

# Chapter 4 Startup and BIOS Settings

## 4.1 Startup Screen

Only a few motherboards without buzzers do not send out a warning sound before entering the operating system. If the hardware is correctly installed, a buzzer will send out a “beep” sound after booting, and then the booting screen below will be displayed on the monitor.



```
Award Modular BIOS v6.00PG, An Energy Star Ally
Copyright (C) 1984-2007, Award Software, Inc.

Intel P35 BIOS for P35-DQ6 D30

Main Processor : Intel(R) Core(TM)2 Quad CPU @ 1.60GHz(266x6)
<CPUID:06F7 Patch ID:0060>
Memory Testing : 523200K OK

Memory Frequency 000 MHz at Single Channel
IDE Channel 0 Master : HDS724040KLSA00 KFA0A20M

Detecting IDE drives ...
IDE Channel 4 Master : DUDRW IDE H16X VER B02P
IDE Channel 4 Slave : None
IDE Channel 5 Master : None
IDE Channel 5 Slave : None

<DEL>:BIOS Setup <F9>:XpressRecovery2 <F12>:Boot Menu <End>:QFlash
03/19/2007-F35-ICH9-6A79069EC-00
```

### 1. Chipset and Motherboard Model Number and BIOS Version

When confronted with compatibility problems with the motherboard (e.g. the capacity of the supported hard disk drive), refer to the model number of the motherboard and check for a new BIOS version to get an update from the manufacturer’s website. For GIGABYTE motherboards, the BIOS versions are usually indicated by a capital F as the first character; the later versions are indicated by larger numbers after the capital F.

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### 2. CPU Specifications

CPU Specifications include CPU brand, type, clock (in parentheses are external frequency and clock multiplier) and ID, etc. CPU types can change, so sometimes the wrong clock detection occurs and you need to enter BIOS Setup to adjust it manually or update the BIOS.

### 3. Memory Information

The number of the memory capacity detection will increase during startup. When the number stops increasing, it indicates the total capacity of the computer's memory. If the memory modules are installed in the dual-channel fashion along with the chipset's support, "Dual Channel" will be displayed to indicate that the dual channel function has been activated.

### 4. IDE and Serial ATA Device Information

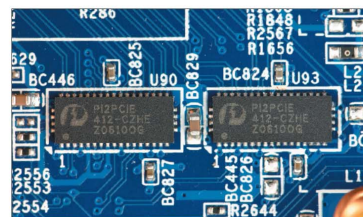
If two devices are connected to an IDE cable and the jumper setting are correct (refer to Section 3.4), Master and Slave will display the model numbers of the hard disk drive or optical drive. This also applies to Serial ATA devices.

### 5. Function Prompt

The screen will show the key to enter BIOS (Del key in most cases). Gigabyte motherboards that support Dual BIOS, Q-Flash and Xpress Recovery will display such information (at the bottom of the screen) and hot keys for execution.

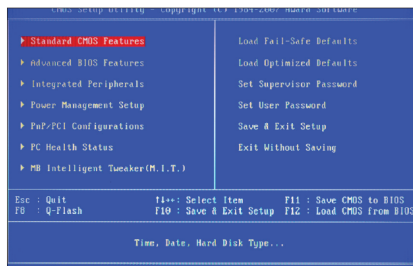
#### BIOS Definition.....

BIOS (Basic Input/Output System) is saved in the EPROM chip of the motherboard and saves the hardware settings, including processor, memory, graphics accelerator and hard disk drive. The BIOS also control the performance and stability of the system. You need to know about BIOS to configure the optimal settings for the best performance.



## 4.2 BIOS Settings

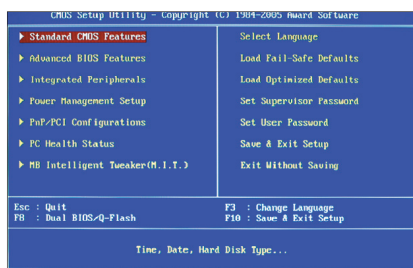
Press the "Del" key to enter the Main menu of BIOS. Do not get confused by the BIOS setting items. All you have to do is change a few settings and use the default values for most of the items. Next, we will show the necessary adjustment items or selected functions for the operating condition to maximize the computer's performance. However, please be advised to refer to the motherboard's documentation for options that you are not familiar with, otherwise, the system may be unbootable or unstable because of incorrect settings.



BIOS Main Menu. This is a common Award BIOS screen; other BIOS options and titles are generally the same.



Press the "F1" key to display the list of BIOS key functions.



All GIGABYTE series motherboards can display Top Performance options by pressing "Ctrl"+"F1" in the BIOS main menu for advanced player setup.

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## Switch Operation Interface to Traditional Chinese.....



To prevent language problems, most GIGABYTE BIOS offer a multi-language interface such as Traditional Chinese to help users operate the setup.

## Date and Time Adjustment.....



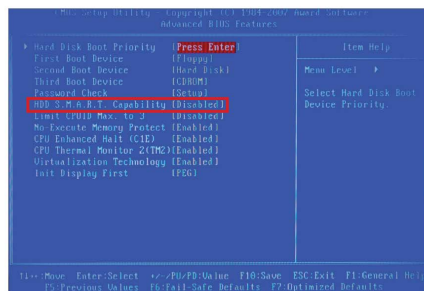
Select the "Standard CMOS Features" and adjust the date and time at the top of the screen. The following section displays the settings of the IDE devices which are detected automatically and do not need to be changed. Next are the floppy disk drive and "Halt On" mode settings. The default setting for the "Halt On" mode is "All, But Keyboard", meaning that the system will not boot-up when detecting any errors, except for keyboard.

## Booting Priority Settings.....



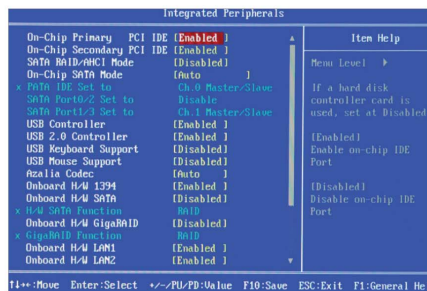
In "Advanced BIOS Features", you can set the first, second and third booting device. For Windows® XP™ installation, make sure to set the optical drive prior to the hard disk drives so that the system can boot up from the CD. It is suggested to turn off the "Boot Up Floppy Seek" function to increase the boot-up speed.

## Enabling the HDD S.M.A.R.T. Capability Function.....

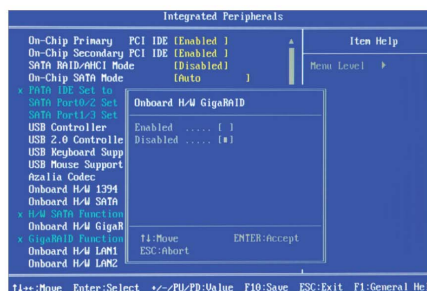


Seagate's S.M.A.R.T. (Self-Monitoring Analysis and Reporting Technology) is a monitoring system for hard disks to detect and report on various indicators of reliability. In case any malfunction occurs, it will send a warning message, allowing users to back up their data before the hard disk drive crashes (additional software is required).

## Integrated Peripherals Setting.....

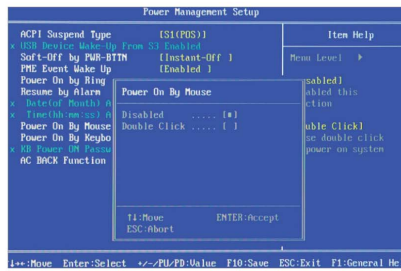


"Integrated Peripherals" is used to control the peripherals, including Serial ATA, IDE, USB, network and 1394 devices. Users may freely enable or disable these devices. For example, the 1394 function may be disabled if it is not in use. In addition to the built-in Serial ATA in the South Bridge chip, this motherboard also supports the chip of the same kind from Silicon Image. Therefore, Serial ATA devices include "On-Chip" and "Onboard" devices. As the RAID function requires more (at least two) hard disk drives and is not applicable to most users, it is skipped (as recommended) during boot-up detection to increase the startup speed. If you use a USB keyboard or mouse, make sure to enable the USB Keyboard Support and USB Mouse Support items to allow for normal operation under DOS.



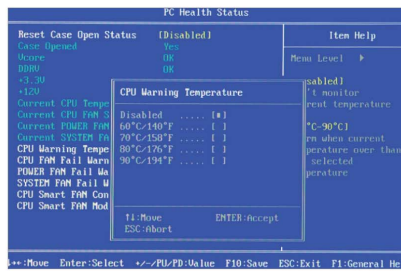
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## Wakeup Source Control.....



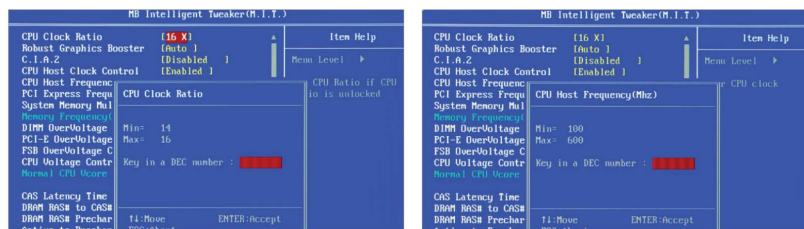
To power on the computer, pressing the power button is not the only way; you can also use the mouse or keyboard. Enter the "Power Management Setup" option and locate "Power On by Mouse", "Power On By Keyboard" or using modem (Power On By Ring), timer (Resume By Alarm) to wake up computer. These functions can all be turned off while not in use.

## Hardware Monitoring Adjustment.....



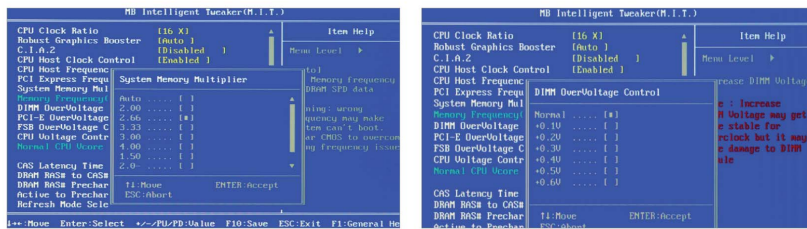
To monitor the system operation, "PC Health Status" provides information such as processor temperature as well as speed values of the power supply fan and system fans. Make sure to enable the processor temperature warning function to protect against processor damage. In addition, you could turn on "CPU Smart FAN Control" function, allowing the CPU cooling fan to automatically adjust its rotational speed, based on the temperature, to reach the balance between heat dissipation and silence.

## Adjust the CPU Clock.....



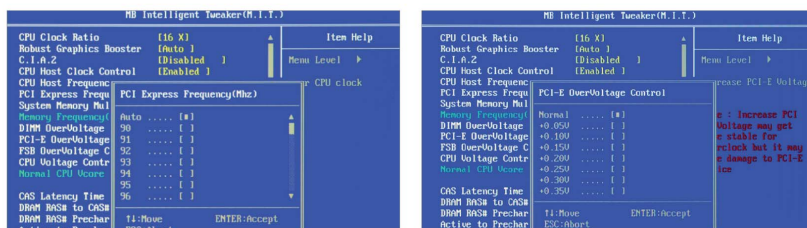
After selecting "MB Intelligent Tweaker (M.I.T.)", you can change the CPU clock ratio and external clock settings in "CPU Clock Ratio" and "CPU Host Frequency (Mhz)" respectively. Inadequate adjustment may cause the over-clock state and system instability. Inexperienced users are advised not to change the settings without full knowledge.

## Memory Clock and Voltage.....



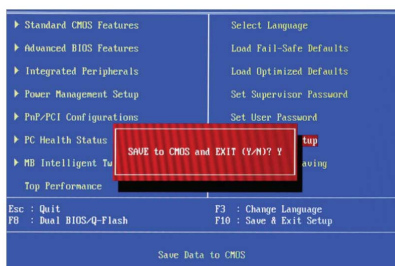
"DIMM OverVoltage Control" and "Memory Frequency (MHz)" allows you to set the clock and voltage of the memory module. Enable the automatic detection, unless over clock is intended.

## PCI-E Clock and Voltage.....



"PCI Express Frequency (MHz)" and "PCI-E OverVoltage Control" allow you to set the speed and voltage of the PCI Express® slot. Make sure that the adjustment does not cause system instability.

## Saving Settings.....



Make sure to save the settings you have made; otherwise, those previous changes will be lost. Select "SAVE TO CMOS and EXIT (Y/N)" or press "F10" on the keyboard and then press the "Y" button. If you don't want to change the setup, you may select "Exit Without Saving" or the "ESC" button on the keyboard and press the "Y" button.