



# USER'S

**More compatible, more functional and more competitive.  
Excellent quality and faster response.**

# MANUAL

Supporting Intel Tualatin & Coppermine Pentium III® FCPGA, Celeron®  
FCPGA Socket 370 Processors,

UDMA33/66, PC100/133 SDRAM

**Quality, Performance Mainboards**

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# Overview

Thank You for purchasing our High Performance Mainboard. Our advanced technology mainboard is designed for processing speeds of 933MHz or above and is upgradeable for future processors.

The Intel Mainboard Utilizes 815G(B-STEP) and ICH chipset provide an Integrated Bus Mastering IDE controller with two high performance IDE interfaces for up to four UDMA IDE devices (hard drives, or CD-ROM's). The LPC(Low-pin count) I/O controller integrates a floppy drive interface, two enhanced 16C550 compatible serial ports, one parallel port and one consumer infra red compatible interface. The ICH I/O controller integrates two USB 1.1 compliant controllers.

Intel 815G (B-STEP) chipset support Intel Tualatin & Coppermine Pentium III FCPGA and Intel Celeron FCPGA processors on socket 370 with 100/133 SDRAM DIMM.

Two DIMM slots support up to 512MB Memory Capacity. WAKEUP-LINK Header supports Wake-On-LAN.

Integrated AC97 2.1 Compliant Codec with 3D Stereo enhancement (optional). Award 2M bits Firmware Hub compliant with PC99,ACPI//DMI power management.

Integrated Onboard VGA

Micro ATX 180mm X 245mm.

# Fast Start Installation

This section will aid you in quickly setting up the Mainboard. Be sure to take caution to avoid personal injury or damage to wiring due to sharp pins on connectors, printed circuit assemblies, rough edges and corners and hot components.

Your Location Requirements Are:

- A sturdy, level surface for placement
- Space allowance around mainboard
- A stable environment with no abrupt temperature or humidity changes
- No exposure to chemicals or direct sunlight
- Line voltage and frequency not varying more than + or -10% from the value stated on the package or nameplate (located on the back, opposite the power plug)

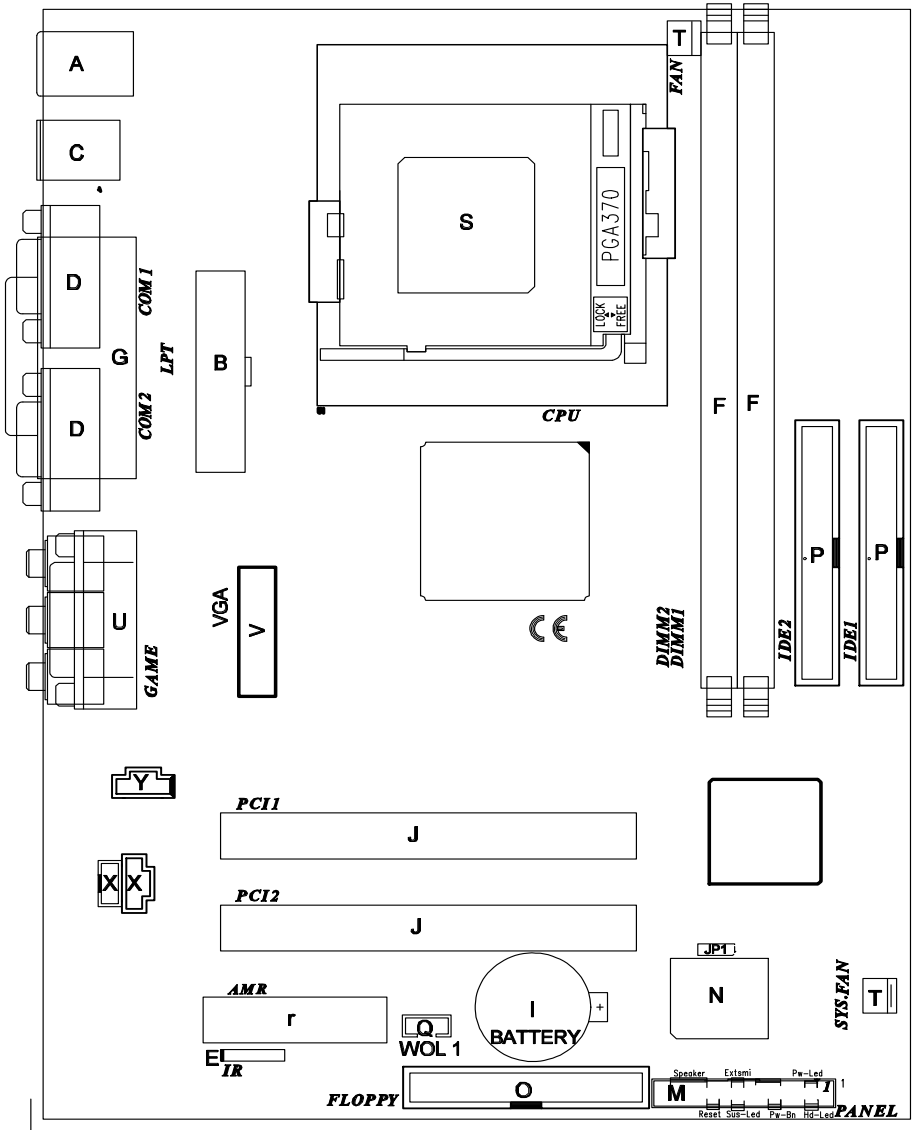
# Checking The Package Contents

Remove the items from the box and make sure you have the following items before beginning. If any of the items below are missing, please contact the representative for part replacement.

## **Micro ATX** Box Standard Package

- 1) Mainboard
- 2) Driver CD with Norton AntiVirus 2001 OEM Version
- 3) User Manual
- 4) IDE Hard Drive Ribbon Cable
- 5) Floppy Drive Ribbon Cable
- 6) VGA Cable

# Mainboard Diagram





Before we begin installing your series Mainboard, we have provided you with a diagram of the Mainboard to help you locate the appropriate “connectors”. The letters below describe the key Mainboard components. Page number in the right hand column will direct you to detailed description of the component.

# **P815G-U**

## **Option : AC97 2.1 Compliant 3D Audio**

### **Onboard**

| COMPONENT   | PAGE |
|---|------|
| A- PS/2 Mouse & Keyboard Connector . . . . .      | 40   |
| B- ATX Power Supply Connector . . . . .           | 40   |
| C- Universal Serial Bus (USB) Connector . . . . . | 41   |
| D- Serial (COM1 & 2) Connector . . . . .          | 41   |
| E- Infra-Red (IR) Header . . . . .                | 41   |
| F- Memory Module Sockets . . . . .                | 42   |
| G- Parallel Port Connector . . . . .              | 42   |
| I- Lithium Battery . . . . .                      | 42   |
| J- PCI Add-in Board Connector . . . . .           | 42   |
| M- Front Panel Function Connector . . . . .       | 43   |
| N- Flash BIOS . . . . .                           | 43   |
| O- Floppy Drive Header . . . . .                  | 44   |
| P- IDE Device Header . . . . .                    | 44   |
| Q- WAKEUP-LINK Header . . . . .                   | 44   |
| r- Audio Modem Riser(AMR) Connector . . . . .     | 45   |
| S- CPU Socket . . . . .                           | 45   |
| T- CPU & SYSTEM FAN Connector . . . . .           | 45   |
| U- Audio & Joystick Connectors . . . . .          | 46   |
| V- VGA Cable . . . . .                            | 46   |
| X- CD Audio Connector . . . . .                   | 46   |
| Y- Auxiliary Audio Connector . . . . .            | 46   |



# Jumper settings

Set the Jumper

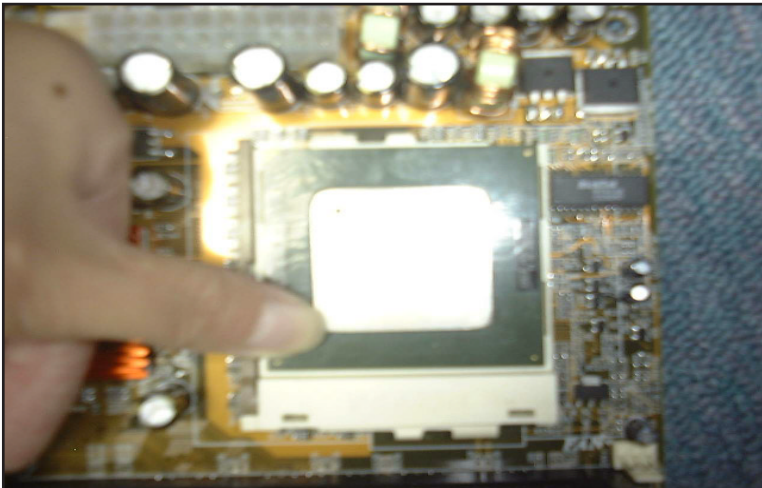
JP1 [1-2] Normal; [2-3] to clear CMOS.

# 7 Quick Steps

Please follow these steps in order to assure that your series of Mainboard installation is successful. Please refer to the back chapters for further information regarding boot-up and configurations. An anti-static wrist band is recommended when handling electronic components, be sure your work area is static free before you begin this section.

## 1 Installing the CPU

The Mainboard provides a 370 pins, Socket 370. The CPU should have a fan attached to prevent overheating. If a fan is not present, user should purchase a fan prior to turning on the system. The recommended heatsinks for the Socket 370 processor are those with three-pin fans that can be connected to the fan connectors on the Mainboard. It provides the +12 Volts DC for your CPU cooling fan.



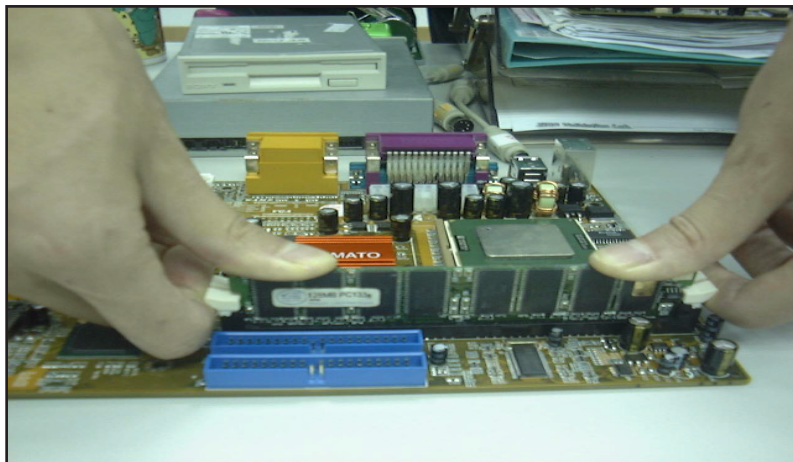


## **CAUTION!**

Be sure that you **MUST** used the recorded CPU, this MB can't support Cyrix ® & Celeron (PPGA) ® Socket 370 CPU. and Be sure that sufficient air circulation must be available across the processor's heatsink. Without sufficient circulation, the processor could overheat and damage both the processor and the mainboard. You may install an auxiliary fan if necessary.

## 2 Installing the Memory

Memory is installed in DIMM Sockets 1-2 (F Mainboard in diagram) as follows :



After you have set the DIMM firmly into its socket, snap the white chip holders up to lock in the DIMM.

**3**

## Attaching ATX Power Supply.

### ATX Power Supply Connector (20-pin ATXPWR)

The single 20-pin connector (B in mainboard diagram) incorporates standard +/-5V and +/-12V, with a standby 5V. With a power supply that supports remote power on/off, the mainboard can turn off the system power through the software control, such as the shutdown in Windows 95 Start Menu. The BIOS system will turn the system power off when it receives the proper APM command from the OS. APM must be enabled in the BIOS and OS systems in order for the soft-off feature to work properly.



**ATX Power Connector**



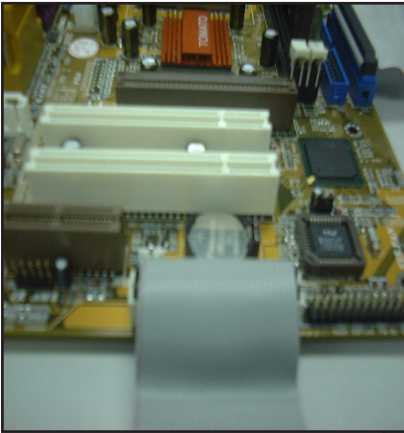
### Attaching the power supply wire

**IMPORTANT:** Wire should always be connected with the red stripe on the Pin 1 side of the connector. The four corners of the connector's are labeled on the mainboard.

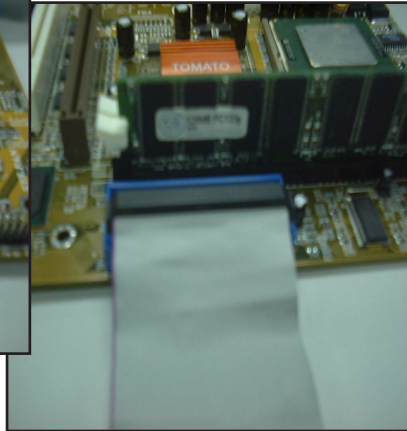
**4**

## Floppy Disk Drive Connector (34-pin FLOPPY).

This is a 34-pin connector that supports the provided floppy drive ribbon cable. After connecting the single end to the on-board “FLOPPY” connector, (O in mainboard diagram) connect the remaining plugs on the other end to the corresponding floppy drives.



*Floppy connection*



*IDE connection*

7 Quick Steps

**5**

## IDE Device Connector.

The on-board IDE connectors (P in mainboard diagram) support the provided 40/80-pin IDE hard disk ribbon cable. After connecting the single end to the mainboard, connect the remaining plugs at the other end of your hard disk(s). If you install hard disks, you must configure the drives by setting its jumpers according to the documentation of your hard disk.

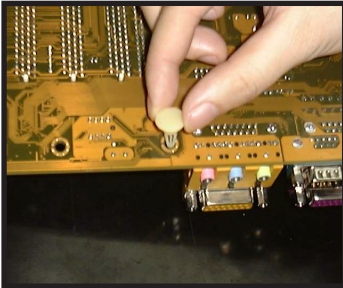
Also, you may connect the hard disk drives so that both become Masters, using one ribbon cable on the primary IDE-connector, and the other on the secondary IDE connector.

NOTE: For the flat ribbon cable connection, please make sure that the pin 1 of the ribbon cable (the red wire side of the cable) is correctly connected to the on-board connector's pin 1 as shown on the “mainboard diagram”.

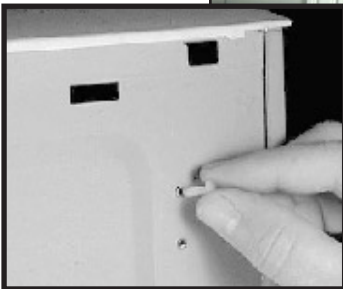
**6**

## Mounting Mainboard to chassis

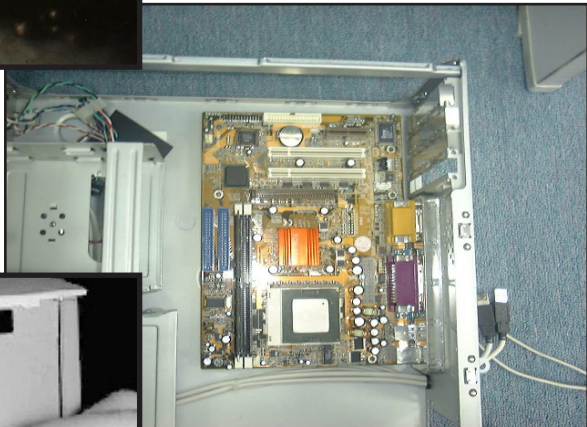
Snap black mounting pins onto the mainboard as shown. Carefully install the mainboard into the computer chassis and align the corresponding mounting holes on the mainboard with the holes on your chassis. While chassis design varies you may need to refer to the chassis manual for the mainboard mounting area. Insert white pins through the chassis and through the mounting holes on the mainboard into the black pin making sure they are snapped fully into place.



Black mounting pin



Insert white mounting pin

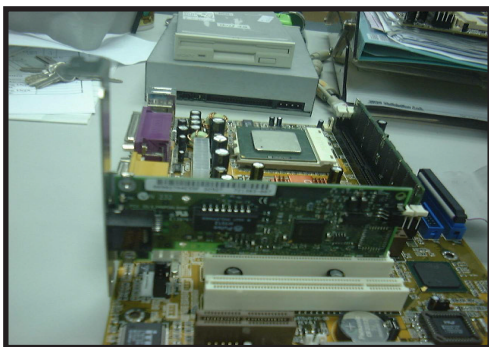


Insert into chassis



## 7 Installing Add-in Boards

First read your expansion card documentation for hardware and software settings that may be required to set up your specific card. Set any necessary jumpers on your expansion card and remove the cover plate on your computer case at the slot you intend to use. Keep the plate for possible future use. Carefully align the card's connector and press firmly. Secure the card on the slot with the screw you removed from the cover plate.



PCI Board Installation



Make sure to align rear external I/O connector's with the corresponding openings in chassis shown below (A,C & G in mainboard diagram)

You can now attach the Front Panel Function Connector (M in mainboard diagram) wires and Keyboard, Mouse and Monitor cables to the appropriate ports. Connect the main power cable and boot your system.

Press the DEL key when prompted and continue BIOS configurations discussed in the next chapter.



I/O connectors aligned with openings

# BIOS Setup

1. Press **DEL** to enter BIOS Setup.

2. Press **F10** to save and exit.

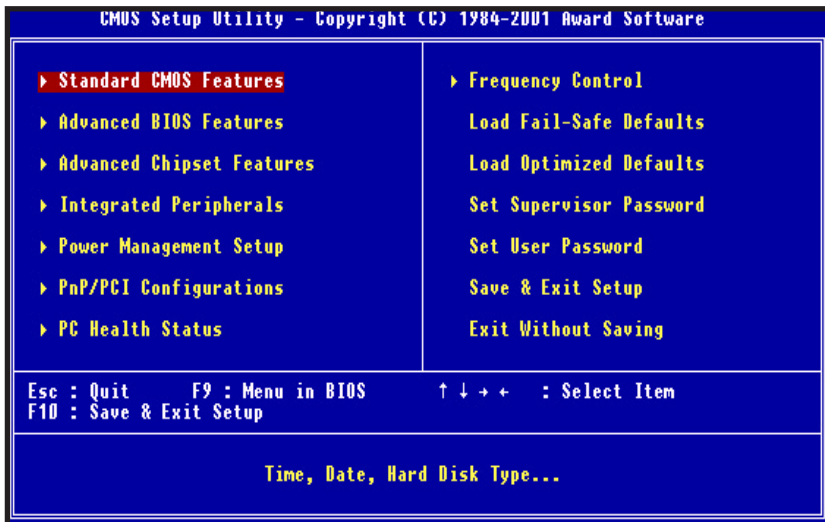
3. Press **ESC** to abort.

4. Press **F2** to enter BIOS Setup.

5. Press **F10** to save and exit.

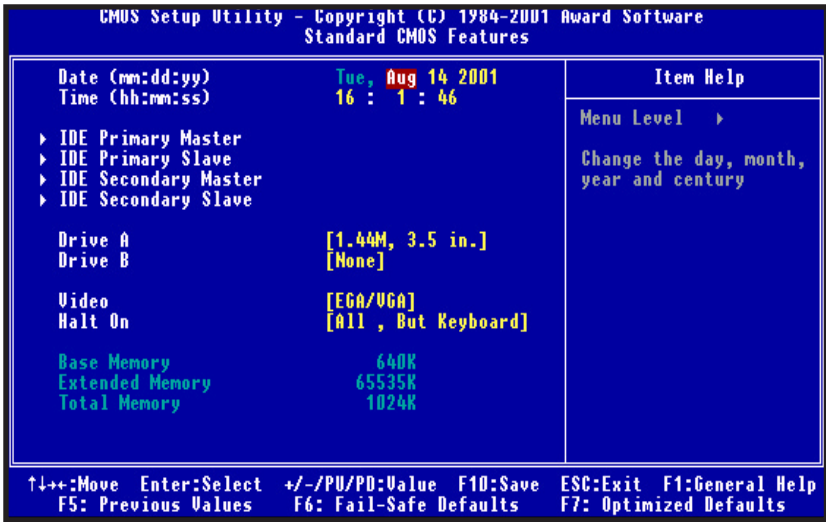
6. Press **ESC** to abort.

7. Press **F2** to enter BIOS Setup.



## Award BIOS Setup

|                           |   |
|---------------------------|---|
| Standard CMOS Feature     | Set time & date, hard disk drive type, type of floppy drive, Monitor type.  |
| Advanced BIOS Feature     | Select system boot sequence, floppy control, CPU cache settings, Shadow RAM.  |
| Advanced Chipset Feature  | Configure chipset specific options and features.  |
| Integrated Peripherals    | Configure onboard I/O device addresses and operating modes.   |
| Power Management Setup    | Select various power saving options.  |
| PnP/PCI Configurations    | Set PCI Plug and Play device options.   |
| PC health Status          | Report system / CPU temperature and cooling fans status.  |
| Frequency Control         | Select CPU's Front Side Bus (FSB) frequency and core/bus frequency ratio.   |
| Load Fail-Safe Defaults   | Load settings that are more likely to configure a workable computer when something is wrong. If you cannot boot the computer successfully, select the Fail-Safe option and try to diagnose the problem after the computer boots. These settings do not provide optimal performance. |
| Load Optimized Defaults   | Load settings that provide best performance characteristic. (Default factory settings)  |
| Setup Supervisor Password | Change / Add / Remove supervisor password.  |
| Setup User Password       | Change / Add / Remove user password.  |
| Save & Exit Setup         | Save Data to CMOS   |
| Exit Without saving       | Abandon all Changes   |



## Standard CMOS Features

### Time / Date

These fields provide you with the current date and time. Note that the hour is displayed as a 24-hour clock. For example, 1:00 PM is 13:00:00.

### Floppy Drive A, Floppy Drive B

This option selects the type of floppy drives installed.

### Primary Master, Primary Slave, Secondary Master, Secondary Slave



## Advanced BIOS Features

### Virus Warning

Enabled / Disabled Virus Warning function. Default setting is "Disabled".

### CPU Internal Cache

### External Cache

Enables processor on-chip L1 and L2 cache memory. Available settings are Enabled and Disabled. Default is "Enabled".

### CPU L2 Cache ECC Cheeking

This option enables Error Checking and Correction (ECC) on the processor's L2 cache bus. Default is "Enabled".

### Processor Number Feature

This category enables or disables the processor Number Feature.

### Quick Power on Self Test

When Enabled, BIOS will skip certain power-on self-test (POST) procedures (such as memory test above 1MB) to speed up the boot process. Default setting is "Enabled".

### First / Second / Third Boot Device

Assign the priority of each storage device to be the boot-up drive. Supported devices are Floppy, LS-120, HDD, CDROM, SCSI, LAN,ZIP100. Default boot sequence is Floppy -> HDD-0 -> CDROM.

### **Boot Other Devices**

Specifies whether BIOS to boot from other device not listed in the 1st/2nd/3rd Boot Device options when BIOS fail to boot from those devices. Default setting is "Enabled".

### **Swap Floppy Drive**

Set this option to "Enabled" to permit drives A: and B: to be swapped. Default is "Disabled".

### **Boot Up Floppy Seek**

Specify whether floppy drive A: will perform a Seek operation at system boot. Default setting is "Enabled".

### **Boot Up NumLock Status**

Set this option to "OFF" to turn the Num Lock key off when the computer is booted so you can use the arrow keys on both the numeric keypad and the keyboard. Default is "ON".

### **Gate A20 Option**

Sets "Fast", lets chipset control Gate A20; Sets "Normal", lets a pin in the keyboard controller control Gate A20. Default setting is "Fast".

### **Typematic Rate setting**

Enabled / Disabled Typematic Rate setting, when enabled, the typematic rate and typematic delay can be selected. Default setting is "Disabled".

### **Security Option**

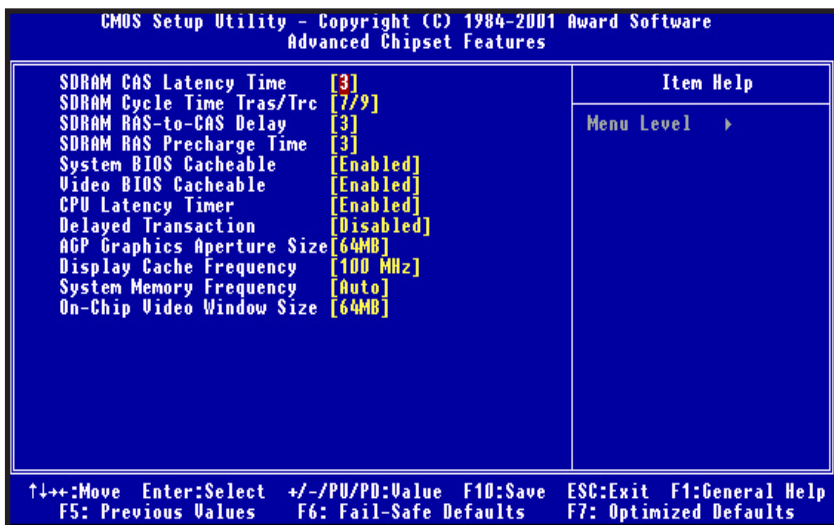
Enables password checking every time the computer is powered on or every time BIOS Setup is executed. If System is chosen, a user password prompt appears every time the computer is turned on. If "Setup" is chosen, the password prompt appears if BIOS Setup is executed. Default is "Setup".

### **OS Select For Dram > 64MB**

Set to "OS2" if running OS/2 operating system and using more than 64MB system memory. Default is "Non OS2".

### **Report No FDD for Win95**

When setting this option to "YES", system can release the IRQ for other peripherals. This option should be "NO", when the floppy driver is installed in the system.



## Advanced Chipset Features

### SDRAM CAS Latency Time

Specifies the number of SCLKs between the time when the Read command is sampled by SDRAM and the Whitney Sample reads data from SDRAM. Available settings are 3(SCLKs) or 2. Default is "3".

### SDRAM Cycle Time Tras/Trc

Specifies the length of the SDRAM cycle time in SCLKs. Available options are 7/9, 5/7, and auto. Default is "7/9".

### SDRAM RAS-to-CAS Delay

Specifies the length of the delay inserted between the RAS and CAS signals of the SDRAM system memory access cycle. The settings are Auto, 2 SCLKs or 3 SCLKs. Default setting is "3".

### SDRAM RAS Precharge Time

Specifies the length of the RAS precharge part of the SDRAM system memory access. Available settings: Auto, 2 SCLKs, or 3 SCLKs. Default setting is "3".



### **System BIOS Cacheable**

Enabled / Disabled System BIOS cache. Default setting is "Enabled".

### **Video BIOS Cacheable**

Enabled / Disabled Video BIOS cache. Default setting is "Enabled".

### **CPU Latency Timer**

Enables CPU BIST. Default is "Enabled".

### **Delayed Transaction**

Enables / Disables ICH (I/O Controller Hub 2) delayed transactions for internal register, Firmware Hub (FWH) and Low Pin Count (LPC) interface accesses. Default is "Disabled".

### **AGP Graphics Aperture Size**

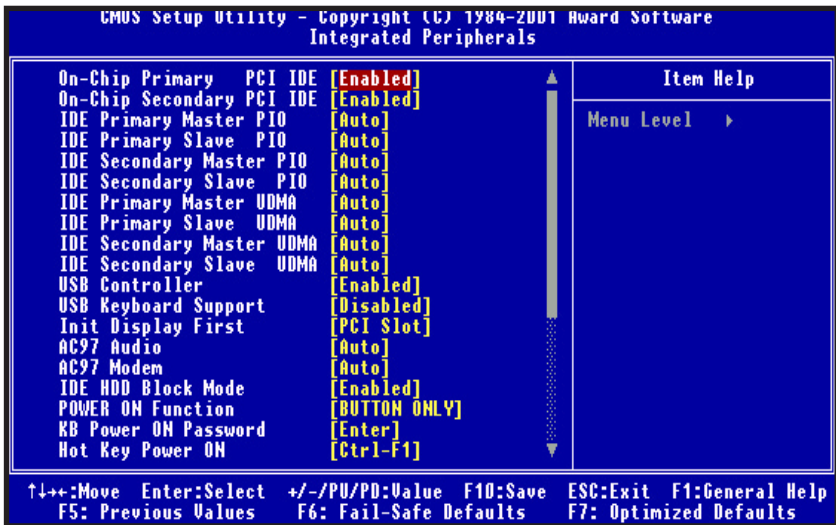
Sets maximum memory aperture for onboard AGP port. Available settings are 32MB and 64MB. Default is "64MB".

### **System Memory Frequency**

Sets System memory, Available settings are Auto ,100MHz and 133MHz,When FSB is 133MHz, You can settings 100MHz or 133MHz. Default is "Auto".

### **On-chip video Window size**

Sets on-chip video windows size, The settings are Disabled and 64MB. Default setting is 64MB.



## *Integrated Peripherals*

### **On-Chip Primary PCI IDE**

Enabled / Disabled on-chip primary PCI IDE. Default setting is "Enabled".

### **On-Chip Secondary PCI IDE**

Enabled / Disabled on-chip Secondary PCI IDE. Default setting is "Enabled".

### **IDE Primary Master / Slave PIO**

### **IDE Secondary Master / Slave PIO**

### **IDE Primary Master / Slave UDMA**

### **IDE Secondary Master / Slave UDMA**

Auto / Disabled IDE UDMA function feature. Default setting is "Auto", which lets BIOS determine.

### **USB Controller**

Enabled / Disabled USB Controller. Default setting is "Enabled".

### **USB Keyboard Support**

Enabled / Disabled USB Keyboard Support. Default setting is "Disabled".

## **Init Display First**

Default setting is "PCI Slot". Sets Init Display First to PCI Slot.

## **AC97 Audio**

Default setting is "Auto". BIOS will automatically detect onboard AC97 Audio.

## **AC97 Modem**

Default setting is "Auto". BIOS will automatically detect onboard AC97 Modem.

## **IDE HDD Block Mode**

Enabled / Disabled IDE HDD Block Mode. Default setting is "Enabled".

## **Power On Function**

Specifies the keyboard hot key, power button to wakeup the computer from S3-S5 state. Available options are Button only: Password, Hot key, Mouse Move, Mouse Click, Any KEY, BUTTON ONLY, keyboard 98. Default setting is Button only.(Apart the "button only" setting, the others option, Be sure that +5V SB of Your Power is no less than 720mA)

## **KB Power On Password**

Sets Keyboard Power on Password.

## **Hot Key Power On**

Sets power on Hot key. Default setting is "Ctrl-F1".

## **On-board FDC Controller**

Enabled / Disabled on-board FDC controller. Default setting is "Enabled".

## **Onboard Serial Port 1 / 2**

Specify the I/O port addresses of serial port 1 and 2. Available settings are Auto, Disabled, 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4 and 2E8/IRQ3. Default setting is "3F8/IRQ4 / 2F8/IRQ3".

## **UART Mode Select**

Specifies the operation mode of onboard Serial Port 2. The onboard Serial Port 2 can be configured as an Infrared(IR) port or an ordinary RS-232 serial port. Available settings are Normal, IrDA, ASKIR and SCR. Default is "Normal".

## **UR2 Duplex Mode**

This option is not available when UART is set to "Normal". Available options are Half Duplex and Full Duplex. Default setting is "Half".

## **Onboard Parallel Port**

Specifies the I/O port address of the onboard parallel port. Available settings are Auto, Disable, 378H, 278H and 3BCH. Default is "378/IRQ7".

## **Parallel Port Mode**

Specifies the onboard parallel port mode. Available options are Normal, Bi-Dir, ECP and EPP. Default is "SPP".

## **ECP Mode USE DMA**

This option only appears if the Parallel Port Mode option is set to ECP. It assigns a DMA channel to the onboard parallel port. Available settings are 1, 3. Default is "3".

## **PWRON after PWR\_Fail**

Resume the system to power on status after power fail. Available settings are On, Off, Former-Sts. Default is "Off".

## **Game Port Address**

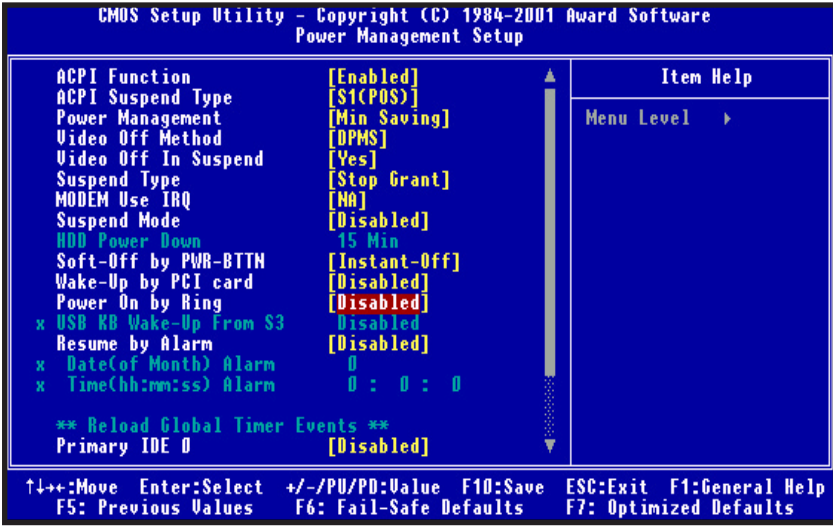
Specifies the Onboard Game Port I/O address. Available settings are 201, 209, and Disabled. Default is "201".

## **Midi Port Address**

Specifies the I/O address of the MIDI interface on the Onboard Game Port. Available options are 300h, 330h 290h and Disabled. Default is "330".

## **Midi Port IRQ**

Assigns the IRQ line to the MIDI interface. Available options are 5 and 10. Default setting is "10". This option is not available if the Onboard Midi Port is disabled S-232 serial port.



## Power Management Setup

### ACPI Function

Enabled/disabled ACPI Function. Default setting is "Enabled".

### ACPI Suspend Type

Specifies ACPI Suspend type. Default setting is "S1(POS)".

### Power Management

Specifies Power Management Mode. Default setting is "User Define".

### Video Off Method

Specifies Video off Method. Default setting is "DPMS".

### Video Off In Suspend

Specifies Video off in Suspend.

### Suspend Type

Specifies Suspend Type. Default setting is "Stop Grant".

### Modem Use IRQ

Sets Modem use IRQ

### Suspend Mode

Specifies Suspend Mode. Default setting is "Disabled".

### **HDD Power Down**

Specifies HDD Power Down Mode. Default setting is "Disabled".

### **Soft Off by PWR\_BTTN**

Sets Power Down Mode by PWR\_BTTN. Default setting is "Instant-off".

### **Wake-Up by PCI card**

Enabled / Disabled Wake-up by PCI card. Default setting is "Disabled".

### **Power On by Ring**

Enabled / Disabled Power on by Ring. Default setting is "Disabled".

### **Resume by Alarm**

Enabled / Disabled Resume by alarm. Default setting is "Disabled".

### **Primary IDE0**

Enabled / Disabled monitor Primary IDE0 for Green event. Default setting is "Disabled".

### **Primary IDE1**

Enabled / Disabled monitor Primary IDE1 for Green event. Default setting is "Disabled".

### **Secondary IDE0**

Enabled / Disabled monitor Secondary IDE0 for Green event. Default setting is "Disabled".

### **Secondary IDE1**

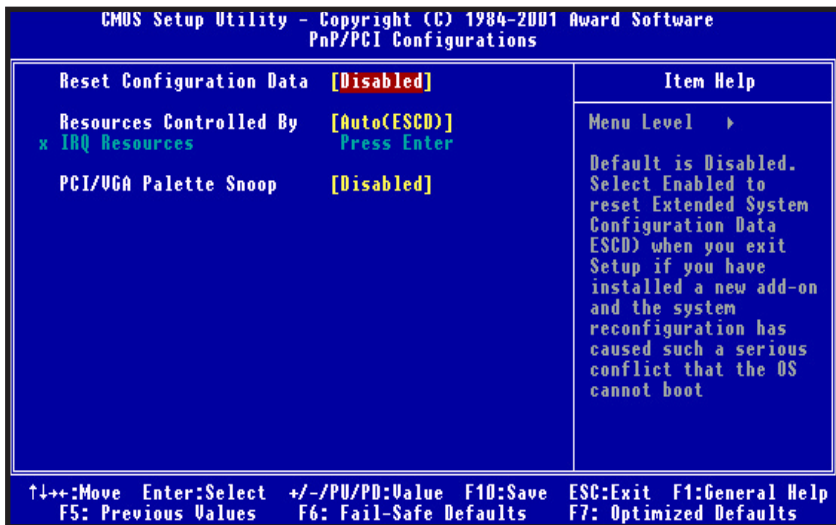
Enabled / Disabled monitor Secondary IDE1 for Green event. Default setting is "Disabled".

### **FDD,COM,LPT Port**

Enabled/Disabled monitor FDD,COM,LPT for Green event. Default setting is "Disabled".

### **PCI PIRQ [A-D]#**

Enabled PCI PIRQIA-DJ#,Monitor PCI PIRQIA-DJ#IRQ Active,Disabled PCI PIRQIA-DJ# Ignore PCI PIRQIA-DJ# IRQ Active. Default setting is "Disabled".



## PnP/PCI Configurations

### Reset configuration Data

Enabled / Disabled Reset configuration Data. Default setting is "Disabled".

### Resources Controlled by

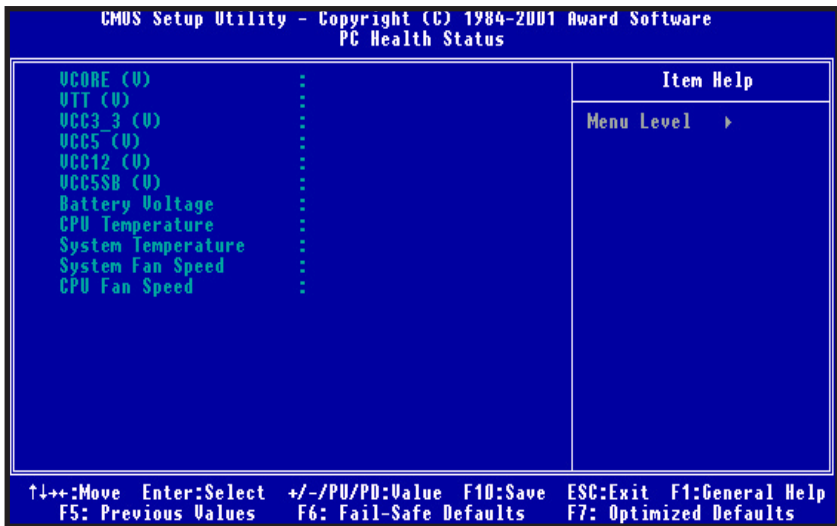
Sets the allocation of PCI resources. Available options are Manual and Auto(ESCD). Default setting is "Auto"(ESCD). BIOS automatically assigns resources.

### IRQ Resources

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

### PCI/VGA Palette Snoop

Enabled / Disabled PCI / VGA Palette Snoop. Sets Enabled for having Video card on ISA Bus and VGA card on PCI Base. Sets "Disabled" for VGA card only.



## PC Health Status

### Vcore/VTT/VCC3.3/VCC5/VCC12/VCC5SB/Battery Voltage

Detect System's Voltage status automatically.

### CPU Temperature

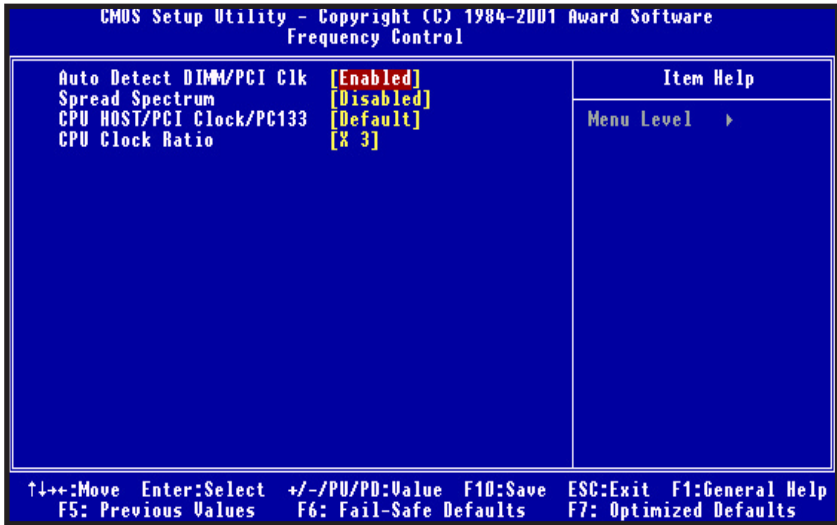
### System Temperature

Detect System and CPU temperature automatically.

### System Fan Speed

### CPU Fan Speed





## Frequency Control

### Auto Detect DIMM/PCI CLK

Enabled / Disabled Auto detect DIMM/PCI CLOCK. Default setting is "Enabled".

### Spread Spectrum

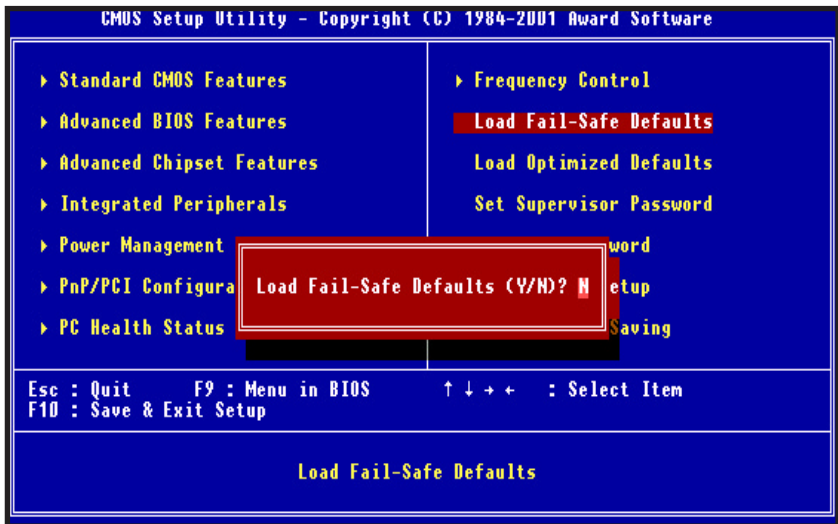
This option turns on/off the clock generator's Spread Spectrum feature to reduce Electromagnetic Interference (EMI) generated by high speed clock signals. Default setting is "Disabled".

### CPU Host/PCI Clock/PC133

Select the clock generator's Front Side Bus frequency for CPU over-clocking. Default setting is "Default".

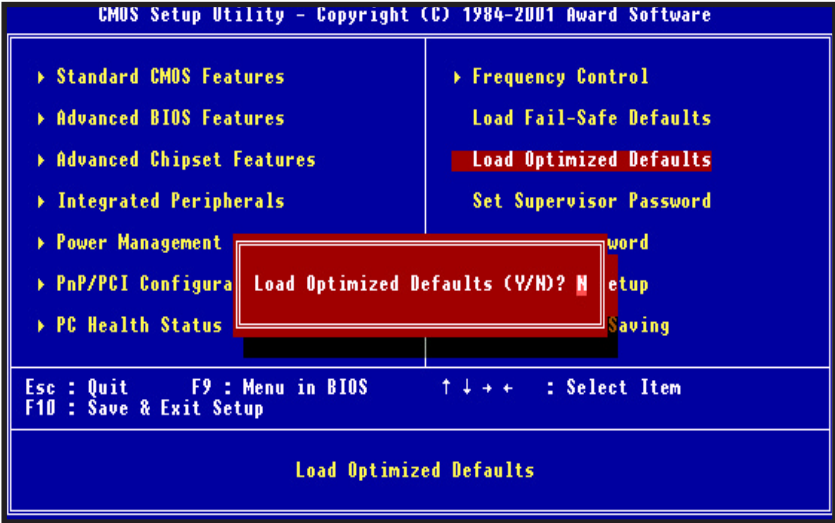
### CPU Clock Ratio

Select CPU's core/bus frequency ratio. This setting has no effect on processors with frequency ratio locked. Available settings are between 2x and 16x of the CPU BUS Speed. The ratio increases with 0.5 step. Default setting is "X3" (Safe).



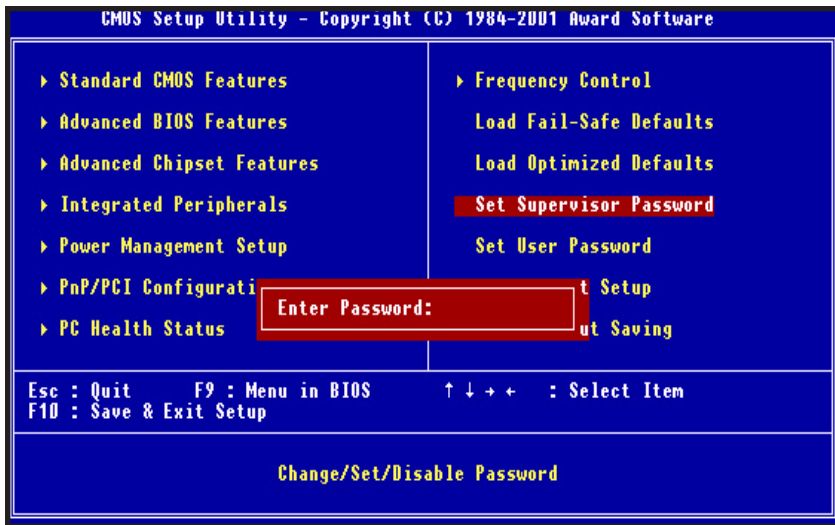
## ***Load Fail-safe Defaults***

Fail-safe defaults contain the most appropriate values of the system parameters that allow minimum system performance.



## *Load Optimized Defaults*

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



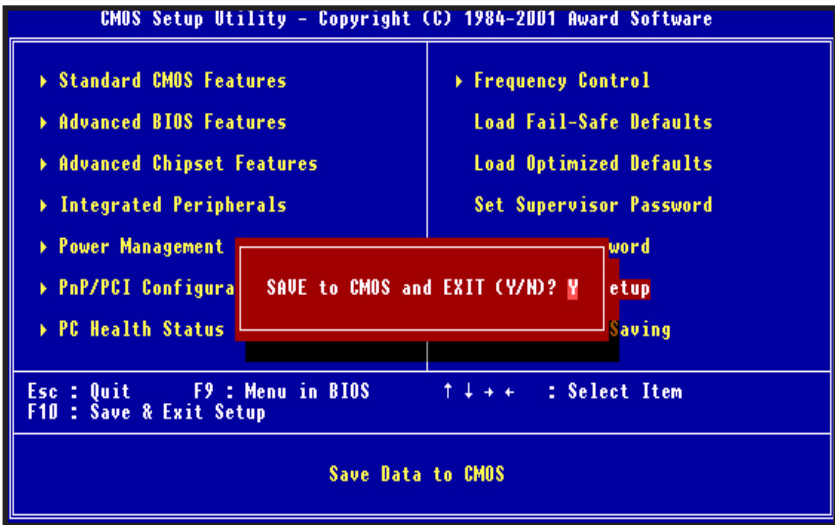
## ***Set Supervisor / User password***

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

Type the password, up to eight characters and press<Enter>. The new password will clear the previously entered password from CMOS Memory, you will be asked to confirm the Password. Type the password again and press <Enter>.

To disable password, just press <Enter> when you are prompted to enter password. A Message <<PASSWORD DISABLED!!!>> will appear to confirm the password being disabled. Once the password is disabled, the system will boot and you can enter setup freely.

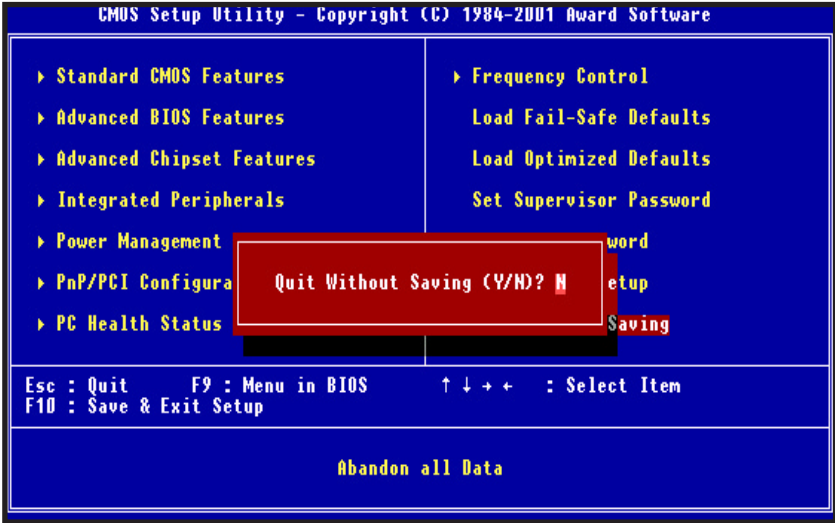
If you select "System" at "Security Option" in BIOS Features Setup Menu, you will be prompted for the password every time. If you select "Setup" at "Security option" in BIOS Features Setup Menu, you will be prompted only when you try to enter Setup.



## Save & Exit Setup

Type "Y" will quit the Setup Utility and Save the user setup value to RTC CMOS.

Type "N" will return to Setup Utility.



## ***Exit Without Saving***

Type "Y" will quit the Setup Utility and Without Saving the User setup Value.

Type "N" will return to Setup Utility.

# Glossary

# Glossary

A



## PS/2 Mouse & Keyboard Connector

The Mainboard provides two on-board PS/2 connectors, one for the keyboard, and one for the mouse. PS/2 devices all have a standard 6-pin round shape connector. If you are already using a PS/2 mouse or keyboard, simply plug them into the corresponding connector. No jumper settings are necessary.

B



## ATX Power Supply Connector

The Mainboard provides a single 20-pin ATX power supply connector, which incorporates standard +5V and +12V, 3.3V and soft-on/off signals. With a power supply that supports remote power on/off, the mainboard can turn off the system power through software control, such as the shutdown command in the Windows 95 / Windows 98 Start Menu. The BIOS system will turn the system power off when it receives the proper APM command from the OS. APM must be enabled in the BIOS and OS systems in order to set the soft-off feature working properly.

| Pin | Signal Name | Pin | Signal Name |
|-----|-------------|-----|-------------|
| 1   | +3.3V       | 11  | +3.3V       |
| 2   | +3.3V       | 12  | -12V        |
| 3   | Ground      | 13  | Ground      |
| 4   | +5V         | 14  | PW_ON       |
| 5   | Ground      | 15  | Ground      |
| 6   | +5V         | 16  | Ground      |
| 7   | Ground      | 17  | Ground      |
| 8   | PWRGOOD     | 18  | -5V         |
| 9   | +5VSB       | 19  | +5V         |
| 10  | +12V        | 20  | +5V         |





## About the Soft Touch Power Button

In an ATX based system, the new soft touch power button replaces the main power switch that turns your system on and off. From an OFF state, you can switch the system ON by simply pressing the power button. From an ON state, the system can be turned OFF by pressing and holding the power button for four (4) seconds OR shut down instantly. The functions of the power button can also be altered in the Power Management section of the CMOS setup.

## C Universal Serial Bus (USB) Connector

The Mainboard provides two Universal Serial Bus (USB) connectors. USB is a new interface standard for adding external Plug-and-Play (PnP) devices to the computer system. Peripherals that support USB PnP capabilities can operate at up to a 12Mb/sec data transfer rate. Eventually, all external devices connected to your computer will be standardized to USB.

## D Serial (COM1 & 2) Connector

The ATX Mainboard provides two serial port connectors. Based on the ATX standard, (2) 9-Pin serial ports are now built on the mainboard back panel. This design makes the mainboard installation easier.

## E Infra-Red (IR) Header

The Mainboard provides a 5-pin header interface, IR for connection to a Hewlett Packard HSDSL-1000 compatible infrared (IrDA) transmitter/receiver. Connect IR to the front panel I/O IrDA connector provided with your system. Once the module is connected to the front panel I/O IrDA connector, Serial port 2 can be re-directed to the IrDA module. When configured for IrDA, the user can transfer files to or from portable devices such as laptops, PDA's and printers using application software such as LapLink. The IrDA specification provides for data transfers at 115 kbps from a distance of 1-meter. Support for Consumer infrared (ASK-IR) is also included. Please refer to your IR equipment for more detailed information.

The header pin-out is as follows:

| Pin | Signal Name              |
|-----|--------------------------|
| 1   | VCC, power source        |
| 2   | No Connection            |
| 3   | IRRX, infra-red receive  |
| 4   | Ground                   |
| 5   | IRTX, infra-red transmit |



## F Memory Module Sockets

The Mainboard provides two 168 pins standard DIMM sockets for installation of 3.3V unbuffered Single or Double Bank SDRAM modules.



## G Parallel Port Connector

The ATX Mainboard provides a parallel port connector. Based on the ATX standard, a 25-pin parallel port is now built on the mainboard back panel. This design makes the mainboard installation easier. The parallel port can be BIOS configured into standard (SPP) mode, Enhanced Parallel Port (EPP) mode, and a high speed Extended Capabilities Port (ECP) mode. EPP Mode requires a driver provided by the peripheral manufacturer in order to operate properly.

## I LITHIUM BATTERY

A 3V, CR2032, Lithium battery is installed on the on-board battery socket. This battery is used to supply the CMOS RAM backup power during system powered-off. Danger of explosion if battery is incorrectly replaced. Therefore, if you have any difficulties, please consult the technical personnel.



## J PCI Add-In Board Connector

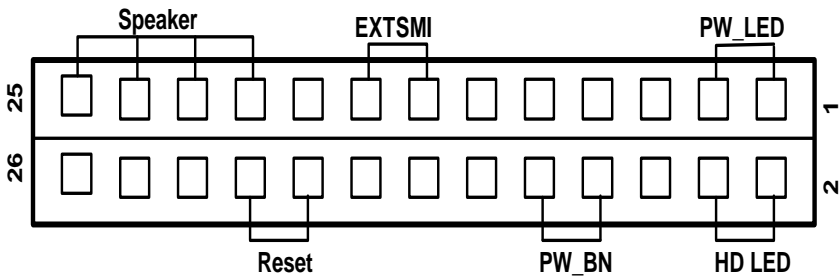
The Mainboard provides 2 PCI Connectors for the PCI cards.

**M**

## Front Panel Function Connector

The Mainboard integrates all system front panel functions into a single on-board connector. These include connections for the following features:

| Function                                 | Connector Pin-Out Label |
|--|-------------------------|
| System Reset                             | RESET                   |
| Power LED                                | PW-LED                  |
| Hard Drive Activity LED                  | HD_LED                  |
| Soft-Touch Button Power On/Off           | PW-BN                   |
| External Power Saving Control (optional) | EXTSMI                  |
| External speaker                         | Speaker                 |

**N**

## Flash BIOS

The Mainboard flash BIOS provides users with more flexibility in upgrading their mainboards. The flash BIOS can be easily reprogrammed via software.

**O**  **Floppy Drive Header**

The Mainboard provides a 34-pin connector that supports the included floppy drive ribbon cable. After connecting the single end to the on-board “FLOPPY” connector, connect the remaining plugs on the other end of the cable to the corresponding floppy drives.

NOTE: Pin 5 is removed to prevent inserting the connector in the wrong orientation.

**P**  **IDE Device Header**

The Mainboard provides (2) independent bus-mastering PCI IDE interfaces capable of supporting up to Mode 4 and Ultra DMA-33/66 devices. The system BIOS supports automatic detection of the IDE device data transfer rate and translation between different kinds of device modes such as Logical Block Addressing (LBA), Extended Cylinder Sector Head (ECSH) translation modes and ATAPI (e.g., CD-ROM) devices on both IDE interfaces.

The two on-board IDE headers support the provided 80-pin IDE hard disk ribbon cables. If you install two hard disks and/or CD-Rom drives, you must configure the two drives by setting their IDE master/slave jumpers according to the documentation for those devices.

Also, you may connect the two hard disk drives so that both become Masters, using one ribbon cable on the primary IDE header and one on the secondary IDE header.

**Q**  **WAKEUP-LINK Header**

The Mainboard provides a WAKEUP-LINK header (WOL) used to connect an add-in Network Interface Card which has Wakeup capability.

**r**  **Audio Modem Riser (AMR) Connector**

The Mainboard provides a AMR Connector for the AMR cards.

**S**  **CPU Socket**

The Mainboard provides a 370-pin CPU Socket for Intel Tualatin, Coppermine Pentium III, Celeron FCPGA processor. The CPU should have a fan attached to it to prevent from overheating. If a fan is not present, a fan should be installed prior to turning the system on.

**T**  **CPU & System Fan Connector**

The recommended heatsink for the processor are those with 12 Volt three-conductor fan that can be connected to the fan connector on the mainboard. It provides +12 Volts DC to the CPU cooling fan as follows:

| PIN | SIGNAL NAME      |
|-----|------------------|
| 1   | Ground           |
| 2   | +12V             |
| 3   | FAN Speed Detect |



**CAUTION!** Be sure that sufficient air circulation is available across the processor's heatsink by regularly checking that your CPU fan is working. Without sufficient circulation, the processor could overheat and damage both the processor and the mainboard. You may install an auxiliary fan if necessary.

The *SYSTEM* and *AUXILIARY* fan connectors are provided for optional cooling fans.

**U**  **Audio & Joystick Connectors**

The Mainboard provides Audio headers.

**Audio & Joystick Connectors**



Line Output



Line Input



Microphone Input



Game Port

**V**  **VGA Header**

The Mainboard provides a VGA Header for the Integrated Graphics Controller.

**X**  **CD Audio Connector**

CD Audio input ( Right, Ground, Ground, Left )

**Y**  **Auxiliary Audio Connector**

Auxiliary input ( Right, Ground, Ground, Left )

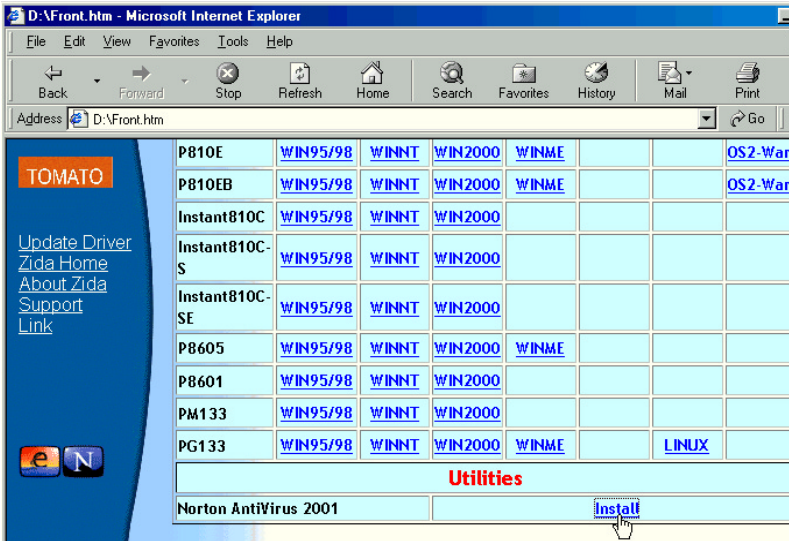
## CD Driver & Software Installation Guide

Steps :

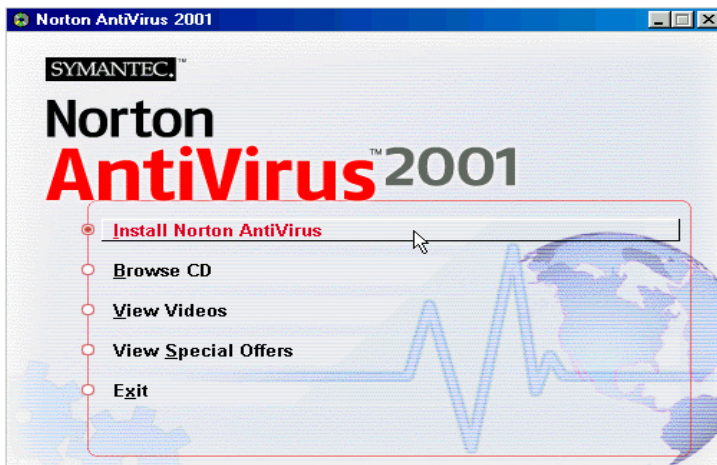
1. Boot up the Operating System (Windows 95/98/SE/NT/2000/Me/XP)
2. Put the M/B CD Disc into the CD-ROM Drive and wait for Autorun
3. Select P815G-U and click your Operating System Type
4. Then Installation intel chipset driver (INF)
5. Then installation onboard VGA Card driver
6. Follow the instructions and install suitable drivers

## Norton Anti-Virus OEM Version Setup Guide

Step 1 : Load the Driver CD in CDROM and find the Norton AntiVirus 2001 "Install" Option.

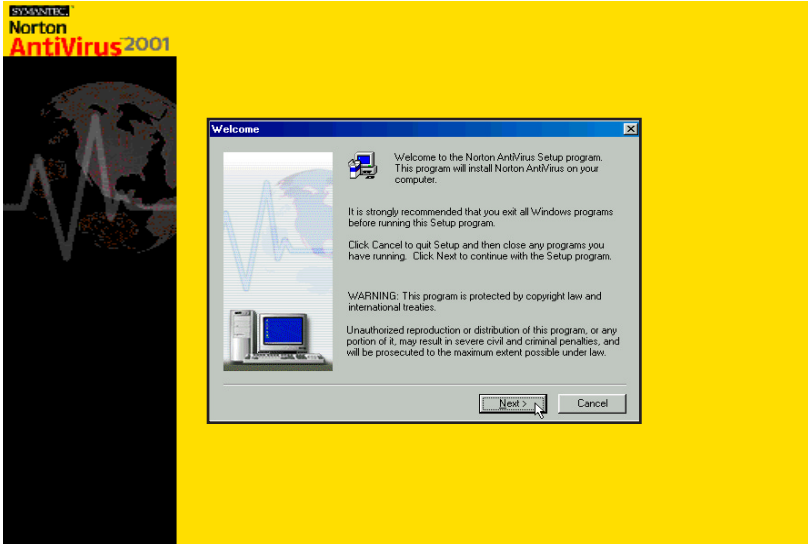


Step 2 : When CD finishes loading, press " Install Norton AntiVirus" to install the software.

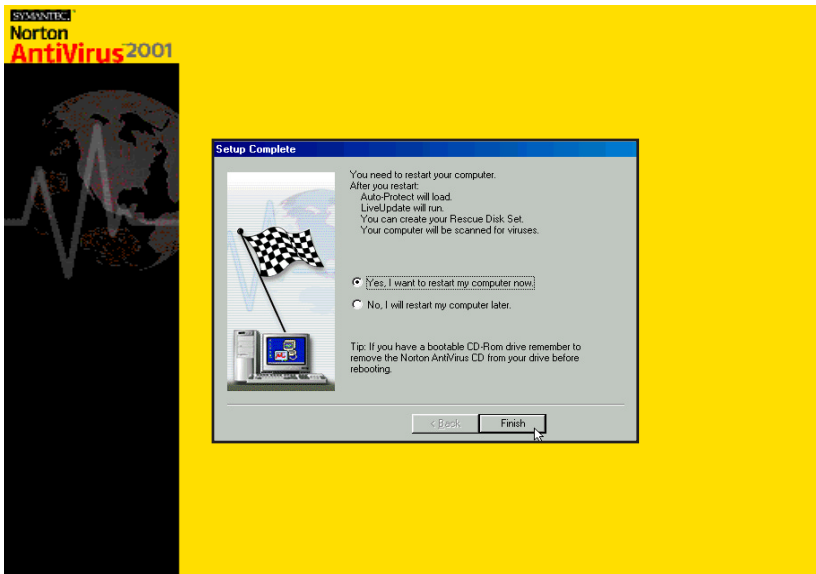




Step 3 : Follow the installation procedures on screen.



Step 4 : Select "Yes" and press "Finish" button to reboot computer.





## Guide

### Introduce INSTANT ON function:

**INSTANT ON** is a Windows 98 ACPI sleep mode function. When recovering from sleep mode, the system is able, in just a few seconds, to retrieve the last “state” of the system before it went to sleep and recover to that state. The “state” is stored in memory (RAM) before the system goes to sleep. During sleep mode, your system uses only enough energy to maintain critical information and system functions, primarily the system state and the ability to recognize various “wake up” triggers or signals, respectively.

### INSTANT ON function Installation

Please follow the steps to complete the **INSTANT ON** function installation.

**1**

Power on the computer when memory counting starts, press <Del>. You will enter BIOS Setup. Select the item “**POWER MANAGEMENT SETUP**”, then select **S3 (STR)** in “**ACPI Suspend Type**” option. Remember to save the settings by pressing "ESC" and choose the “**SAVE & EXIT SETUP**” option.

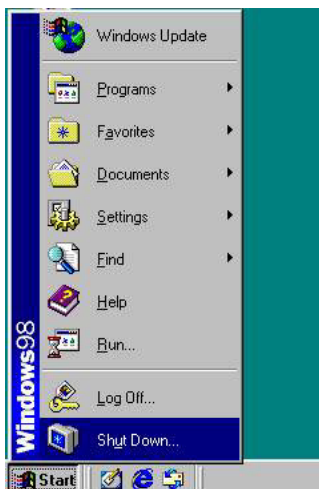
**2**

The installation of **INSTANT ON** is completed. You can use this function in Windows 98.

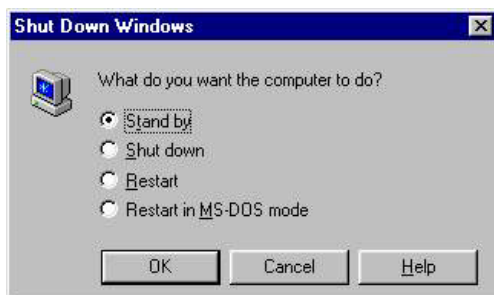
There are two ways :

1. Choose the “Stand by” item in the “Shut Down Windows” area.

- A. Press the “Start” button and then select “Shut Down”

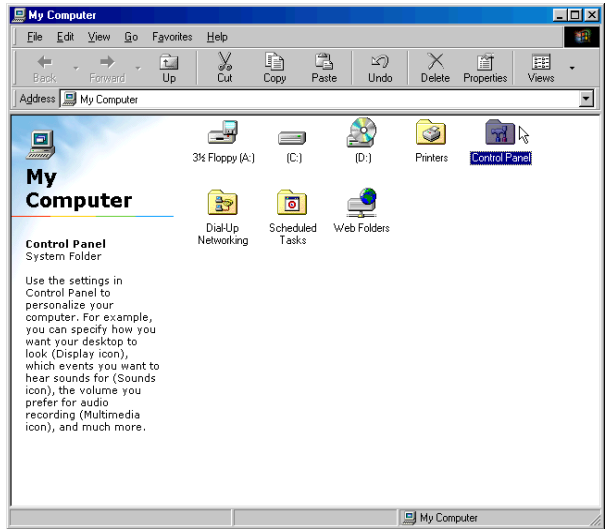


- B. Choose the “Stand by” item and Click “OK”



2. Set the system "power on" button to initiate sleep mode in Win95/98:

A. Double click "My Computer" and then "Control Panel"

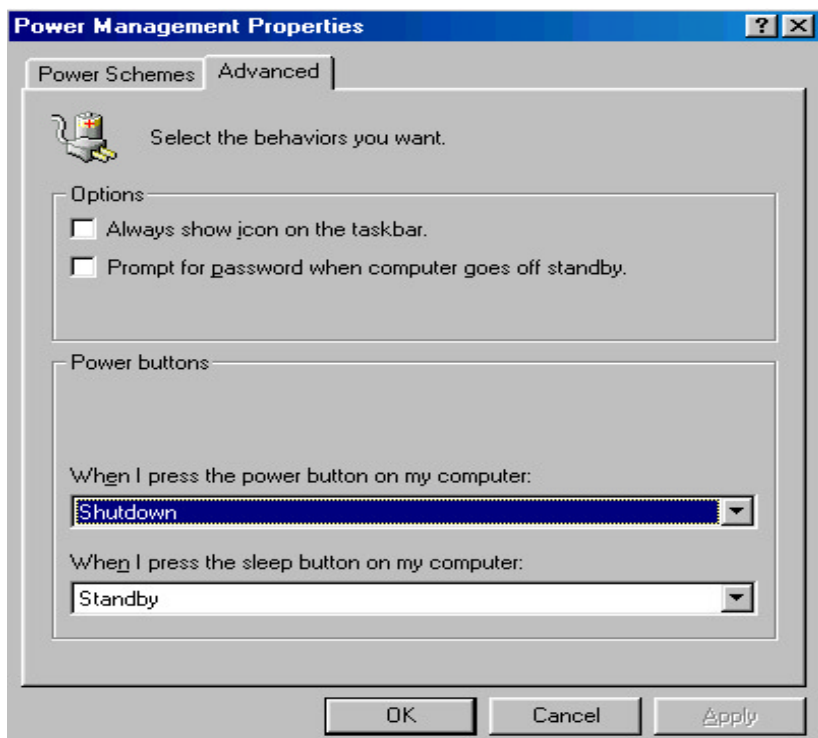


B. Double click the "Power Management" item.



- C. Select the “Advanced” tab and “Standby” mode in Power Buttons.

Restart your computer to complete setup.  
Now when you want to enter sleep mode, just press the “Power on” button.



#### 5 How to recover from the sleep mode?

There are four ways to “wake up” the system:

1. Press the “Power On” button.
2. Use the “Keyboard Power On” function.
3. Use the “Modem/Lan Resume” function.
4. Use the “Resume by Alarm” function.

## **Notice to INSTANT ON users :**

1. ATX power supply requirement
  - comply with the ATX 2.01
  - provide more than 720 mA 5V Stand-By current
  
2. SDRAM requirement
  - PC100/133 compliant.