S/N:0002 Printed in Taiwan

User's Manual

MotherBoard

S/N:0002

Slot1 440BX ATX Mainboard

S/N:0002 Rev. 3.1

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1.1. Package Checklist

This mainboard package contains the following items. Please inspect the package contents and confirm that the following items are included. There is anything missing or damaged, call your vendor for instructions before proceeding. The package includes :

Item	Quantity
Mainboard	1
Flat Cable : Floppy ribbon cable (34-pin)	1
IDE ribbon cable (40-pin)	1
User's Manual	1
Software Support CD-ROM	1
Retention Module	1

1.2. Specifications

Chipset	System	Intel 82440BX
CPU		Intel Pentium Ⅱ/Ⅲ/ Celeron processor with slot 1 package
CPU Host Clock	66MHz	66MHz, 75MHz, 83MHz
	100MHz	100MHz, 103MHz, 112MHz, 133MHz
Form Factor		ATX
BIOS		AWARD Green , Plug & Play
Memory		Three 168-pin DIMMs [support EDO(3.3V)/ SDRAM / PC-100 MHz SDRAM] , Max. 768MB SDRAM main memory (Support ECC)
Slots	ISA	3 x 16-Bit ISA
	PCI	4 x 32-Bit PCI
	Shared	1 x PCI / ISA
	AGP	One AGP(Accelerated Graphics Port) slot for high performance 3D graphical card
I/O		1. Two high speed 16550 compatible serial ports. 2. One Multi-Mode parallel port (SPP/EPP/ECP standard). 3. Two Universal Serial Bus ports (USB). 4. PS/2 keyboard and PS/2 mouse ports. 5. Two IDE ports ,supports four IDE devices (PIO mode 4, DMA mode 2, Ultra DMA 33), and LS-120/ZIP disk driver 6. Two 720KB/1.2MB/1.44MB/2.88MB floppy disk controller. 7. IrDA interface.
Features		1. Menu In BIOS (M.I.B.) for use for nature. 2. Keyboard Password Power On. 3. Wake on LAN (WOL). 4. Real Time Clock Wake-up. 5. Modem Ring Wake-up. 6. CPU FAN control in Suspend On/Off. 7. Trend ChipAwayVirus in BIOS, and PC-Cillin software in CD-ROM to ensure virus free. 8. SB-LINK for PCI Sound (optional). 9. CPU and System Temperature / Voltage / Fan speed monitor function (optional).
Dimension		Four-Layer PCB ATX size (305mm X 190mm)

1.2.1. Technology

AGP (Accelerated Graphics Port)

The system board is equipped with 1 AGP slot, AGP is an interface designed to support high performance 3D graphics card. It utilizes a dedicated pipeline to access system memory for texturing, delivering up to 533MB/sec, bandwidth for 3D graphics applications. AGP in this Pentium II Processor based system board will deliver faster and better graphics with your PC.

SDRAM (Synchronous Dynamic Random Access Memory)

The system board supports unbuffered SDRAM memory. SDRAM is a DRAM technology that uses the clock on the chip to synchronize with the CPU clock so that the timing of the memory chips and the timing of the CPU are synchronized. This saves time during transmission of data, subsequently increasing system performance.

Ultra DMA-33 Bus Master IDE

Synchronous Ultra DMA mode provides data transfer rate up to a maximum of 33MB/sec. Which is twice the data transfer rate of Enhanced IDE or ATA-2. This enables the CPU to operate more efficiently when handing simultaneous events.

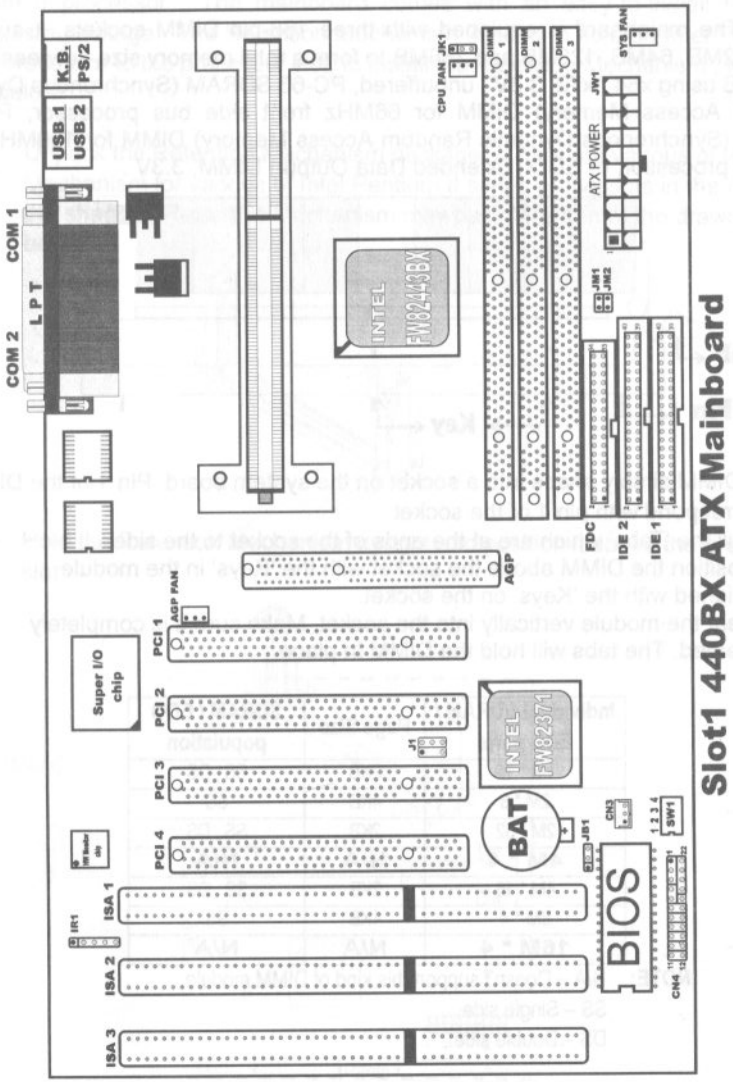
ECC (Error Checking and Correction)

ECC is a function that allows the system to recover from memory failure. It detects single-bit and multiple-bit errors and corrects single-bit error thus providing uninterrupted processing of data. To use this function, you must install DIMM that supports parity. Refer to the "Installing System Memory" section in Chapter 2 (2.1.1.) of this manual.

ACPI (Advanced Configuration and Power Interface)

The system board is designed to meet the ACPI specification. ACPI has energy saving features that enables PCs to implement Power Management and Plug–and–Play with operating systems that support OS Direct Power management.

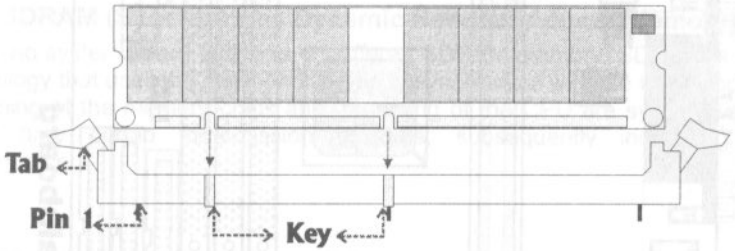
2.1. Mainboard Layout Drawing



2.2. Hardware Installation Steps

2.2.1. Installing System Memory

The mainboard is equipped with three 168-pin DIMM sockets, it supports 16MB, 32MB, 64MB, 128MB and 256MB to form a total memory size between 16MB to 768MB using x64 / x72, 3.3V , unbuffered, PC-66 SDRAM (Synchronous Dynamic Random Access Memory) DIMM for 66MHz front side bus processor, PC-100 SDRAM (Synchronous Dynamic Random Access Memory) DIMM for 100MHz front side bus processor, or EDO (Extended Data Output) DIMM, 3.3V .



A DIMM simply snaps into a socket on the system board. Pin 1 of the DIMM must correspond with pin 1 of the socket

- Pull the 'Tabs' which are at the ends of the socket to the side.
- Position the DIMM above the socket with the 'Keys' in the module aligned with the 'Keys' on the socket.
- Seat the module vertically into the socket. Make sure it is completely seated. The tabs will hold the DIMM in place.

Individual SDRAM / EDO parts	Page Size	SDRAM / EDO population
1M * 16	2KB	SS , DS
2M * 8	4KB	SS
2M * 32	2KB	SS , DS
4M * 4	**N/A**	**N/A**
4M * 16	2KB	SS , DS
8M * 4	4KB	SS
16M * 4	**N/A**	**N/A**

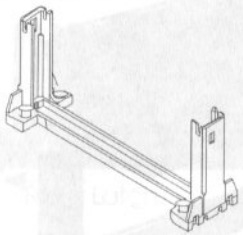
NOTE: N/A – Doesn't support this kind of DIMM module.
SS – Single side.
DS – Double side.

2.2.2. Installing a Processor

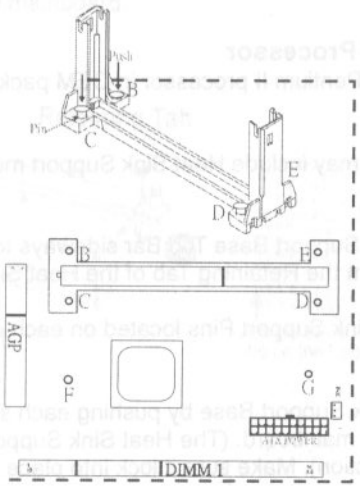
2.2.2.1. Installing the Retention Mechanism

The mainboard is equipped with a 242-pin processor slot for installing an Intel Pentium II processor . The mainboard comes with an easy-to-install Retention Mechanism package . The Retention Mechanism is used to hold an Intel Pentium II series processor to the processor slot, to install the Retention Mechanism , follow the steps below.

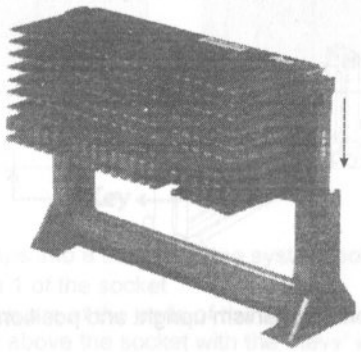
1. Unpack the Retention Mechanism package. (There are various of Retention Mechanism for various of Intel Pentium II series processors in the market, the shape of Retention Mechanism may be different from the drawing below).



2. Hold the Retention Mechanism upright and position it above the processor slot .



3. Now slide the Retention Mechanism downward so that it fits over the processor slot. Firmly press the ends of the Retention Mechanism until it snaps into place. The Retention Mechanism will only fit in one direction. It has a keying mechanism so that the notch on one of the inner side of the Retention Mechanism will fit into the key on one side of the processor slot.
4. Firmly press the 'pins' located at the four corners (B,C,D,E) of the Retention Mechanism to as far as it will go. These pins will stabilize the Retention Mechanism onto the mainboard.
5. Install the processor CPU into the Retention Mechanism , and slide the supports onto the pegs.

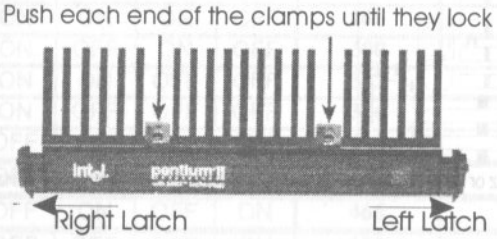


2.2.2.2. Installing OEM Processor

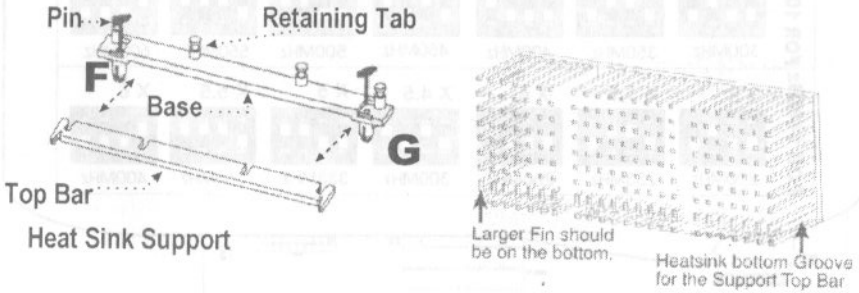
If you are using Intel Pentium II processor in OEM package, please follow the steps bellow.

1. Your OEM package may include Heat Sink Support mechanism, heatsink and processor .
2. Push the Heat Sink Support Base Top Bar sideways to free the Head Sink Support Top Bar from the Retaining Tab of the Heat Sink Support Base.
3. Remove the Heat Sink Support Pins located on each end of the Heat Sink Support Base.
4. Install the Head Sink Support Base by pushing each side down firmly into hole F and G on the mainboard. (The Heat Sink Support Base can only be installed in one direction). Make sure it lock into place.

5. Replace the Head Sink Support Pins on each end of the Heat Sink Support Base. These pins will insert through the Heat Sink Support Base to secure it to the mainboard.
6. Hold the processor and push the latches toward the center of the processor until they click into place.
7. Hold the processor so that the headsink is facing toward the Heat Sink Support Base on the mainboard. Slide the processor into the Retention Mechanism. Ensure that the aligment notch in the processor fits into the plug in the processor slot. Push the processor down firmly, with even pressure on both sides of the top, until it is seated.
8. Push the latches on the processor outward until they click into place in the Retention Mechanism. The latches must be secured for proper electrical connection of the processor.

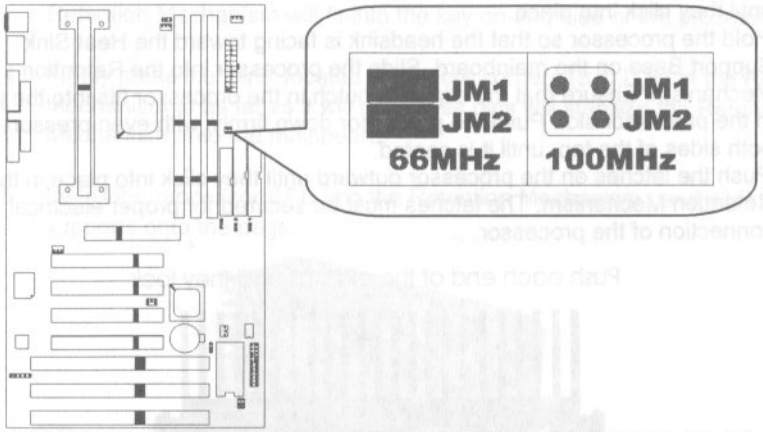


9. Slide the Heat Sink Support Top Bar into the heatsink until it locks into place.
10. Attach the small end of the power cable to the three-pin connector on the heatsink fan, then attach the large end fan connector to the three-pin fan connector on the mainboard.



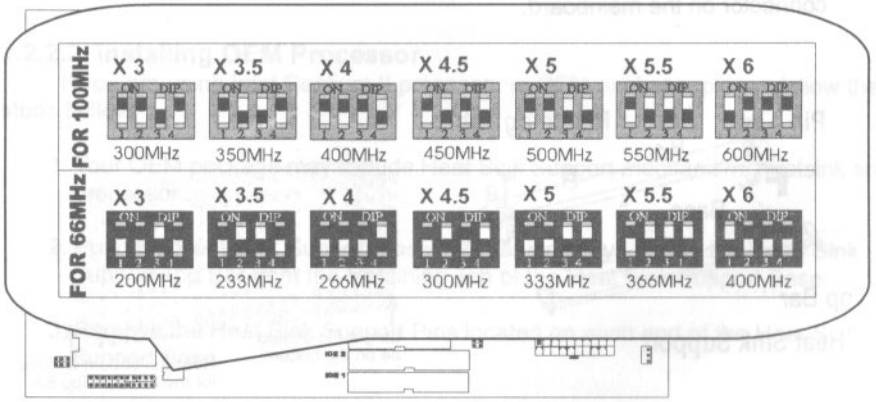
2.2.3. Jumper Setting for the Processor

※ CPU Bus Clock Jumper Setting (JM1, JM2) :



CPU Bus Clock 66MHz or 100MHz Jumper Setting (JM1 JM2). Default setting : 100MHz (JM1 – Off, JM2 – Off).

※ CPU Ratio Jumper Setting (SW1) :



NOTE : (Ratio) x (CPU Bus Clock) = CPU Frequency

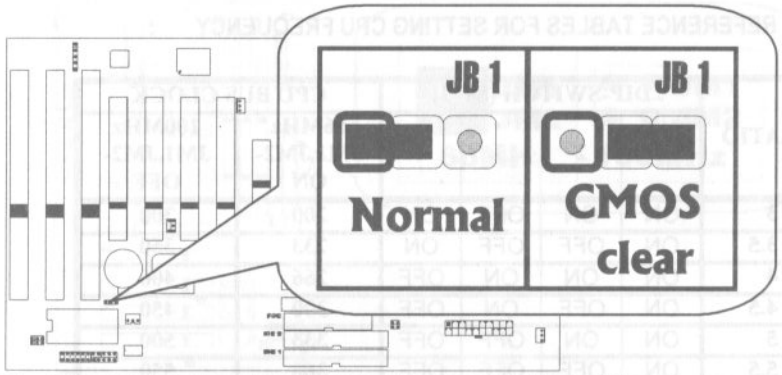
2.2.4. Quick Reference Tables of Processor Jumper Setting

※ QUICK REFERENCE TABLES FOR SETTING CPU FREQUENCY :

RATIO	DIP-SWITCH (SW1)				CPU BUS CLOCK	
	1	2	3	4	66MHz JM1,JM2-ON	100MHz JM1,JM2-OFF
X 3	ON	ON	OFF	ON	200	300
X 3.5	ON	OFF	OFF	ON	233	350
X 4	ON	ON	ON	OFF	266	400
X 4.5	ON	OFF	ON	OFF	300	450
X 5	ON	ON	OFF	OFF	333	500
X 5.5	ON	OFF	OFF	OFF	366	550
X 6	OFF	ON	ON	ON	400	600
X 6.5	OFF	OFF	ON	ON	433	650
X 7	OFF	ON	OFF	ON	466	700
X 7.5	OFF	OFF	OFF	ON	500	750
X 8	OFF	ON	ON	OFF	533	800

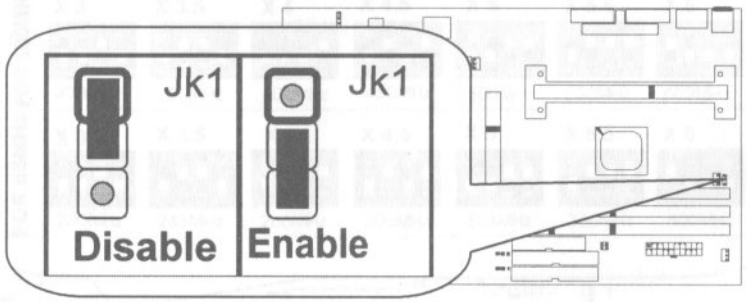
2.2.5. Other Jumper Settings on the Mainboard

2.2.5.1. Jumper Setting for CMOS Clear

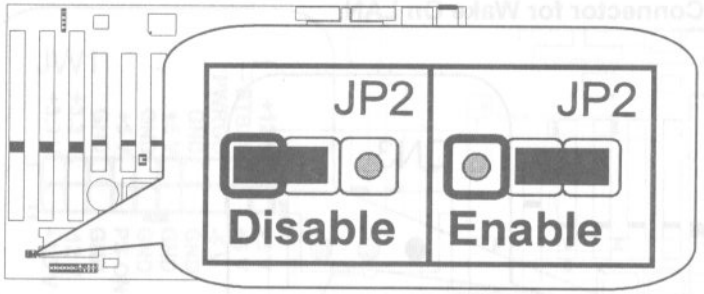


- If the mainboard crashes due to any inappropriate BIOS setting, you may need to clear CMOS data by setting the jumper to "Clear" position and stay there for 2 seconds at least, then put the jumper back to the "Normal" position.
- You need to enter the BIOS setup utility to save the BIOS settings (Save & Exit Setup) when the system boot first time after the CMOS data was cleared.
- It is recommended that you clear the CMOS data after you replace current BIOS flash ROM chip with new chip.

2.2.5.2. Jumper Setting for Keyboard Power On



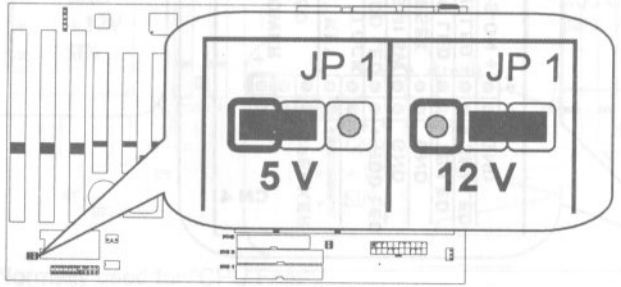
2.2.5.3. Jumper Setting for AC Recovery



NOTE : (1 – 2) **Disable** – Default setting.
(2 – 3) **Enable** – When the system is powered down by inappropriate AC power shut down, the "Enable" setting will enable the system to power on automatically after AC power recovers.

For Winbond(83977TF) super I/O only

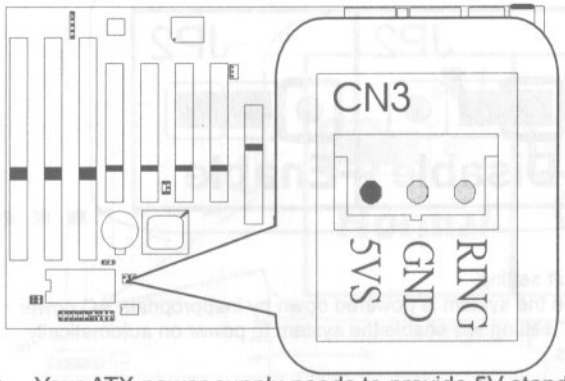
2.2.5.4. Jumper Setting for BIOS flash ROM type



- You should not change the default setting unlees you change current BIOS flash ROM chip with different type of flash ROM chip.

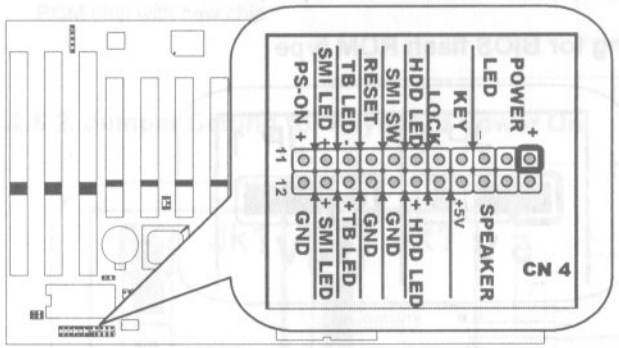
2.2.6. Ports and Connectors on the Mainboard

2.2.6.1. Connector for Wake On LAN



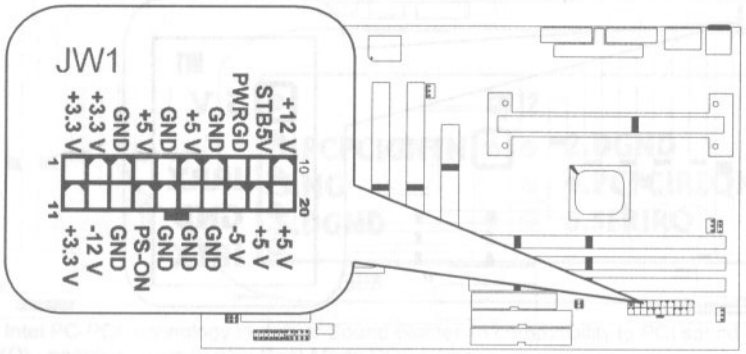
- Your ATX power supply needs to provide 5V stand-by voltage and Min. 700 mA stand-by current to make Wake – On – LAN function properly.

2.2.6.2. Connector for System Panel

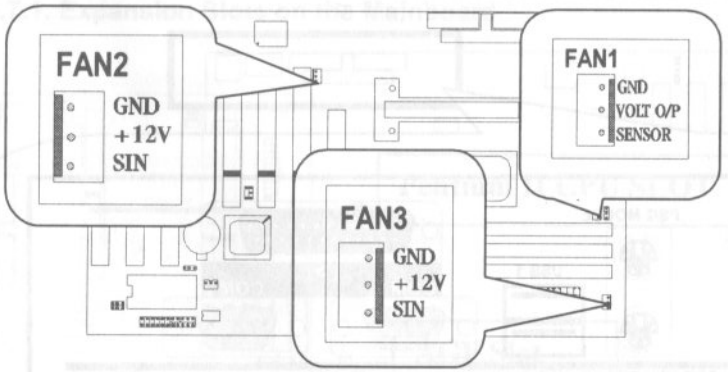


Pin 1-3	:POWER LED	Pin 4,5	: Key Lock	Pin 6,17	: HDD LED
Pin 7,16	: SMI SW	Pin 8,15	: Reset	Pin 9,14	: Turbo LED
Pin 10,13	: SMI LED	Pin 11,12	: PS-ON	Pin 19-22	: Speaker

2.2.6.3. Connector for ATX Power

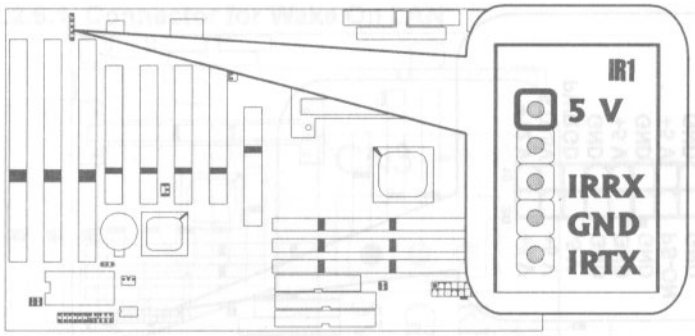


2.2.6.4. Connector for CPU & System FAN

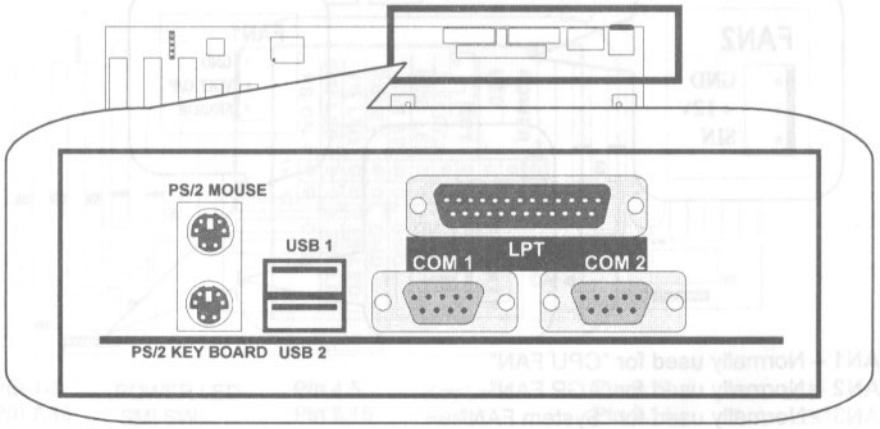


FAN1 – Normally used for "CPU FAN"
FAN2 – Normally used for "AGP FAN"
FAN3 – Normally used for "System FAN"

2.2.6.5. Connector for IrDA Interface



2.2.6.6. Connector for External Panel



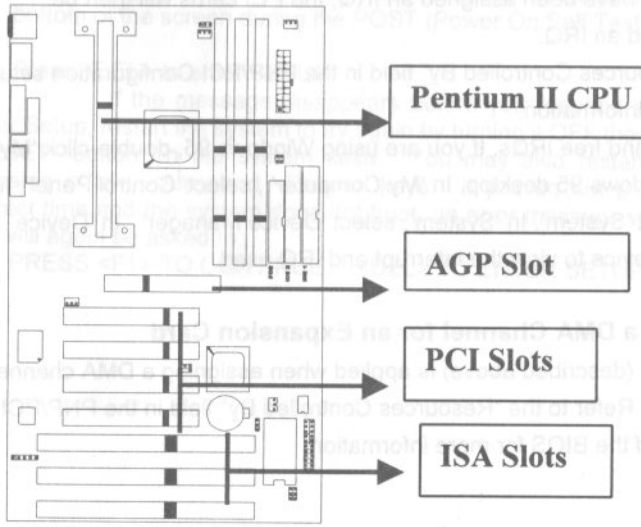
PS/2 Keyboard Connector	6-pin mini-din Female
PS/2 Mouse Connector	6-pin mini-din Female
USB (Universal Serial Bus) Port Connector	Two 9-pin Female
LPT Parallel Printer Connector	25-pin D-sub Female
Serial Port COM1 and COM2 Connector	Two 9-pin D-sub Male

2.2.6.7. Connector for SB-Link (Optional)

Uses Intel PC-PCI technology to deliver Sound Blaster 16 compatibility to PCI sound card (AWE64D) , enabling users to play Real-Mode DOS game.

2.2.7. Installing Expansion Cards

2.2.7.1. Expansion Slots on the Mainboard



2.2.7.2. Installing Steps

1. Switch off computer's power.
2. Locate for a free expansion slot on the system chassis. Remove the screw and slot cover. Save the slot cover for future use.
3. Unpack the expansion card. Refer to the expansion card user's manual for any hardware settings such as jumpers.
4. Position the expansion card above the free slot. When the card's edge – connector is aligned with the slot, press firmly on the top of the card to seat it. Secure it with the screw you removed in step2.
5. Replace the computer's cover and switch on the power.

2.2.7.3. Assigning an IRQ for an Expansion Card

The system has a total of 16 IRQs but most of them have been used by different components on the system leaving only 6 free IRQs available for expansion cards. There are 2 types of ISA cards : Legacy (configured manually using jumpers) and PnP (IRQs are assigned automatically). When both type of cards exist, assign an IRQ for the Legacy cards first. The PnP card will then automatically be assigned an IRQ that has not been used by the Legacy cards.

After all ISA cards have been assigned an IRQ, the PCI cards will then be automatically assigned an IRQ.

Refer to the "Resources Controlled By" field in the PNP/PCI Configuration setup of the BIOS for more information.

To view the used and free IRQs. If you are using Windows 95, double-click 'My Computer' in the Windows 95 desktop. In 'My Computer' , select 'Control Panel'. In 'Control Panel', select 'System'. In 'System', select 'Device Manager' . In 'Device Manager' , select a device to view the interrupt and IRQ used.

2.2.7.4. Assigning a DMA Channel for an Expansion Card

The same method (described above) is applied when assigning a DMA channel to an expansion card. Refer to the "Resources Controlled By" field in the PNP/PCI Configuration setup of the BIOS for more information.

3.1. Introduction

This manual discusses Award's Setup program built into the ROM BIOS. The Setup program allows users to modify the basic system configuration. This special information is then stored in battery back-up RAM so that it retains the Setup information when the power is turned off.

The Award Basic Input / Output System (BIOS) support for detailed fine-tuning of the chipset controlling the entire system.

The rest of this manual is intended to guide you through the process of configuring your system using Setup.

Starting Setup

The Award BIOS is immediately activated when you first power on the computer. The BIOS reads the system information contained in the CMOS and begins the process of checking out the system and configuring it. When it finishes, the BIOS will seek an operating system on one of the disks and then launch and turn control over to the operating system.

While the BIOS is in control, the Setup program can be activated by one of two ways:

1. By pressing <Del> immediately after switching the system on, or
2. By pressing the <Del> key when the following message appears briefly at the bottom of the screen during the POST (Power On Self Test).

Press <DEL> to enter SETUP.

If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it 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 boot, an error message will be displayed and you will again be asked to...

PRESS <F1> TO CONTINUE, <DEL> TO ENTER SETUP

3.1.1. Main Menu

ROM PCI / ISA BIOS
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 SETUP DEFAULTS	

Esc : Quit F5 : Menu In BIOS ↑↓→← : Select Item
F10 : Save & Exit setup (Shift)F2 : Change Color

Virus Protection, Boot Sequence....

Once you enter the Award BIOS CMOS Setup Utility, the Main Menu will appear 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.

Note that a brief description of each highlighted selection appears at the bottom of the screen.

Press <F5> key to see all Menu In BIOS (M.I.B.)

- M.I.B. is a friendly design for user to review BIOS menu by a simple keystroke

Setup Items

The main menu includes the following main setup categories. Recall that some systems may not include all entries.

3.1.2. Standard CMOS Setup

ROM PCI / ISA BIOS
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Date (mm: dd: yy) : Wed, Jul, 29, 1998/9/25
Time (hh: mm: ss) : 9 : 25 : 5

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

Drive A : 1.44M, 3.5in.
Drive B : None

Video : EGA/VGA
Halt On : All Errors

Base Memory :	640K
Extended Memory :	261120K
Other Memory :	384K
Total Memory :	262144K

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

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

* DATE

The date format is <day>, <month>, <date>, <year>. Press <F3> to show the calendar.

day	The day, from Sun to Sat, determined by the BIOS and is display-only
date	The date, from 1 to 31 (or the maximum allowed in the month)
month	The month, Jan through Dec.
year	The year, from 1994 through 2079

* TIME

The time format is <hour> <minute> <second>. The time is calculated based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

* DAYLIGHT SAVING

The category adds one hour to the clock when daylight-saving time begins. It also subtracts one hour when standard time returns.

Enabled	Enable daylight-saving
Disabled	Disable daylight-saving

* Primary Master/ Primary Slave/ Secondary Master/ Secondary Slave

The categories identify the types of 2 channels that have been installed in the computer. There are 45 predefined types and 4 user definable types are for Enhanced IDE BIOS. Type 1 to Type 45 are predefined. Type user is user-definable.

Press PgUp or PgDn to select a numbered hard disk type or type the number and press <Enter>. Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category. If your hard disk drive type is not matched or listed, you can use Type "User" to define your own drive type manually.

If you select Type "User", you will need to know the information listed below. Enter the information directly from the keyboard and press <Enter>. This information should be included in the documentation from your hard disk vendor or the system manufacturer.

If the controller of HDD interface is ESDI, the selection shall be "Type 1".

If the controller of HDD interface is SCSI, the selection shall be "None".

If you select Type "Auto", BIOS will Auto-Detect the HDD & CD-ROM Drive at the POST stage and showing the IDE for HDD & CD-ROM Drive.

TYPE	drive type
CYLS.	number of cylinders
HEADS	number of heads
PRECOMP	write precom
LANDZONE	landing zone
SECTORS	number of sectors
MODE	mode type

If a hard disk has not been installed select NONE and press <Enter>.

* Drive A Type/ Drive B Type

The category identifies the types of floppy disk drive A or drive B that have been installed in the computer.

The choice : None, 360K (5.25in) , 1.2M (5.25in) , 720K (3.5in), 1.44M (3.5in), 2.88M (3.5in) .

* VIDEO

The category selects the type of video adapter used for the primary system monitor. Although secondary monitors are supported, you do not have to select the type in Setup.

The choice: EGA/VGA, CGA 40, CGA 80, MONO .

* HALT ON

The category determines whether the computer will stop if an error is detected during power up.

The choice: No errors, All errors; All, But Keyboard; All, But Diskette; All, But Disk/Key .

* MEMORY

The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

Base Memory

The POST will determine the amount of base (or conventional) memory installed in the system. The value of the base memory is typically 512K for systems with 512K memory installed on the motherboard, or 640K for systems with 640K or more memory installed on the motherboard.

Extended Memory

The BIOS determines how much extended memory is present during the POST. This is the amount of memory located above 1MB in the CPU's memory address map.

Other Memory

This refers to the memory located in the 640K to 1024K address space. This is memory that can be used for different applications. DOS uses this area to load device drivers in an effort to keep as much base memory free for application programs. The BIOS is the most frequent user of this RAM area since this is where it shadows RAM

3.1.3. BIOS Features Setup

ROM PCI / ISA BIOS
BIOS FEATURES SETUP
AWARD SOFTWARE, INC.

ChipAwayVirus on Guard	: Enabled	Video BIOS	Shadow	: Enabled
CPU Internal Cache	: Enabled	C8000-CBFFF	Shadow	: Disabled
External cache	: Enabled	CC000-CFFFF	Shadow	: Disabled
Quick Power On Self Test	: Enabled	D0000-D3FFF	Shadow	: Disabled
Boot Sequence	: A, C, SCSI	D4000-D7FFF	Shadow	: Disabled
Swap Floppy Drive	: Disabled	D8000-DBFFF	Shadow	: Disabled
Boot Up Floppy Seek	: Enabled	DC000-DFFFF	Shadow	: Disabled
Boot Up Numlock Status	: On			
Boot Up System Speed	: High			
Gete A20 Option	: Normal			
Typematic Rate Setting	: Disabled			
Typematic Rate (Chars/Sec)	: 6			
Typematic Delay (Msec)	: 256			
Security Option	: Setup			
IDE Second Channel Control	: Disabled	Esc : Quit	↑↓→← : Select Item	
PS/2 mouse function control	: Disabled	F1 : Help	PU/PD/+/- : Modify	
PCI/VGA Palette Snoop	: Disabled	F5 : Old Values	(Shift)F2 : Color	
OS Select For DRAM > 64MB	: Non-OS2	F6 : Load BIOS Defaults		
Report No FDD For WIN 95	: No	F7 : Load Setup Defaults		

This section allows you to configure your system for basic operation. You have the opportunity to select the system default speed, boot-up sequence, keyboard operation, shadowing and security.

* ChipAwayVirus on Guard

When this item is *Trend ChipAwayVirus (TCAV) on Guard*. Boot Viruses pose the most severe threat because they can move from a floppy diskette to your hard drive in less then a second. And it all happens during the loading of the boot sector. Provides a virus-free boot and operating system, experience peace of mind though hardware-base virus protection, detects known and unknown boot viruses with rule-based technology, receive immediate protection! Already installed on this board!.

The Choice: Enabled, Disabled .

* CPU Internal Cache/ External Cache

These two categories speeds up memory access. However, it depends on CPU /Chipset design. The default value is enable.

The Choice: Enabled, Disabled .

* Quick Power On Self Test

This category speeds up Power On Self Test (POST) after you power up the computer. If it is set to Enable, BIOS will shorten or skip some check items during POST.

The Choice: Enabled, Disabled .

* Boot Sequence

This category determines which driver to search first for the disk operating system (i.e.,DOS). Default value is A,C.

The Choice: A,C,SCSI ; C,A,SCSI ; C,CDROM,A ; CDROM,C,A ; D,A,SCSI ; SCSI,A,C ; SCSI,C,A ; C only ; LS/ZIP,C .

* Swap Floppy Driver

This item allows you to determine whether enable the swap floppy driver or not.

The Choice: Enabled, Disabled .

* Boot Up Floppy Seek

During POST , BIOS will determine if the floppy disk driver installed is 40 or 80 tracks. 360K type is 40 tracks while 720K, 1.2M and 1.44M are all 80 tracks.

The Choice: Enabled, Disabled .

* Boot Up Numlock Status

This allows you to determine the default status of the numeric keypad. By default, the system boots up with NumLock on .

The Choice: On , Off .

* Gate A20 Option

This entry allows you to select how the gate A20 is handled. The gate A20 is a device used to address memory above 1 Mbytes. Initially, the gate A20 was handled via a pin on the keyboard. Today, while keyboards still provide this support, it is more common, and much faster, for the system chipset to provide support for gate A20.

The Choice: Normal, Fast.

* Typematic Rate Setting

This determines if the typematic rate is to be used. When disabled, con-tinually holding down a key on your keyboard will generate only one instance. In other words, the BIOS will only report that the key is down. When the typematic rate is enabled, the BIOS will report as before, but it will then wait a moment, and, if the key is still down, it will begin the report that the key has been depressed repeatedly. For example, you would use such a feature to accelerate cursor movements with the arrow keys.

The Choice: Enabled, Disabled .

* Typematic Rate (Chars/Sec)

When the typematic rate is enabled, this selection allows you select the rate at which the keys are accelerated.

The Choice: 6, 8, 10, 12, 15, 20, 24, 30 .

* Typematic Delay (Msec)

When the typematic rate is enabled, this selection allows you to select the delay between when the key was depressed and when the acceleration begins .

The Choice: 250, 500, 750, 1000 .

* Security Option

This category allows you to limit access to the system and setup, or just to setup .

The Choice: System, Setup .

Note: To disable security, select PASSWORD SETTING at Main Menu and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter setup freely .

* OS Select for DRAM > 64 MB

This item allows you to access the memory that over 64MB in OS/2 .

The Choice: Non-OS2 , OS2 .

* PCI / VGA Palette Snoop

It determines whether the MPEG ISA / VESA VGA Cards can work with PCI / VGA or not .

The Choice: Enabled, Disabled .

* Video BIOS Shadow

Determines whether video BIOS will be copied to RAM. However, it is optional depending on chipset design. Video Shadow will increase the video speed .

The Choice: Enabled, Disabled .

* C8000 – CBFFF Shadow / DC000 – DFFFF Shadow

These categories determine whether option ROMs will be copied to RAM. An example of such option ROM would be support of on-board SCSI.

The Choice: Enabled, Disabled .

3.1.4. Chipset Features Setup

ROM PCI / ISA BIOS
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.

Auto Configuration	: Enabled	Spread Spectrum	: Disabled
EDO DRAM Speed Selection	: 60 ns	CPU Host Clock	: Disabled
EDO CASx# MA Wait State	: 2	CPU Warning Temperature	: Disabled
EDO RASx# Wait State	: 2	Current System Temp.	: 23℃73℉
SDRAM RAS-to-CAS Delay	: 3	Current CPU1 Temperature	: 30℃86℉
SDRAM RAS Precharge Time	: 3	Current CPUFAN1 Speed.	: 5627 RPM
SDRAM CAS lantecy Time	: 3	Current CPUFAN2 Speed	: 5753 RPM
SDRAM Precharge Control	: Disabled	Current CPUFAN3 Speed	: 0 RPM
DRAM Data Integrity Mode	: Non-ECC		
System BIOS Cacheable	: Enabled	IN0(V) : 2.78V	IN1(V) : 2.49V
Video BIOS Cacheable	: Enabled	+3.3V : 3.37V	+5V : 4.99V
Video RAM Chaceable	: Disabled	+12V : 12.46V	-12V : -12.54V
8 Bit I/O Recovery Time	: 1	-5V : 5.04V	
16 Bit I/O Recovery Time	: 1		
Memory Hole At 15M-16M	: Disabled	Esc : Quit	↑↓→← : Select Item
Passive Release	: Enabled	F1 : Help	PU/PD/+/- : Modify
Delayed Transaction	: Disabled	F5 : Old Values	(Shift)F2 : Color
AGP Aperture size (MB)	: 64	F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as DRAM and the external cache. It also coordinates communications between the conventional ISA bus and the PCI bus. It must be stated that these items should never need to be altered. The default settings have been chosen because they provide the best operating conditions for your system. The only time you might consider making any changes would be if you discovered that data was being lost while using your system.

DRAM SETTING

The first chipset settings deal with CPU access to dynamic random access memory (DRAM). The default timings have been carefully chosen and should only be altered if data is being lost. Such a scenario might well occur if your system had mixed speed DRAM chips installed. So that greater delays may be required to preserve the integrity of the data held in the slower memory chips.

*** Auto Configuration**

This item allows you selects pre-determined optimal values for DRAM, cache, timing according to CPU type & system clock.

The Choice: Enabled, Disabled.

*** EDO DRAM Speed Selection**

This value in this speed to fit your DRAM's timming.

The Choice: 50ns, 60ns.

*** EDO CASx# MA Wait State**

Use the default setting.

The Choice: 1 , 2.

*** EDO RASx# Wait State**

Use the default setting.

The Choice: 1 , 2 .

*** SDRAM RAS-to-CAS Delay**

Use the default setting.

The Choice: 2 , 3 .

*** SDRAM CAS Precharge Time**

Use the default setting.

The Choice: 2 , 3.

*** SDRAM Precharge Control**

Use the default setting.

The Choice: Enabled, Disabled .

* DRAM DATA Integrity Mode

Memory parity check function in your memory module with parity check.

The Choice: Non-ECC , ECC.

* AGP Aperture Size

Select the size of the Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation. See www.agpforum.org for AGP information.

The Choice: 4MB, 8MB, 16MB, 32MB, 64MB, 128MB, 256MB.

* System BIOS Cacheable

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

The Choice: Enabled, Disabled.

* Video BIOS Cacheable

Selecting Enabled allows caching of the system BIOS ROM at C0000h-F7FFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

The Choice: Enabled, Disabled.

* Memory Hole at 15M – 16M

You can reserve this area of system memory for ISA adapter ROM. When this 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.

The Choice: Enabled, Disabled.

* CPU Host Clock

66MHz	The Choice : Disable, 50MHz, 66MHz, 75MHz, 83MHz.
100MHz	The Choice : Disabled, 100MHz, 103MHz, 112MHz, 133MHz.

* CPU Warning Current CPU /Sys Temp. FAN Speed

Set the desire temperature that you want to get the warning beep when CPU temperature are higher than it. (option function)

All these information are showing the current situation of the CPU (option function).

3.1.5. Power Management Setup

ROM PCI / ISA BIOS
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

Power Management	: User Define	** Reload Global Timer Eve	nts **
PM Control by APM	: Yes	IRQ [3-7, 9-15], NMI	: Disabled
Video Off Method	: DPMS	Primary IDE 0	: Disabled
Video Off After	: Suspend	Primary IDE 1	: Disabled
MODEM Use IRQ	: 3	Secondary IDE 0	: Disabled
Doze Mode	: Disabled	Secondary IDE 1	: Disabled
Standby Mode	: Disabled	Floppy Disk	: Disabled
Suspend Mode	: 8 Min	Serial Port	: Enabled
HDD Power Down	: Disabled	Parallel Port	: Disabled
Throttle Duty Cycle	: 62.5%		
VGA Active Monitor	: Disabled		
Soft-Off by PWR-BTTN	: Instant-Off		
CPUFAN Off In Suspend	: Enabled		
Resume by Ring	: Enabled	Esc : Quit	↑↓→← : Select Item
Resume by Alarm	: Disabled	F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values	(Shift)F2 : Color
		F6 : Load BIOS Defaults	
IRQ 8 Break Suspend	: Disabled	F7 : Load Setup Defaults	

The Power Management Setup allows you to configure you system to most effectively save energy while operating in a manner consistent with your own style of computer use.

* Power Management

Its category allows you to select the type (or degree) of power saving and is directly related to the following modes :

1. Doze Mode
2. Suspend Mode
3. HDD Power Down

There are for Power Management, three of which have fixed mode settings.

Disable	No power management. Disables all four modes
Min. Power Saving	Minimum power management. Doze Mode = 1 hr. Standby Mode = 1 hr., Suspend Mode = 1 hr., and HDD Power Down = 15 min.
Max. Power Saving	Maximum power management -- ONLY AVAILABLE FOR SL CPU'S. Doze Mode = 1 min., Standby Mode = 1 min., Suspend Mode = 1 min., and HDD Power Down = 1 min.
User Defined	Allows you to set each mode individually. When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

* PM Control APM

When enabled, an Advanced Power Management device will be activated to enhance the Max. Power Saving mode and stop the CPU internal clock. If Advance Power Management (APM) is installed on your system, selecting Yes gives better power savings.
If the Max. Power Saving is not enabled, this will be preset to *No*.

* Video Off After

When enabled, this feature allows the VGA adapter to operate in a power saving mode.

Always On	Monitor will remain on during power saving modes.
Suspend --> Off	Monitor blanked when the systems enters the Suspend mode.
Susp,Stby --> Off	Monitor blanked when the system enters either Suspend or Standby modes.
All Modes --> Off	Monitor blanked when the system enters any power saving mode.

* Video Off Method

This determines the manner in which the monitor is blanked.

V/H SYNC+Blank	This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.
Blank Screen	This option only writes blanks to the video buffer.
DPMS	Select this option if your monitor supports the Display Power Management Signaling (DPMS) standard of the Video Electronics Standards to select video power management values.

* MODEM Use IRQ

Name the interrupt request (IRQ) line assigned to the modem (if any) on your system. Activity of the selected IRQ always awakens the system.

The choice: 3, 4, 5, 7, 9, 10, 11, NA.

* Soft-Off by PWR-BTTN

This item allows you to set the off function of power button by software control.

The choice: Delay 4 Sec, Instant Off.

PM Timers

The following four modes are Green PC power saving functions which are only user configurable when User Defined Power Management has been selected. See above for available selections.

* Standby Mode

When enabled and after the set time of system inactivity, the fixed disk drive and the video would be shut off while all other devices still operate at full speed.

* Doze Mode

When enabled and after the set time of system inactivity, the CPU clock will run at slower speed while all other devices still operate at full speed.

* Suspend Mode

When enabled and after the set time of system inactivity, all devices except the CPU will be shut off.

PM Events

You may disable activity monitoring of some common I/O events and interrupt requests so they do not wake up the system. The default wake-up event is keyboard activity.

* HDD Ports Activity

When set to *On* (default), any event occurring at a HDD (serial) port will awaken a system which has been powered down.

* COM Ports Activity

When set to On (default) , any event occurring at hard or floppy drive port will awaken a system which has been powered down.

* Power ON by Ring

When you select Enabled, a signal from ring returns the system to Full On state.

The choice: Enabled, Disabled.

* Resume by Alarm

When you select Enabled, the following fields appear. They let you set the alarm that returns the system to Full On state.

The choice: Enabled, Disabled.

* LPT Ports Activity

When set to On (default), any event occurring at a LPT (printer) port will awaken a system which has been powered down.

The following is a list of IRQ's, Interrupt Re Quests, which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur.

When the operating system is ready to respond to the request, it interrupts itself and performs the service.

As above, the choices are *On* and *Off*. *Off* is the default.

When set *On*, activity will neither prevent the system from going into a power management mode nor awaken it.

IRQ3 (COM2)	IRQ10 (Reserved)
IRQ4 (COM1)	IRQ11 (Reserved)
IRQ5 (LPT2)	IRQ12 (PS/2 Mouse)
IRQ6 (Floppy Disk)	IRQ13 (Coprocessor)
IRQ7 (LPT1)	IRQ14 (Reserved)
IRQ8 (RTC Alarm)	IRQ15 (Reserved)
IRQ9 IRQ2 Redir)	

3.1.6. PNP / PCI Configuration

ROM PCI / ISA BIOS
PNP / PCI CONFIGURATION
AWARD SOFTWARE, INC.

PNP OS Installed	: No		
Resources Controlled by	: Auto		
Reset Configuration Data	: Disabled		
		Esc : Quit	↑↓→← : Select Item
		F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values	(Shift)F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

This section describes configuring the PCI bus system. PCI, or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

* PNP OS Installed

Select Yes if the system operating environment is Plug-and-Play aware (e.g. Windows 95)

The choice: Yes and No.

* Resource Controlled By

The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows®95.

The choice: Auto and Manual.

* Reset Configuration Data

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (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 can not boot.

The choice: Enabled and Disabled .

* IRQ 3/4/5/7/9/10/11/12/14/15 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.

The choice: Legacy ISA and PCI/ISA PnP.

* DMA 0/1/3/5/6/7 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 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.

The choice: Legacy ISA and PCI/ISA PnP.

* PCI IRQ Activated By

This sets the method by which the PCI bus recognizes that an IRQ service is being requested by a device. Under all circumstances, you should retain the default configuration unless advised otherwise by your system manufacturer.

The choice: Level (default) and Edge.

* PCI IDE IRQ Map To

This allows you to configure your system to the type of IDE disk controller in use. By default, Setup assumes that your controller is an ISA (Industry Standard Architecture) device rather than a PCI controller. The more apparent difference is the type of slot being used.

If you have equipped your system with a PCI controller, changing this allows you to specify which slot has the controller and which PCI interrupt (A, B,C or D) is associated with the connected hard drives.

Remember that this setting refers to the hard disk drive itself, rather than individual partitions. Since each IDE controller supports two separate hard drives, you can select the INT# for each. Again, you will note that the primary has a lower interrupt than the secondary as described in "*Slot x Using INT#*" above.

Selecting "*PCI Auto*" allows the system to automatically determine how your IDE disk system is configured.

3.1.7. Load BIOS Setup

ROM PCI / ISA BIOS
POWER MANAGEMENT SETUP
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 DEFA	SAVING
LOAD SETUP DEF	
Esc : Quit	↑↓→← : Select Item
F10 : Save & Exit setup	(Shift)F2 : Change Color

LOAD BIOS SETUP (Y/N)?Y

This *Load BIOS Defaults* option allows you to load the troubleshooting default values permanently stored in the BIOS ROM . These default setting are non-optimal and disable all high performance features. To load these default setting, highlight *Load BIOS Defaults* on the main screen and then press the <Enter> key. The system displays a confirmation massage on the screen. Press the <Y> key and then the <Enter> key to confirm. Press the <N> key and then the <Enter> key to abort. This feature does not affect the fields on the Standard CMOS Setup screen.

3.1.8. Load BIOS Defaults

ROM PCI / ISA BIOS
POWER MANAGEMENT SETUP
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 DEFA	SAVING
LOAD SETUP DEF	
Esc : Quit	↑↓→← : Select Item
F10 : Save & Exit setup	(Shift)F2 : Change Color

LOAD SETUP DEFAULTS (Y/N)?Y

This *Load Setup Defaults* option allows you to load the default values to the system configuration fields. These default values are the optimized configuration settings for the system. To load these default values, highlight *Load Setup Defaults* on the main screen and then press the <Enter> key. The system displays a confirmation message on the screen. Press the <Y> key and then the <Enter> key to confirm. Press the <N> key and then the <Enter> key to abort. This feature does not affect the fields on the Standard CMOS Setup screen.

3.1.9. Integrated Peripherals

ROM PCI / ISA BIOS
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.

IDE HDD Block Mode	: Enabled	Onboard FDC Controller	: Enabled
IDE Primary Master PIO	: Auto	Onboard Serial Port 1	: 3F8/IRQ4
IDE Primary Slave PIO	: Auto	Onboard Serial Port 2	: 2F8/IRQ3
IDE Secondary Master PIO	: Auto	UART Mode Select	: Normal
IDE Secondary Slave PIO	: Auto	Onboard Parallel Port	: 378/IRQ7
IDE Primary Master UDMA	: Auto	Parallel Port Mode	: SPP
IDE Primary Slave UMA	: Auto		
IDE Secondary Master UDMA	: Auto		
IDE Secondary Slave UDMA	: Auto		
On-Chip Primary PCI IDE	: Enabled		
On-Chip Secondary PCI IDE	: Enabled		
USB Keyboard Support	: Disabled		
Init Display First	: PCI Slot		
POWER ON Function	: BUTTON ONLY	Esc : Quit	↑↓→← : Select Item
		F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values	(Shift)F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

* On-Chip First Channel

This chipset contains a internal PCI IDE interface with support for two IDE channels. Select Enabled to activate the first and/or second IDE interface. Select Disabled to deactivate this interface, if you install a first and/or second add-in IDE interface IDE interface.

The choice: Enabled, Disabled.

* IDE Prefetch Mode

Enable prefetching for IDE drive interfaces that support its faster drive accesses. If you are getting disk drive errors, change the setting to omit the drive interface where the errors occur. Depending on the configuration of your IDE subsystem, this field may not appear, and it does not appear when the Internal PCI/IDE field, above, is Disabled.

The choice: Enabled, Disabled.

* IDE HDD Block Mode

This item allows your hard disk controller to use the fast block mode to transfer data to and from your hard disk drive (HDD). Select Enabled only if your hard drives support block mode.

The choice: Enabled, Disabled.

* IDE Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/ Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

* IDE Primary/Secondary Master/Slave UDMA

Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33, select Auto to enable BIOS support.

The Choice: Auto, Disabled.

* Onboard FDC Controller

This should be enabled if your system has a floppy disk drive (FDC) installed on the system board and you wish to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature.

The Choice: Enabled, Disabled

* Onboard Serial Port 1/ Port 2

This item allows you to determine access onboard serial port 1/port 2 controller with I/O address.

The choice: 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled.

* UART 2 Mode

This item allows you to determine which Infra Red (IR) function of onboard I/O chip.

The choice: Standard, ASKIR, HPSIR.

* IR Function Duplex

This item allows you to select the IR function when you select the UART 2 Mode is ASKIR

The Choice: Half, Full.

* RxD, TxD Active

This item allows you to determine the active of RxD, TxD.

The Choice: "Hi, Hi", "Lo, Lo", "Lo, Hi", "Hi, Lo".

* Onboard Parallel Port

This item allows you to determine access onboard parallel port controller with which I/O address.

The choice: 378/IRQ7, 278/IRQ5, 3BC/IRQ7, Disabled.

* Onboard Parallel Mode

Select an operating mode for the onboard parallel (printer) port. Normal EPP (Extended Parallel Port) ECP (Extended Capabilities Port) ECP+EPP PC AT parallel port Bi-directional port Fast, buffered port Fast, buffered, bi-directional port.
Select Normal unless you are certain your hardware and software both support EPP or ECP mode.

The choice: SPP, ECP/EPP, ECP, EPP/SPP.

* USB Keyboard Support

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

The choice: Enabled, Disabled.

* Password Power ON Function

This item allows you to select which way to power on your computer . The choices are **Password , Hot Key , Button only** .

The choice: 3, 1.

Password	Setup your Password, and enter it (five words at most) . Then confirm your Password
Hot Key	Select : <Ctrl> + <F1> ... <F12>

SUGGESTION : When you use this function , the current of the Keyboard had better **not be over 5mA** , and power stand-by mode had **be over 100mA** .

NOTE : If you forget the password you set before , you can read page-11 CMOS Clear (JB1) to reset your CMOS .

3.1.10. Supervisor / User Password Setting

You can set either supervisor or user password, or both of then. The differences between are:

user password : just can only enter but do not have the right to change the options of the setup menus.

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

ENTER PASSWORD:

Type the password, up to eight characters in length, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable a password, just press <Enter> when you are prompted to enter the password. A message will confirm the password will be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

PASSWORD DISABLED.

When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents an unauthorized person from changing any part of your system configuration.
Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted. This would prevent unauthorized use of your computer.

You determine when the password is required within the BIOS Features Setup Menu and its Security option . If the Security option is set to "System", the password will be required both at boot and at entry to Setup. If set to "Setup", prompting only occurs when trying to enter Setup.

3.1.11. IDE HDD Auto Detection

ROM PCI / ISA BIOS
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

HARD DISKS	TYPE	SIZE	CYLS	HEAD	RECOMP	LANDZ	SECTOR	MODE
Primary Master :								

Select Primary Master Option (N=Skip) :N

OPTION	SIZE	CYLS	HEAD	RECOMP	LANDZ	SECTOR	MODE
2(Y)	853	827	32	0	1653	63	LBA
1	853	1654	16	65535	1653	63	Normal
3	853	827	32	65535	1653	63	Large

Note: Some OS (Like SCO-UNIX) must be "NORMAL" for installation

ESC: Skip

The Setting on the screen are for reference only. Your version may not be identical to this one.

Use this option to detect the parameters for the hard disk drives installed in your system. These parameters will then be automatically entered into the "Standard CMOS Setup". The IDE HDD Auto Detection screen displays the following categories of information: Size, Cylinders, Heard, Precomp, LandZone, Sectors, and Mode

3.1.12. Save and Exit Setup

ROM PCI / ISA BIOS
POWER MANAGEMENT SETUP
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 DEFA	SAVING
LOAD SETUP DEF	
Esc : Quit	↑↓→← : Select Item
F10 : Save & Exit setup	(Shift)F2 : Change Color

SAVE to CMOS and EXIT (Y/N)?Y

Select this option to save into the CMOS memory all modifications you specify during the current session. To save the configuration changes, highlight the *Save & Exit Setup* option on the main screen and then press the <Enter> key.

3.2. Upgrade BIOS Utility

The upgrade process requires two files , the new BIOS file *(XXXX. bin)* and the upgrade utility *(awdflash. exe)*. Both files can be downloaded from your vendor's Web site.

RUNNING THE UPGRADE PROGRAM:

1. Boot system from the bootable floppy diskette you created. Booting from the diskette bypasses loading drivers from the **CONFIG.SYS** and **AUTOEXE. BAT** files on the hard drive, eliminating the possibility of loading a program *(a.g., a memory manager)* that conflicts with the AWARD flash utility.

> **NOTE :** The Award flash utility cannot run when EMM386 or QEMM are loaded. If you try, an error message appears.

2. At the **DOS** command line, type **AWDFLASH** and press <Enter>.
3. The cursor should be opposite **"FILE NAME to PROGRAM"**
4. Type the name of the new BIOS file *(for example, newbios. bin)*, and press <Enter>.
5. At the bottom of the menu, this prompt appears:

   Do you Want to Save BIOS (Y/N)?

6. If you **DO NOT** wish to save the old BIOS, type **<N>** and press <Enter>. Then move to step 8.
   If you **DO** wish to save the old BIOS, respond **<Y>**, and press <Enter>.
7. In the "File Name to Save" field, type a file name for the old BIOS *(for example, oldbios. bin)*, and press <Enter>.
   Your old BIOS is saved in a file as named, in the default drive and directory *(in this example, on the A drive)*.
8. Then the program prompts you

   Do You Want to Update? (Y/N)

9. If you **DO NOT** wish to update the BIOS, type **<N>** and press <Enter>. The program exits to the command line. Skip the remainder of this section and go directly to the next section.
   If you **DO** wish to update the BIOS, respond **<Y>** and press <Enter>. When the updating is finished, the following message appears:

   Programming Flash Memory – 3FF00(for 2MB) OK

   Please Power off or Reset System

10. Restart you system. You BIOS should be successfully update.

4.1. System Hardware Monitor Setup Utility (optional)

The mainboard comes with a system hardware health monitor utility contained in the provided CD. This utility shows the current temperature of the processor, power voltages, and processor / chassis fan speed.

The utility also allows you to manually set the range of the processors temperature, power voltages, and processor / chassis fan speed. If the settings / values are over or under the set range, an error massage will pop-up and an alarm will beep. This software driver supported by the OS are : Microsoft Windows 9X and Windows NT

4.2. IDE Driver

The mainboard comes with IDE Bus Master driver supported by the Operating System are : Windows 9X and Windows NT . To install the IDE driver, please refer to the "Readme" file contained in the provided CD.

All steps or procedures to install software drivers are subject to change without notice as the software are occassionally updated. Please refer to the readme files for the latest information.

4.3. Trend OEM English PC-Cillin

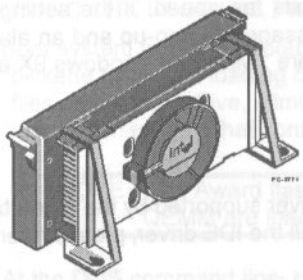
This Trend PC-cillin (OEM-English) for Windows 9X. To installed select Auto Run "PC-cillin", please refer to the "Readme" file contained in the provided CD. For optimum protection against viruses, you must continue to update your virus pattern file, which is used by PC-cillin to detect virus activity. You can download pattern files from either the Internet or BBS after you register the product.

Technical support is available to registered users at Trend offices worldwide. To find a Trend Office nearest you, look in the *tech.txt* file in the program group or under the Technical Support topic in the on-line help or user's guide. You can also find the address of a Trend office near you from our Web site at:

Web Page http://www.antivirus.com ***or*** www.trend.com.tw

Appendix A – Identify Pentium II / III Processor

How to identify your Pentium II / III processor



Pentium II Processor at :
66MHz (233 ~ 366 MHz)
100MHz (350 ~ 500 MHz)
L2 Cache : 512K

This page is designed to help interpret the markings on a Pentium II/III processor, an explain some of the tools available for determining the stepping, voltage, and features of a particular Pentium II/III processor. The primary tools that will help identify a Pentium II/III processor are CPUID, the Specification Update, and the Quick Reference Guide. The Pentium II/III processor S.E.C (Single Edge Contact) cartridge has laser etched markings that indicate the processor speed, L2 cache size, S-spec number, Serialization code, and country of origin. *http://www.intel.com*

DYNAMIC MARK AREA:

B80522P300512E SL2QC
97490091-289 MALAY

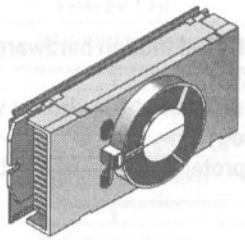
B80522P | **300** | **512E** | **SL2QC**

300 : Speed (MHz)
512E : Level 2 Cache Size (in Kilobytes)
SL2QC : S-spec Number

2-D Matrix Mark
Intel UCC#
Order Code(Product-Speed
S Number
Lot Number(date,factory)

97490091 - **289** **MALAY**

97490091 : FPO # (Test Lost Traceability#)
289 : Serialization Code
MALAY : Country of Origin



Celeron Processor at :
66MHz (266 ~ 300 MHz)
L2 Cache : 0K or 128K

Appendix B – TREND ChipAwayVirus

This Board is Protected by Trend ChipAwayVirus Here's Why it Makes a Better Board:

- Provides a virus-free boot and operating system
- Experience peace of mind though hardware -base virus protection
- Detects known and unknown boot viruses with rule-based technology
- Receive immediate protection! Already installed on this board!

You're right to be concerned about viruses. With over 2600 in existence, they pose a very real threat to any PC user. They can strike in an instant, without warning or prejudice – and erase gigabytes of data.

Boot Viruses pose the most severe threat because they can move from a floppy diskette to your hard drive in less than a second. And it all happens during the loading of the boot sector, making anti-virus programs that load through the **config.sys** and **autoexec.bat** files worthless.

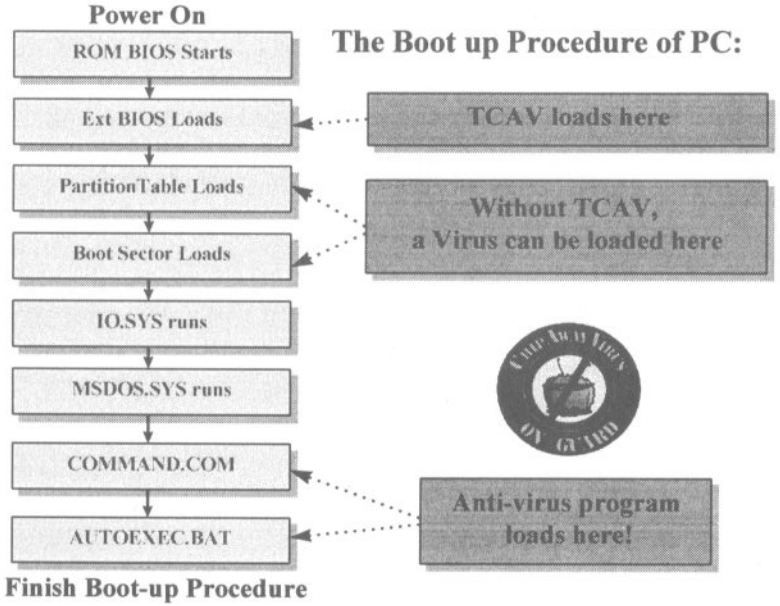
Finally, a Solution from Anti-virus expert*

Anti-virus software alone can't do the job. But **Trend ChipAwayVirus** can make up this deficiency. It's a hardware-base anti-virus solution that stops virus damage and infection through a proven ***rule-base*** anti-virus technology – meaning it watches for virus ***behaviors*** rather than virus code.

So Trend ChipAwayVirus can catch both known and unknown viruses, including mutation-engine viruses, both boot sector viruses, stealth viruses and general viruses! For today and tomorrow.

And thanks to **JumpLoading™** technology, **Trend ChipAwayVirus** takes control early in the boot cycle, before boot viruses have a chance to load. So the entire boot process is virus-free and your computer boots to a clean operating system.

Peace of Mind For You

Best of all **Trend ChipAwayVirus** is here – on this board. The same technology was chosen for Intel motherboards. We are providing a quality board and peace of mind. That's always a great combination!

See how **Trend ChipAwayVirus** protect your computer during the boot-up procedure :