expansion Slots

### 3.4.1 ISA, PCI and AGP Slots

There are two types of ISA expansion cards design-Legacy and PnP (Plug & Play). For Legacy cards you must set the cards' jumpers manually. For Plug & Play cards, your system will assign the IRQs and DMAs automatically. You can verify the IRQ allocation either by using Microsoft's Diagnostic (MSD.EXE) utility which is in the DOS directory or through the Windows 95 resources menu.



### 3.4.2 Installation Procedure

The KR630 has 7 expansion slots on-board. There are two 16-bit ISA Bus and four 32-bit PCI expansion slots. One of the expansion slots is shared by the connectors and will accommodate either an ISA or a PCI expansion card, but not both at the same time. All four PCI expansion slots accept PCI Bus master cards and fully supported by PCI 2.1 Specifications. One 32-bit AGP expansion slot. The Accelerated Graphics Port (AGP or A.G.P.) is a high performance, component level interconnect targeted at 3D graphical display applications and is based on a set of performance extensions or enhancements to PCI. A.G.P. interface specification Rev. 1.0 compliant.

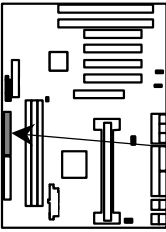
To install expansion cards, please read the expansion card's documentation, which shipped with the expansion card, for instructions.

**NOTICE:** Some expansion cards require an IRQ to work and may cause a conflict. There are total of 16 IRQs but some free for expansion cards. In case of a conflict please contact the system manufacturer for technical support.

## 3.5 Installation of IDE, I/O cables connection

### 3.5.1 Primary IDE Connector (39-pin block) (J25)

This connector supports two primary channel IDE devices via a ribbon cable. When two IDE devices are installed using the primary IDE connector make sure that the second IDE device is set to slave mode as indicated the device's manual.

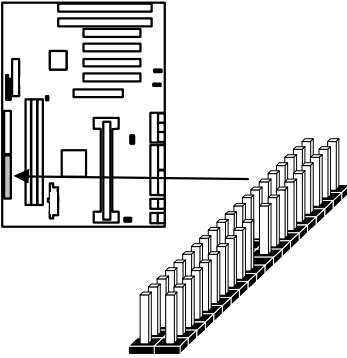


Pin	Signal Name	Pin	Signal Name
1	Reset IDE	2	Ground
3	Host Data 7	4	Host Data 8
5	Host Data 6	6	Host Data 9
7	Host Data 5	8	Host Data 10
9	Host Data 4	10	Host Data 11
11	Host Data 3	12	Host Data 12
13	Host Data 2	14	Host Data 13
15	Host Data 1	16	Host Data 14
17	Host Data 0	18	Host Data 15
19	Ground	20	Key
21	DDRQ0 (DDRQ1)	22	Ground
23	I/O Write #	24	Ground
25	I/O Read #	26	Ground
27	IOCHRD	28	Pull-down
29	DDACK0 (DDACK1) #	30	Ground
31	I/O 14 (I/O 15)	32	IOCS 16#
33	Addr 1	34	Reserved
35	Addr 0	36	Addr 2
37	Chip Select 1P (1S) #	38	Chip Select 3P (3S)
39	Activity #	40	Ground

**WARNING:** When you connect a ribbon cable to these ports, you must orient the cable connector so that the PIN 1 edge of the cable is at the PIN 1 end of the on-board connector.

### 3.5.2 Secondary IDE Connector (39-pin block) (J26)

This connector supports two secondary channel IDE devices and 120MB Floppy drives via a ribbon cable. When two IDE devices are installed using the secondary IDE connector make sure that the second IDE device is adjusted to slave mode as instructed in the device's manual.

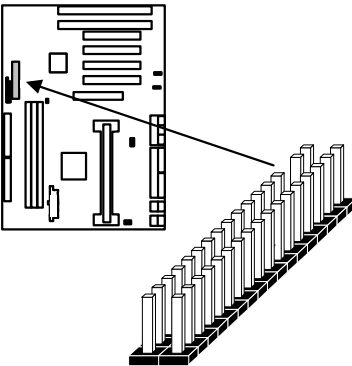


Pin	Signal Name	Pin	Signal Name
1	Reset IDE	2	Ground
3	Host Data 7	4	Host Data 8
5	Host Data 6	6	Host Data 9
7	Host Data 5	8	Host Data 10
9	Host Data 4	10	Host Data 11
11	Host Data 3	12	Host Data 12
13	Host Data 2	14	Host Data 13
15	Host Data 1	16	Host Data 14
17	Host Data 0	18	Host Data 15
19	Ground	20	Key
21	DDR00 (DDR01)	22	Ground
23	I/O Write #	24	Ground
25	I/O Read #	26	Ground
27	IOCHRD	28	Pull-down
29	DDACK0 (DDACK1) #	30	Ground
31	IRO14 (IRO15)	32	IOCS16#
33	Addr 1	34	Reserved
35	Addr 0	36	Addr 2
37	Chip Select 1P (1S) #	38	Chip Select 3P (3S)
39	Activity #	40	Ground

**WARNING:** When you connect a ribbon cable to these ports, you must orient the cable connector so that the PIN 1 edge of the cable is at the PIN 1 end of the on-board connector.

### 3.5.3 Floppy Drive connector (33-pin block) (J17)

The FDC sub-system can control three types (1.2, 1.44, and 2.88MB) of floppy drivers or compatible tape drives. Connection to floppy drives is via a header (J20). The floppy disk interface includes 48mA drivers and Schmit inputs on the drive interface.

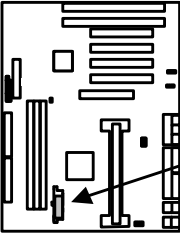


Pin	Signal Name	Pin	Signal Name
1	Ground	2	DRV DEN0
3	Ground	4	Reserved
5	Key	6	DRV DEN1
7	Ground	8	FDINDEX#
9	Ground	10	FDM00#
11	Ground	12	FD DS1#
13	Ground	14	FD DS0#
15	Ground	16	FDM01#
17	MSEN1	18	FDDIR#
19	Ground	20	FDSTEP#
21	Ground	22	FDWD#
23	Ground	24	FDWE#
25	Ground	26	FDTRK0#
27	Ground	28	FDWPD#
29	MID0	30	FDRDATA#
31	Ground	32	FDHEAD#
33	MIDI	34	DSKCHG#

**WARNING:** When you connect a ribbon cable to this port, you must orient the cable connector so that the PIN 1 edge of the cable is at the PIN 1 end of the on-board port

### 3.5.4 Power Input Connector (20-pin block) (J16)

This connector supports a standard ATX power supply. When connecting, make sure the lock key matches the hook attached on a power supply cable. The power cord should be unplugged when you connect it.

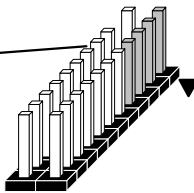
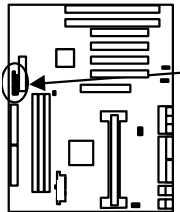


Pin	Name (Function)	Pin	Name (Function)
11	3.3V (Power +3.3 Voltage)	1	3.3V (Power +3.3 Voltage)
12	-12V (Power -12 Voltage)	2	3.3V (Power +3.3 Voltage)
13	Ground (Power Ground)	3	Ground (Power Ground)
14	PS_ON (Soft-Off Control)	4	+5V (Power +5 Voltage)
15	Ground (Power Ground)	5	Ground (Power Ground)
16	Ground (Power Ground)	6	+5V (Power +5 Voltage)
17	Ground (Power Ground)	7	Ground (Power Ground)
18	-5V (Power -5 Voltage)	8	PWRGD (Power Good)
19	+5V (Power +5 Voltage)	9	5VSB (Standby 5V)
20	+5V (Power +5 Voltage)	10	+12V (Power +12 Voltage)

**WARNING:** Make sure that the ATX Power Supply can take at least 10 mAMP load on the 5 Volt Standby lead (5VSB). You may experience difficulty in powering on your system without this.

### 3.5.5 HDD LED Connector (4-pin) (J19)

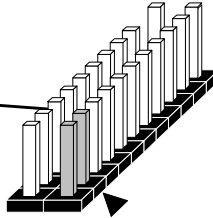
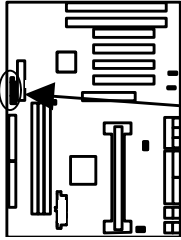
The KR630 supports one straight 4 pin header for connecting to front panel Hard Disk activity LED indicator.



Pin	Signal Name
1	LED+
2	LED-
3	LED-
4	LED+

### 3.5.6 Reset Switch Connector (2-pin) (J23)

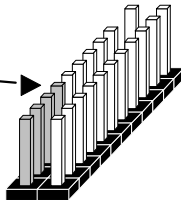
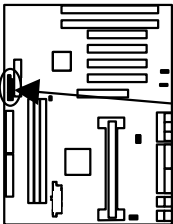
This connector supports the front panel case-mounted reset. It is advised that the reset switch be used for rebooting the system in order to extend the life of the system's power supply.



Pin	Signal Name
1	Reset
2	Ground

### 3.5.7 Speaker Connector or on Board Buzzer(4-pin) (J24)

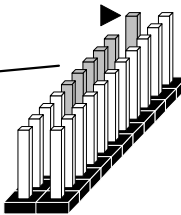
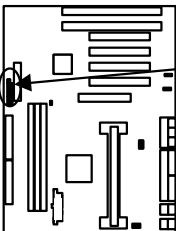
A1 x 4 straight header is available on the mainboard to drive a chassis-mounted speaker if desired. The header can select between the internal Buzzer by installing a jumper between pin 3 and 4. When the chassis mounted speaker is needed the jumper should be removed.



Pin	Signal Name
1	SPKRDAT
2	No connect
3	Buzzer/Speaker Sel
4	Logic ground

### 3.5.8 IrDA connector (7-pin) (J20)

The KR630 mainboard offers an IrDA function. The case must reserve space for the IR module if you want to use the IrDA function. This connector supports optional wireless transmission and reception of infrared data. The module mounts in a small opening on the system case that supports this feature. The efficient distance is 100cm and the transfer rate is 1.44M KB/sec.

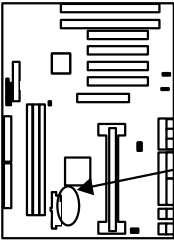


Pin	Signal Name
1	VCC
2	Key
3	IR-RX(Receive)
4	LOGIC GROUND
5	IR-TX (Transmit)
6	RX for IR Remote
7	Fast IR

**IMPORTANT:** You must configure this feature through the BIOS. This IR module is supported by the mainboard via a 7-pin connector and ribbon cable.

### 3.5.9 CPU Fan connector (J15)

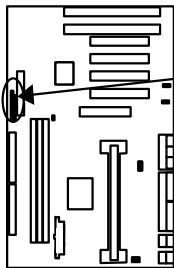
This connector supports Pentium II CPU cartridge fan power



Pin	Signal Name
1	LOGIC-GROUND
2	FAN-PWR-ON
3	FANTACHI

### 3.5.10 Power Button Connector (J22)

This connector supports the ATX case-mounted Power Switch, which supports System Suspend function. When the BIOS setting set the Delay 4 second to "On", the System can be set to Suspended Mode once you push the Power Switch no longer then 4 second, otherwise (push the Power Switch over 4 seconds) the System can be totally Power Off. When the BIOS setting set the Delay 4 second to "Off", then Power Switch function work as regular Power Switch.

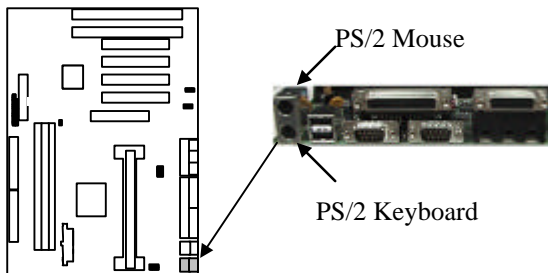


Pin	Signal Name
1	LOGIC-GROUND
2	PWRBTN



### 3.5.11 PS/2 Keyboard and Mouse Connector (J4)

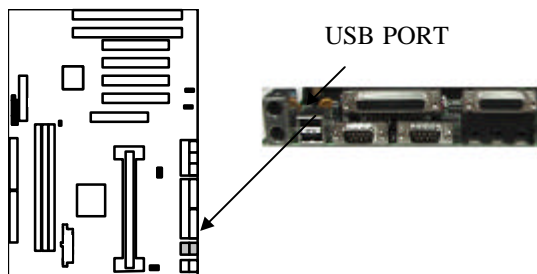
The KR630 mainboard offers 1 PS/2 Keyboard and 1 PS/2 Mouse port as below.



Pin	Signal Name
1	DATA
2	No connect
3	Ground
4	+5V (Fused)
5	Clock
6	No connect

### 3.5.12 Universal Serial Bus (USB) Port (J8)

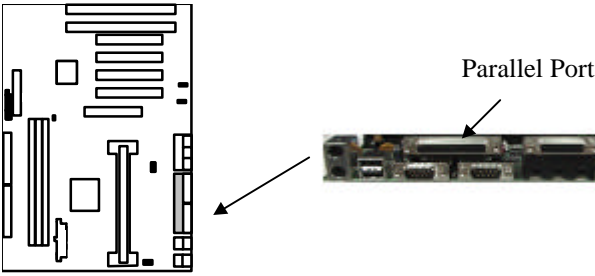
This KR630 mainboard has two USB on-board header. USB devices provide a more convenient operating environment and improve data transferring capacity. True Plug-and-play, this new bus technology will support over 127 different peripherals through a Hub.



Pin	Signal Name
1	VCC
2	-Data
3	+Data
4	Ground

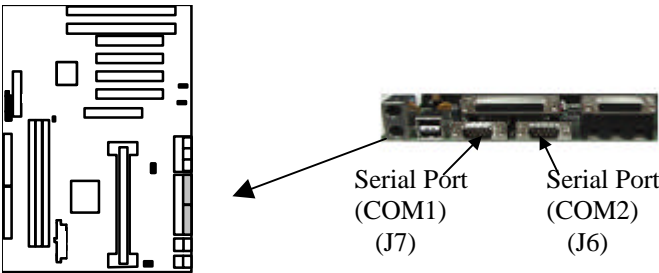
### 3.5.13 Parallel Port Connector (25-pin Block) (J9)

The motherboard includes a bi-directional parallel port (EPP/ECP compatible). The parallel port is capable of being disabled or remapped to either the secondary LPT address or the primary LPT address through BIOS if other parallel ports are installed. The parallel port contains 12mA source output drivers on the drive interface and incorporates Chip Protect circuitry for protection against damage due to printer's power being on.



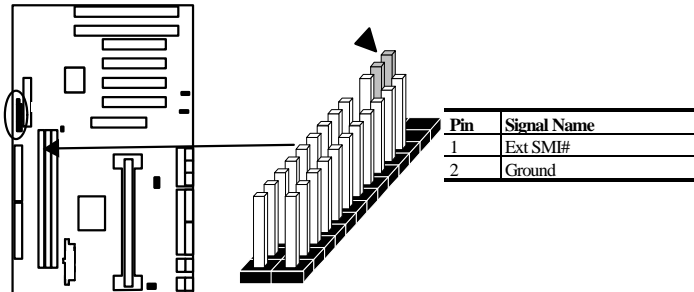
### 3.5.14 Serial Port (J6/J7)

The KR630 has two serial ports. The electrical characteristics are compliant with the EIA-232-D Serial Communications Specifications. The serial ports may be remapped above other installable serial ports or disabled through the BIOS.



### 3.5.15 Sleep button (Suspend) (J21) (Option)

The system can be forced to Suspended mode once the switch be pressed, and the BIOS Power management setting should be Enabled.



## 3.6 Installation of Audio connector(The Following Sections are Available with Optional Audio Only)

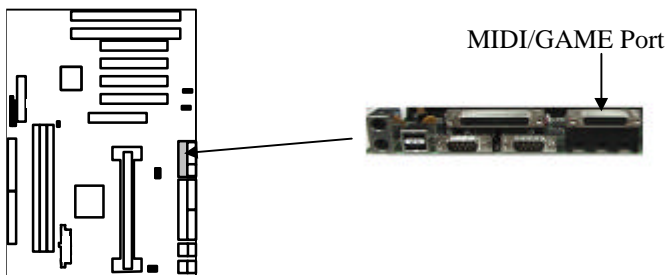
The Audio Connectors on the KR630 provides access to the Line-Out, Line-In and Microphone-In..

### 3.6.1 MIDI/GAME Port (J5) (Option)

For the music enthusiast the MIDI connector also provides access to receive and send MIDI data between instruments or other MIDI capable systems. The MIDI interface is MPU-401 UART compatible with FIFOs. The same MIDI connector provides the Joystick game compatible interface.

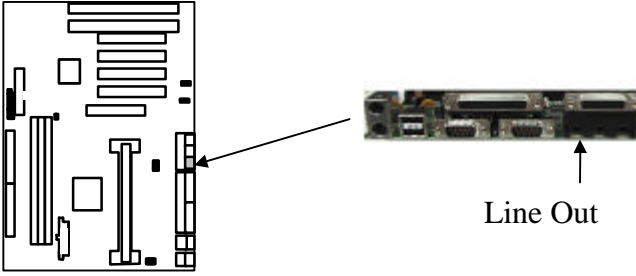
MIDI/GAME port Connector Pinout

PIN	DESCRIPTION	PIN	DESCRIPTION
1	FUSED-VCC	2	F0/GAME PORT DATA 4
3	JOY3/GAME PORT DATA 0	4	LOGIC-GROUND
5	LOGIC-GROUND	6	JOY2/GAME PORT DATA 1
7	F1/GAME PORT DATA 5	8	FUSED-VCC
9	FUSED-VCC	10	F2/GAME PORT DATA 6
11	JOY1/GAME PORT DATA 2	12	TXD/MIDI TRANSMIT DATA
13	JOY0/GAME PORT DATA 3	14	F3/GAME PORT DATA 7
15	RXD/MIDI RECEIVE DATA	16	N/C



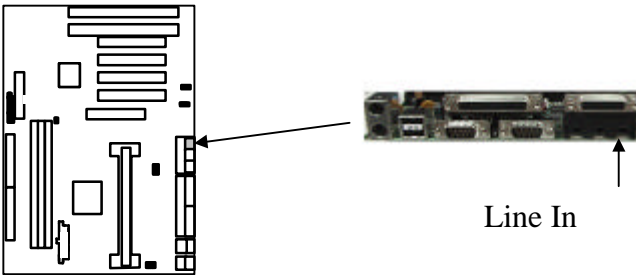
### 3.6.2 Line Out Connector(J3)(Option)

The audio subsystem provides external sound through a user accessible stereo jack connector (J3) soldered to the mainboard. This jack will allow the connection of self-amplified speakers. SRS 3D sound is only available through this port.



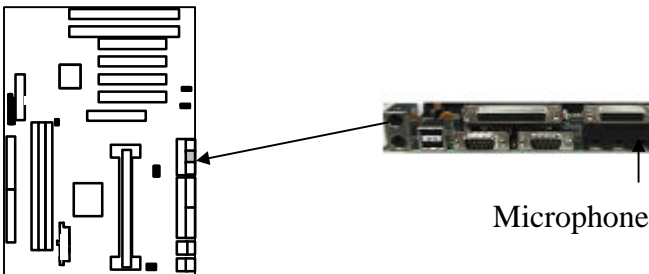
### 3.6.3 Line In Connector(J1)(Option)

An externally accessible stereo jack connector (J1) is soldered to the mainboard to allow the connection of a stereo audio input source into the sound subsystem.



### 3.6.4 Microphone In Connector(J2)(Option)

An external accessible jack connector (J2) is soldered to the mainboard to allow the connection of a microphone for voice input.



### 3.6.5 Wavetable Music Synthesizer(U1 Socket Upgrade Option)

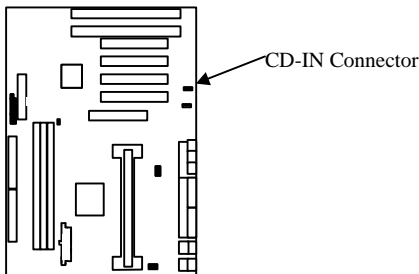
The KR630 includes an upgrade socket for adding the Crystal CS9236 Single-Chip Wavetable Music Synthesizer. The CS9236 is a complete General MIDI Wavetable music synthesizer on a single integrated circuit. The MIDI interpreter, synthesis engine, effects processing and all RAM and ROM memories (including the Wavetable sample ROM) are included on the chip. This all-digital device receives a standard serial MIDI data stream and outputs a stereo 16-bit digital audio stream at 44.1 kHz.

The CS9236 features a high quality General MIDI sample set including 128 melodic instruments and 47 percussion sounds. The synthesis engine is capable of generating up to 32 simultaneous notes. Digital reverberation and chorusing effects are included on the chip.

The CS9236 is the ideal low-cost General MIDI synthesizer solution for a number of applications, including multimedia, games, karaoke and low-cost musical instruments and MIDI sound modules.

### 3.6.6 CD-IN Connector (J27)(Option)

Access to the CD-IN connector for audio input from CD-ROM drives is through a male socket (J27) on the mainboard.



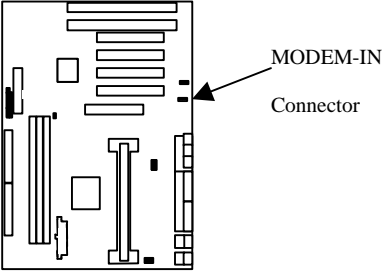
CD-IN Conn. Pinout

PIN	SIGNAL
1	GROUND
2	LEFT CHANNEL
3	GROUND
4	RIGHT CHANNEL

### 3.6.7 MODEM-IN Connector(J28)(Option)

Access to the MODEM-IN connector for audio input and output from the phone connection is through a male socket on the mainboard.

### MODEM-IN Conn. Pinout



<b>PIN</b>	<b>SIGNAL</b>
1	GROUND
2	VOICE IN
3	GROUND
4	VOICE OUT

# 4 BIOS Setup

The KR630 mainboard uses an Award BIOS, which is stored in a Flash EEPROM and which can be upgraded using a floppy disk-based program. The BIOS has a built-in Setup program that allows users to modify the basic system configuration setting. The settings are then stored in a dedicated batter-backed memory, called CMOS RAM, that retains the information when the power is turned off. The BIOS provides critical low-level support for the system central processing, memory, and I/O subsystems. The Award BIOS has been customized by adding important, but nonstandard, features such as virus and password protection, power management, and detailed fine-tuning of the chipset controlling the system. The rest of this manual is intended to guide you through the process of configuring your system using Setup.

## 4.1 Starting Setup

The Award BIOS is immediately activated when you first turn on the computer. The BIOS reads system configuration information in CMOS RAM and begins the process of checking out the system and configuring it through the power-on self test (POST). When these preliminaries are finished, the BIOS seeks an operating system on the of the data storage devices (hard drive, floppy drive, etc.). The BIOS launches the operating system and hands control of system operations to it.

To start Setup, press the <Del> key some time before or while a message similar to this appears briefly at the bottom of the screen during POST:

Press **DEL** to enter SETUP

If the message disappears before you respond and you still wish to enter Setup, reboot the system to try again by turning the system OFF then ON or pressing the “RESET” button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys. If you do not press the keys at the correct time and the system does not reboot, an error message will be displayed at the bottom of the screen and you will again be asked to,

Press **F1** to continue, **DEL** to enter SETUP

### 4.1.1 Setup Keys

These keys help you navigate in Setup:

<↑>, <↓>	Move to previous or next item
<<->, <->>	Move to the item in the left or right hand
<Esc>	Main Menu – Quit and not save changes into CMOS Other Pages -- Exit current page and return to Main Menu
<PgUp> / <+>	Increase the numeric value or make changes
<PgDn> / <->	Decrease the numeric value or make changes

<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Change color from total 16 colors. F2 to select Shift-F2 color forward, Shift-F2 to select color backward
<F3>	Calendar, only for Status Page Setup Menu
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F7>	Load the Setup default
<F10>	Save all the CMOS changes, only for Main Menu

### 4.1.2 Getting Help

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press Esc or the F1 key again.

### 4.1.3 In Case of Problems

If after making and saving system changes with Setup, you discover that your computer no longer is able to boot, the Award BIOS supports an override to the CMOS settings that resets your system to its default configuration.

You can invoke this override by immediately pressing Insert; when you restart your computer You can restart by either using the ON/OFF switch, the RESET button or by pressing Ctrl-Alt-Delete.

The best advice is to alter only settings that you thoroughly understand. In particular, do not change settings in the Chipset screen without a good reason. The Chipset defaults have been carefully chosen by Award or your system manufacturer for the best performance and reliability. Even a seemingly small change to the Chipset setup may causing the system to become unstable.



## 4.2 Main Setup Menu

When you enter the Award BIOS CMOS Setup Utility, a Main Menu (Figure 1) appears on the screen. The Main Menu allows you to select from several Setup functions and two exit choices. Use the arrow keys to select among the items and press Enter to accept and enter the sub-menu.

A brief description of each highlighted selection appears at the bottom of the screen.

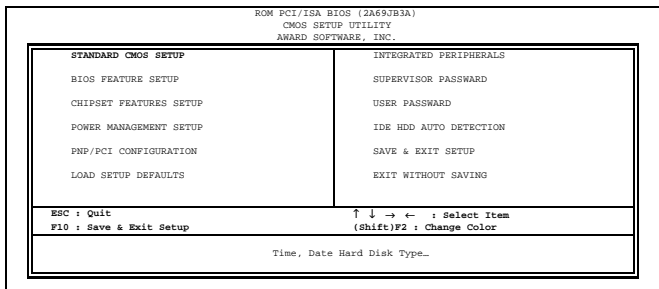


Figure 1

Following is a brief summary of each Setup category.

Standard CMOS	Options in the original PC AT-compatible BIOS.
BIOS Features	Award enhanced BIOS options.
Chipset Features	Options specific to your system chipset.
Power Management	Advanced Power Management (APM) options.
PnP/PCI Configuration	Plug and Play standard and PCI Local Bus configuration options.
Integrated Peripherals	I/O subsystems that depend on the integrated peripherals controller in your system.
Supervisor/User Password Setting	Change, set, or disable a password. In BIOS versions that allow separate user and supervisor passwords, only the supervisor password permits access to Setup. The user password generally allows only power-on access.
IDE HDD Auto Detection	Automatically detect and configure IDE hard disk parameters.
Load Setup Defaults	Setup defaults are factory settings for optimal-performance system operations.
Save & Exit Setup	Save settings in nonvolatile CMOS RAM and exit Setup.
Exit Without Save	Abandon all changes and exit Setup.

## 4.3 Standard CMOS Setup Menu

In the Standard CMOS Menu (Figure 2) you can set the system clock and calendar, record disk drive parameters and the video subsystem type, and select the type of errors that stop the BIOS POST.

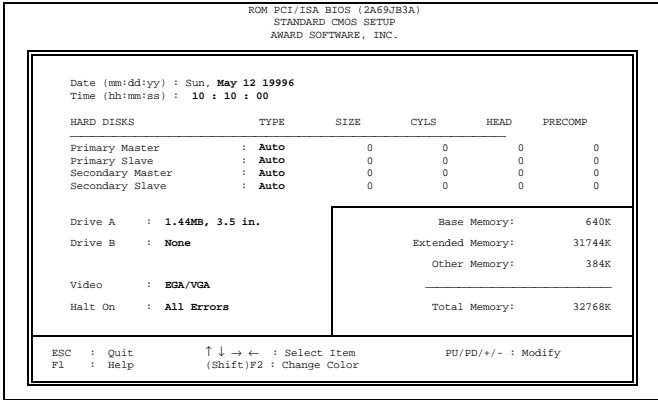


Figure 2

### 4.3.1 Date

The BIOS determines the day of the week from the other date information. This field is for information only. Press the left or right arrow key to move to the desired field (date, month, year). Press the PgUp or PgDn key to increment the setting, or type the desired value into the field.

### 4.3.2 Time

The time format is based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00. Press the left or right arrow key to move to the desired field. Press the PgUp or PgDn key to increment the setting, or type the desired value into the field.

### 4.3.3 Hard Disks

The BIOS supports up to four IDE drives. This section does not show information about ther IDE devices, such as a CD-ROM drive, or about other hard drive types, such as SCSI drives.

**NOTE:** We recommend that you select type AUTO for all drives.

The BIOS can automatically detect the specifications and optimal operating mode of almost ll IDE hard drives. When you select type AUTO for a hard drive, the BIOS detects its specifications during POST, every time the system boots.

If you do not want to select drive type AUTO, other methods of selecting the drive type are available:

- 1) Match the specifications of your installed IDE hard drive(s) with the preprogrammed values for drive types 1 through 45.
- 2) Select USER and enter values into each drive parameter field.
- 3) Use the IDE HDD AUTO DETECTION function in Setup.

Here is a brief explanation of drive specifications:

- **Type:** The BIOS contains a table of pre-defined drive types. Each defined drive type has a specified number of cylinders, number of heads, write precompensation factor, landing zone, and number of sectors. Drives whose specifications do not accommodate any pre-defined type are classified as type USER.
- **Size:** Disk drive capacity (approximate). Note that this size is usually slightly greater than the size of a formatted disk given by a disk-checking program.
- **Cyls:** Number of cylinders
- **Head:** Number of heads
- **Precomp:** Write precompensation cylinder
- **Landz:** Landing zone
- **Sector:** Number of sectors
- **Mode:** Auto, Normal, large, or LBA
  - **Auto:** The BIOS automatically determines the optimal mode.
  - **Normal:** Maximum number of cylinders, heads, and sectors supported are 1024, 16, and 63.
  - **Large:** For drives that do not support LBA and have more than 1024 cylinders.
  - **LBA (Logical Block Addressing):** During drive accesses, the IDE controller transforms the data address described by sector, head, and cylinder number into a physical block address, significantly improving data transfer rates. For drives with greater than 1024 cylinders.

### 4.3.4 Drive A/B type

Select the correct specifications for the diskette drive(s) installed in the computer.

None	No diskette drive installed
360K, 5.25 in	5-1/4 inch PC-type standard drive; 360 kilobyte capacity
1.2M, 5.25 in	5-1/4 inch AT-type high-density drive; 1.2 megabyte capacity
720K, 3.5 in	3-1/2 inch double-sided drive; 720 kilobyte capacity
1.44M, 3.5 in	3-1/2 inch double-sided drive; 1.44 megabyte capacity
2.88M, 3.5 in	3-1/2 inch double-sided drive; 2.88 megabyte capacity

### 4.3.5 Video

Select the type of primary video subsystem in your computer. The BIOS usually detects the correct video type automatically. The BIOS supports a secondary video subsystem, but you do not select it in Setup.

EGA/VGA	Enhanced Graphics Adapter/Video Graphics Array. For EGA, VGA, SEGA, SVGA or PGA monitor adapters.
CGA 40	Color Graphics Adapter, power up in 40 column mode.
CGA 80	Color Graphics Adapter, power up in 80 column mode.
MONO	Monochrome adapter, includes high resolution monochrome adapters.

### 4.3.6 Halt on

During the power-on self-test (POST), the computer stops if the BIOS detects a hardware error. You can tell the BIOS to ignore certain errors during POST and continue the boot-up process. These are the selections:

No errors	POST does not stop for any errors.
All errors	If the BIOS detects any non-fatal error, POST stops and prompts you to take corrective action.
All, But Keyboard	POST does not stop for a keyboard error, but stops for all other errors.
All, But Diskette	POST does not stop for diskette drive errors, but stops for all other errors.
All, But Disk/Key	POST does not stop for a keyboard or disk error, but stops for all other errors.

### 4.3.7 Memory

You cannot change any values in the Memory fields; they are only for your information. The fields show the total installed random access memory (RAM) and amounts allocated to base memory, extended memory, and other (high) memory, RAM is counted in kilobytes (KB: approximately one thousand bytes) and megabytes (MB: approximately one million bytes).

RAM is the computer's working memory, where the computer stores programs and data currently being used, so they are accessible to the CPU. Modern personal computers may contain up to 64MB, 128MB, or more.

### Base Memory

Typically 640 KB. Also called conventional memory. The DOS operating system and conventional applications use this area.

### Extended Memory

Above the 1-MB boundary. Early IBM personal computers could not use memory above 1 MB, but current PCs and their software can use extended memory.

### Other Memory

Between 640 KB and 1 MB; often called High memory. DOS may load terminate-and-stay-resident (TSR) programs, such as device drivers, in this area, to free as much conventional memory as possible for applications. Lines in your CONFIG.SYS file that start with LOADHIGH load programs into high memory

### Total memory

System total memory is the sum of base memory, extended memory, and other memory.

## 4.4 BIOS Features Setup Menu

This screen (Figure 3) contains industry-standard options additional to the core PC AT BIOS. This section describes all fields offered by Award Software in this screen. Some fields may vary from those in your Setup program. Your system board designer may omit or modify some fields.

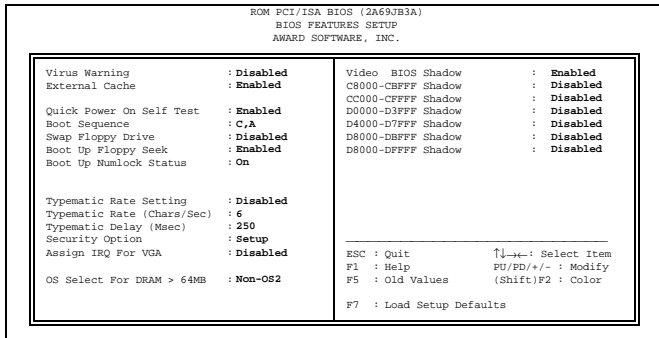


Figure 3

### 4.4.1 Virus Warning

When enabled, you receive a warning message if a program (specifically, a virus) attempts to write to the boot sector or the partition table of the hard disk drive. You should then run an anti-virus program. Keep in mind that this feature protects only the boot sector, not the entire hard drive.

*NOTE: Many disk diagnostic programs that access the boot sector table can trigger the virus warning message. If you plan to run such a program, we recommend that you first disable the virus warning.*

### 4.4.2 CPU Level 1/Level 2 Cache

Cache memory is additional memory that is much faster than conventional DRAM (system memory). Pentium II CPU has Level 1 and Level 2 build-in cache. These fields allow you to Enabled (Default) or Disabled to turn on or turn off the memory cache ability.

### 4.4.3 Boot Sequence

The original IBM PCs loaded the DOS operating system from drive A (floppy disk), so IBM PC-compatible systems are designed to search for an operating system first on drive A, and then on drive C (hard disk). However, the BIOS now offers 10 different boot sequence

options of three drives each. In addition to the traditional drives A and C, options include IDE hard drives D,E, and F; plus a SCSI hard drive and a CD-ROM drive.

#### **4.4.4 Swap Floppy Drive**

This field is effective only in systems with two floppy drives. Selecting Enabled assigns physical drive B to logical drive A, and physical drive A to logical drive B.

#### **4.4.5 Boot Up Floppy Seek**

When *Enabled*, the BIOS tests (seeks) floppy drives to determine whether they have 40 or 80 tracks. Only 360-KB floppy drives have 40 tracks; drives with 720 KN< 1.2MB, and 1.44MB capacity all have 80 tracks. Because very few modern PCs have 40-track floppy drives, we recommend that you set this field to *Disabled* to save time.

#### **4.4.6 Boot Up NumLock Status**

Toggle between *On* or *off* to control the state of the NumLock key when the system boots. When toggled *On*, the numeric keypad generates numbers instead of controlling cursor operations.

#### **4.4.7 Typematic Rate Setting**

When *Disabled*, the following two items (Typematic Rate and Typematic Delay) are irrelevant. Keystrokes repeat at a rate determined by the keyboard controller in your system. When *Enabled*, you can select a typematic a\rate and typematic delay.

#### **4.4.8 Typematic Rate (Chars/Sec)**

When the typematic rate setting is enabled, you can select a typematic rate (the rate at which character repeats when you hold down a key) of 6,8,10,12,15,20,24, or 30 characters per second.

#### **4.4.9 Typematic Delay (Msec)**

When the typematic rate setting is enabled, you can select a typematic delay (the delay before key strokes begin to repeat) of 250, 500, 750 or 1000 milliseconds.

#### **4.4.10 Security Option**

If you have set a password, select whether the password is required every time the System boots, or only when you enter Setup.

### 4.4.11 PCI/VGA Palette Snoop

Some display cards that are not standard VGA such as graphics accelerators or MPEG cards may not show the correct colors, the setting can correct this problem once you set it to Enable, To default setting leave at Disabled.

### 4.4.12 OS select for DRAM>64MB

Select OS2 only if you are running OS/2 operating system with greater than 64MB of RAM on your system.

### 4.4.13 Shadow

Software that resides in a read-only memory (ROM) chip on a device is called *firmware*. The Award BIOS permits *shadowing* of firmware such as the system BIOS, video BIOS, and similar operating instructions that come with some expansion peripherals, such as, for example, a SCSI adapter.

Shadowing copies firmware from ROM into system RAM, where the CPU can read it through the 16-bit or 32-bit DRAM bus. Firmware not shadowed must be read by the system through the 8-bit x-bus. Shadowing improves the performance of the system BIOS and similar ROM firmware for expansion peripherals, but it also reduces the amount of high memory (640KB to 1 MB) available for loading device drivers, etc.

Enable shadowing into each section of memory separately. Many system designers hardwire shadowing of the system BIOS and eliminate a System BIOS Shadow option.

Video BIOS shadows into memory area C0000-C7FFF> The remaining areas shown on the BIOS Features Setup screen may be occupied by other expansion card firmware. If an expansion peripheral in your system contains ROM-based firmware, you need to know the address range the ROM occupies to shadow it into the correct area of RAM.



## 4.5 Chipset Features Setup Menu

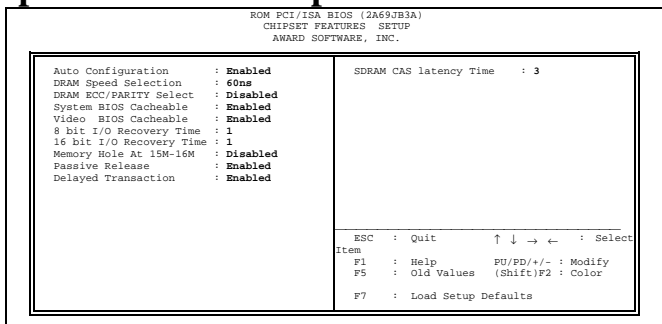


Figure 4

### 4.5.1 Auto Configuration

Auto Configuration selects predetermined optimal values of chipset parameters. When *Disabled*, chipset parameters revert to setup information stored in CMOS. Many fields in this screen are not available when Auto Configuration is *Enabled*.

### 4.5.2 DRAM Speed Selection

The value in this field must correspond to the speed of the DRAM installed in your system. **DO NOT** change the default setting of this fields, as determined by the system board manufacturer for the installed DRAM. This value is access speed, so a lower value means a faster system.

### 4.5.3 DRAM ECC/Parity Select

Select Parity, ECC, or Disabled, depending on the type of DRAM installed in your system. Also you need install Pentium II CPU cartridge with ECC support for ECC function properly once you installed 36-bit SIMM.

### 4.5.4 System BIOS Cacheable

Select Enabled allows caching of the system BIOS ROM at F000h-FFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

### 4.5.5 Video BIOS Cacheable

Select Enabled allows caching of the video BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

### **4.5.6 8 Bit I/O Recovery Time**

The recovery time is the length of time, measured in CPU clocks, which the system will delay after the completion of an input/output request. This delay takes place because the CPU is operating so much faster than the input/output bus that the CPU must be delayed to allow for the completion of the I/O.

This item allows you to determine the recovery time allowed for 8 bit I/O. Choices are from NA, 1 to 8 CPU clocks.

### **4.5.7 16 Bit I/O Recovery Time**

This item allows you to determine the recovery time allowed for 16 bit I/O. Choices are from NA, 1 to 4 CPU clocks.

### **4.5.8 Memory Hole At 15M-16M**

In order to improve performance, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory space below 16 MB. You can reserve this area of system memory for ISA adapter ROM. When that area is reserved it cannot be cached. The user information of peripherals that need to use this area of system memory usually discusses their memory requirements.

### **4.5.9 Passive Release**

When Enabled, CPU to PCI bus accesses are allowed during passive release. Otherwise, the arbiter only accepts another PCI master access to local DRAM.

### **4.5.10 Delayed Transaction**

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select Enabled to support compliance with PCI specification version 2.1.

## 4.6 Power Management Setup Menu

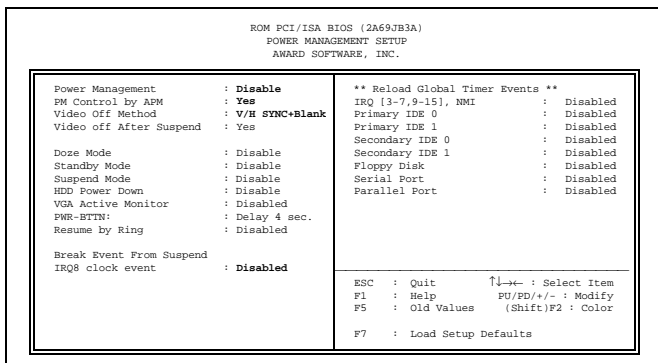


Figure 5

### 4.6.1 Power Management

This option allows you to select the type (or degree) of power saving for Doze, Standby, and Suspend modes. See the section *PM Timers* for a brief description of each mode. This table describes each power management mode:

Disable	Global Power Management will be disabled
Max Saving	Maximum power savings. <b>Only Available for SL CPUs.</b> Inactivity period is 1 minute in each mode.
User Define	Set each mode individually. Select time-out periods in the <i>PM Timers</i> section, following.
Min Saving	Minimum power savings. Inactivity period is 1 hour in each mode (except the hard drive).

### 4.6.2 PM Control by APM

If Advanced Power Management (APM) is installed on your system, selecting *Yes* gives better power savings.

### 4.6.3 Video Off Method

Determines the manner in which the monitor is blanked.

V/H SYNC+Blank	System turns off vertical and horizontal synchronization ports and writes blanks to the video buffer.
DPMS Support	Select this option if your monitor supports the Display Power Management Signaling (DPMS) standard of the Video Electronics Standards Association (VESA). Use the software supplied for your video subsystem to select video power management values.
Blank Screen	System only writes blanks to the video buffer.

#### **4.6.4 Video Off After**

As the system moves from lesser to greater power-saving modes, select the mode in which you want the monitor to blank.

#### **4.6.5 Doze Mode**

Defines the continuous idle time before the system entering DOZE mode. The range is from 1 min to 1 Hr. If any item defined is enabled & active, STANDBY timer will be reloaded

#### **4.6.6 Standby Mode**

After the selected period of system inactivity (1 minute to 1 hour), the fixed disk drive and the video shut off while all other devices still operate at full speed.

#### **4.6.7 Suspend Mode**

After the selected period of system inactivity (1 minute to 1 hour), all devices except the CPU shut off.

#### **4.6.8 HDD Power Down**

After the selected period of drive inactivity (1 to 15 minutes), the hard disk drive powers down while all other devices remain active.

#### **4.6.9 VGA Active Monitor**

When *Enabled*, any video activity restarts the global timer for Standby mode.

#### **4.6.10 Soft-Off by PWR-BTTN**

When this feature set to "Delay 4 sec.", the system will become suspend once the Power Switch be pressed within 4 second, and the system will Power Off once the Power Switch be pressed over 4 second. If it set to "Instant Off", the system will unconditional Power Off once the Power Switch be pressed.

#### **4.6.11 Resume by Ring**

The system will be awaked by telephone ring if this feature set to Enable

### 4.6.12 IRQ8 Clock Event

You can turn *On* or *Off* monitoring of IRQ8 (the Real Time Clock) so it does not awaken the system from Suspend mode.

### 4.6.13 Reload global Timer Events

When *Enabled*, an event occurring on each device listed below restarts the global time for Standby mode.

- IRQ3 -7, 9-15, NMI
- Primary IDE 0
- Primary IDE 1
- Secondary IDE 0
- Secondary IDE 1
- Floppy Disk
- Serial Port
- Parallel Port

## 4.7 PCI Configuration Setup Menu

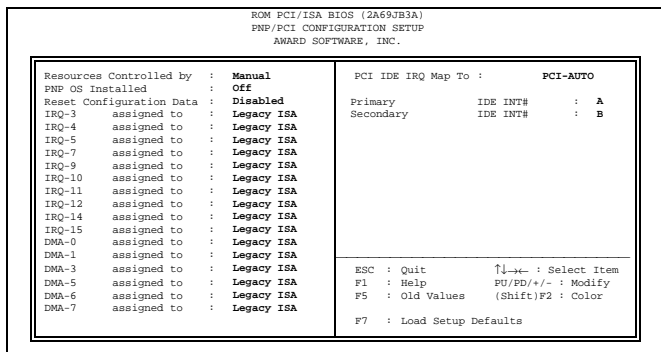


Figure 6

### 4.7.1 PNP OS Installed

The default setting is No when a non PNP OS installed or to prevent reassigning of interrupt setting for some of non PNP cards installed. Select Yes if the OS is PNP aware (e.g. Windows 95).

### 4.7.2 Resources Controlled by

The Award Plug and Play BIOS can automatically configure all the boot and Plug and Play-compatible devices. If you select Auto, all the interrupt request (IRQ) and DMA assignment fields disappear, as the BIOS automatically assigns them.

### 4.7.3 Reset Configuration Data

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Date (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system cannot boot.

### 4.7.4 IRQ # Assigned to

When resources are controlled manually, assign each system interrupt as one of the following types, depending on the type of device using the interrupt.

Legacy ISA Devices compliant with the original PC AT bus specification, requiring a specific interrupt (such as IRQ4 for serial port 1).

PCI/ISA PnP Devices compliant with the Plug and Play standard, whether designed for PCI or ISA bus architecture.

#### **4.7.5 DMA # Assigned to**

When resources are controlled manually, assign each system DMA channel as one of the following types, depending on the type of device using the interrupt:

Legacy ISA Devices compliant with the original PC AT bus specification, requiring a specific DMA channel.

PCI/ISA PnP Devices compliant with the Plug and Play standard, whether designed for PCI or ISA bus architecture.

#### **4.7.6 PCI IRQ Activated by**

Leave the IRQ trigger set at Level unless the PCI device assigned to the interrupt specifies Edge-triggered interrupts.

#### **4.7.7 PCI IDE IRQ Map To**

This field lets you select PCI IDE IRQ mapping or PC AT (ISA) interrupts. If your system does not have one or two PCI IDE connectors on the system board, select values according to the type of IDE interface(s) installed in your system (PCI or ISA). Standard ISA interrupts for IDE channels are IRQ14 for primary and IRQ15 for secondary.

#### **4.7.8 Primary/Secondary IDE INT#**

Each PCI peripheral connection is capable of activating up to four interrupts: INT# A, INT# B, INT# C and INT#D. By default, a PCI connection is assigned INT# A. Assigning INT#B has no meaning unless the peripheral device requires two interrupt services rather than just one. Because the PCI IDE interface in the chipset has two channels, it requires two interrupt services. The primary and secondary IDE INT# fields default to values appropriate for two PCI IDE channels, with the primary PCI IDE channel having a lower interrupt than the secondary.

## 4.8 Integrated peripherals Menu

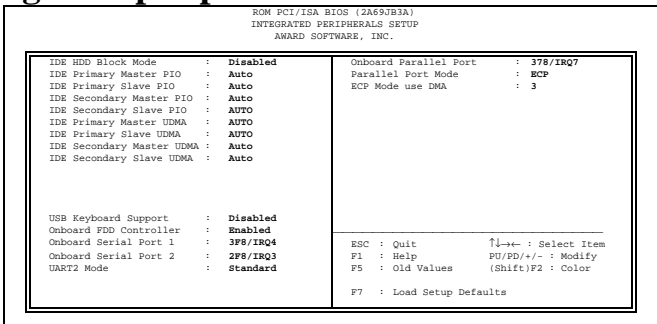


Figure 7

### 4.8.1 IDE HDD Block Mode

Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support.

### 4.8.2 On-Chip Primary/Secondary PCI IDE

The integrated peripheral controller contains an IDE interface with support for two IDE CHANNELS. Select Enabled to activate each channel separately.

### 4.8.3 Onboard FDC Controller

Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install an add-in FDC or the system has no floppy drive, select disabled in this field.

### 4.8.4 Onboard Serial Port 1/2

Select an address and corresponding interrupt for the first and second serial ports.

### 4.8.5 UART2 Mode

Select the UART2 mode, there are 2 option Standard or IrDA.



### 4.8.6 Onboard Parallel Port

Select a logical LPT port name and matching address for the physical parallel (printer) port.

### 4.8.7 Onboard Parallel Mode

Select an operating mode for the onboard parallel (printer) port. Select Normal unless your hardware and software require one of the other modes offered in this field.

SPP	Standard parallel port mode (Default)
EPP	Bi-directional mode
ECP	Fast, buffered
ECP+EPP	Bi-directional and buffered

### 4.8.8 ECP Mode Use DMA

Select a DMA channel for the port.

### 4.8.9 USB Keyboard Support

Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.

## 4.9 IDE HDD Auto Detection

BIOS setup will display all possible modes that supported by the HDD including NORMAL, LBA & LARGE.

If HDD does not support LBA modes, no ‘LBA’ option will be shown.

If no of cylinders is less than or equal to 1024, no ‘LARGE’ option will be show

Users can select a mode which is appropriate for them.

## 4.10 Password Setting

When you select this function, a message appears at the center of the screen:

### **ENTER PASSWORD:**

Type the password, up to eight characters, and press Enter. Typing a password clears any previously entered password from CMOS memory. Now the message changes:

### **CONFIRM PASSWORD:**

Again, type the password and press Enter.

To abort the process at any time, press Esc.

In the *Security Option* item in the **BIOS Features** Setup screen select *System or Setup*:

**System** Enter a password each time the system boots and whenever you enter Setup.

**Setup** Enter a password whenever you enter Setup.

**NOTE:** *To clear the password, simply press Enter when asked to enter a password. Then the password function is disabled.*

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