

Motherboard BIOS Menu Explained

For Models:

MG-63MI-7150

MG-63MI-7100

MG-61MI-7050



A7399MH3 V1.2 042308

Intel(R) Core(TM)2 Quad CPU Q6600 @ 2.40GHz , Speed: 266x9=2400 MHz

Memory Frequency For DDR2 800MHz (Single Channel)

MMIO ROM Version :4.074.34

Press DEL to run Setup

Press F11 for BBS POPUP

Initializing USB Controllers .. Done.

896MB OK

BIOS POST Screen, this is the screen where the BIOS starts to detect components installed on the system, CPU, Memory, Hard Drives, and optical Drives.

The First Line shows the motherboards Identification tag, and BIOS version number.

Pressing DEL key at this screen will enter the BIOS options.

> Standard CMOS Features

> Advanced BIOS Features

> Integrated Peripherals

> Power Management Setup

> PnP/PCI Configurations

> H/W Monitor

> Cell Menu

Load Fail-Safe Defaults

Load Optimized Defaults

BIOS Setting Password

Save & Exit Setup

Exit Without Saving

Enter: Select +/-: Value F10: Save Esc : Exit F1: General Help
F6: Load Optimized Defaults F7 : Load Fail-Safe Defaults

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Standard CMOS Features:

This section allows you to change the time, date, manually configure and view hard disk/optical drives, the Floppy disk type, and View General System Information.

Advanced BIOS Features:

Allows you to Set your Boot Sequence, XFX Logo Splash Screen, CPU Features, and Chipset Features.

Integrated Peripherals:

Configure all onboard devices, including USB, IDE, SATA, LAN, Audio, and Serial Header.

Power Management Setup:

Set your sleep states, Suspend timers, and what events can cause the system to wake.

PnP/PCI Configuration:

Allows you to set the IRQ and DMA resource allocations for the PCI bus and plug in play devices.

H/W Monitor:

Allows you to monitor fan speeds, temperatures, and voltages.

Cell Menu:

Set the frequencies of your CPU and Memory, change memory timings, and enable spread spectrum support.

Standard CMOS Features

		Help Item
Date (MM:DD:YY) :	[Day XX/XX/XXXX]	
HH:MM:SS	[XX:XX:XX]	
> IDE Primary Master	[Not Detected]	
> IDE Primary Slave	[Not Detected]	
> SATA 1	[Not Detected]	
> SATA 2	[Not Detected]	
> SATA 3	[Not Detected]	
> SATA 4	[Not Detected]	
Floppy Drive A	[Not Installed]	
> System Information	[Press Enter]	

Enter: Select +/-: Value F10: Save Esc : Exit F1: General Help
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Data and Time Can be set above.

All the IDE and SATA ports listed here Have nothing detected. All modern disk drives and optical drives will automatically be detected and will display a part number instead of Not Detected. If you are using a legacy device you can go in and manually set the device's settings, including S.M.A.R.T support.

Floppy Drive A Options:

Not Installed – Use this option if no floppy drive exist in the system.

320kb

1.2MB

720KB

1.44MB – The standard 3 ½ in floppy drive type.

2.88MB

System Informaiton:

Shows Detailed system information about the CPU, BIOS, and Memory.

System Information

Processor Information Type @ x.xxGHz	Help Item
CPUID/MicroCode :xxxx/xxxx	
CPU Frequency : 2.40GHz (266x9)	
BIOS Version : Vx.x MMDDYYYY	
Physical Memory : xxxMB	
Usage Memory : xxxMB	
Cache Size : 4096 KB x 2	

Enter: Select +/-: Value F10: Save Esc : Exit F1: General Help
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The First Line will Display what type of process is installed and the speed it runs at.

CPUID/MicroCode:
 Shows the CPU's unique identifier.

CPU Frequency:
 Show the speed that the CPU is running at, and the multiplier used to reach that speed.

BIOS Version:
 Shows the current BIOS version you have installed, as well as an 8 digit number representing the BIOS date.

Physical Memory:
 Shows how much RAM is installed in the system.

Cache Size:
 Shows amount of L2 Cache on the CPU.

Advanced BIOS Features

Boot Sector Protection [Disabled] Full Screen Logo Display [Disabled] Quick Booting [Enabled] Boot Up Num-Lock LED [Off] IOAPIC Function [Enabled] MPS Table Version [1.4] > CPU Feature [Press Enter] > Chipset Feature [Press Enter] > Boot Sequence [Press Enter]	Help Item
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Enter: Select +/-: Value F10: Save Esc : Exit F1: General Help
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Boot Sector Protection:

Enabled or Disabled

Boot sector virus protection

Full Screen Logo Display:

Enabled or Disabled

Shows XFX Logo at startup.

Quick Booting:

Enabled or Disabled

Skips certain POST test to allow for faster booting to Operating System

Boot Up Num-Lock LED:

On or Off

Power on state for the Num Lock Key. Basically if its on or off at system startup.

IOAPIC Function:

Enabled or Disabled

I/O Advanced Programmable Interrupt Controller. Basically improves multiprocessor support with more IRQ's and faster handling of those Interrupts.

MPS Table Version:

1.1 or 1.4

Multi-processor Specification. Set to 1.4 for windows 2000 and above. 1.1 for older operating systems.

Boot Sequence:

This option shows up when bootable devices are connected to the motherboard. Will open a menu that will allow you to change the order in which the motherboard will cycle to find a device that has a bootable operating system.

CPU Feature

Execute Bit Support [Enabled] Set Limit CPUID MaxVal to 3 [Disabled]	Help Item

Enter: Select +/-: Value F10: Save Esc : Exit F1: General Help
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Execute Bit Support:

Enabled or Disabled

Improves security and protection from virus's and worms that try to execute malicious code.

Set Limit CPUID MaxVal to 3:

Enabled or Disabled

Limits number of CPU Cores 3, keep disabled unless running older OS.

Chipset Feature

HPET	[Disabled]	Help Item
VGA Share Memory	[128MB]	

Enter: Select +/-: Value F10: Save Esc : Exit F1: General Help
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HPET:
Enabled or Disabled
 High Precision Event Timer, helps synchronize multimedia streams which can provide smoother playback. Feature only support in newer operating systems such as Vista, Windows 2008, and OSX. Not Supported in Windows XP.

VGA Share Memory:
 Sets how much system memory will be allocated to the onboard GPU.
 32mb
 64mb
 128mb
 256mb
Disabled –Only use if utilizing an add in graphics card.

Integrated Peripherals

Item	Value	Help Item
USB Controller	[Enabled]	
USB Device Legacy Support	[Enabled]	
Onboard LAN Controller	[Enabled]	
LAN Option ROM	[Disabled]	
HD Audio Controller	[Enabled]	
> On-Chip ATA Devices	[Press Enter]	
> I/O Devices	[Press Enter]	

Enter: Select +/-: Value F10: Save Esc : Exit F1: General Help
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USB Controller:

Enabled or Disabled

Turns off or on all the USB ports on the motherboard.

USB Device Legacy Support:

Enabled or Disabled

Allows Legacy Devices to run through the USB port such as the mouse and keyboard. If disabled such devices wont work until an OS and drivers are installed.

Onboard LAN Controller:

Enabled or Disabled

Completely enables or disables the network port on the motherboard.

LAN Option ROM:

Enabled or Disabled

Used for booting to LAN options.

HD Audio Controller:

Enabled or Disabled

Completely enables or disables the onboard audio controller.

On-Chip ATA Devices

On-Chip IDE Controller	[Enabled]	Help Item
PCI IDE BusMaster	[Disabled]	
On-Chip SATA Controller	[Enabled]	
RAID Mode	[RAID]	
SATA Primary Master Channel	[Enabled]	
SATA Primary Slave Channel	[Enabled]	
SATA Secondary Master Channel	[Enabled]	
SATA Secondary Slave Channel	[Enabled]	

Enter: Select +/-: Value F10: Save Esc : Exit F1: General Help
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On-Chip IDE Controller:

Enabled or Disabled

Turns on and off the IDE controller on the motherboard.

PCI IDE BusMaster:

Enabled or Disabled

Allows for IDE devices to communicate directly with less use of the CPU in command Line environments.

On-Chip SATA Controller:

Enabled or Disabled

Turns on and off the SATA controller on the motherboard.

RAID Mode:

Sets what kind of mode the Serial ATA hard drives will be running in.

IDE – Recommended for easy installation of operating systems, and single disk operating systems.

AHCI – Advanced Host Controller Interface – Offers more features for hard disks, however will require extra drivers to be installed during OS installation to operate properly.

RAID – Necessary for RAID arrays, when this option is selected you will be able to set which SATA devices will be running in RAID mode, will require additional drivers during OS installation.

I/O Devices

COM Port 1	[3F8/IRQ4]	Help Item

Enter: Select +/-: Value F10: Save Esc : Exit F1: General Help
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Com Port 1:

Controllers what resources the Serial header will take.

- Disabled*
- 3F8/IRQ4*
- 2F8/IRQ3*
- 3E8/IRQ4*
- 2E8/IRQ3*

Power Management Setup

ACPI Function	[Enabled]	Help Item
ACPI Standby State	[S1]	
Power Button Function	[Power Off]	
Restore on AC Power Loss	[Off]	
> Wake Up Event Setup	[Press Enter]	

Enter: Select +/-: Value F10: Save Esc : Exit F1: General Help
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ACPI Function:

Enabled or Disabled

Advanced Configuration and Power Interface. Needed for Power Management options to be controller by the Operating system.

ACPI Function:

S1 or S3

Determines what type of suspend mode will be used when the system goes into Standby.

S1 is Power on Standby mode, power still goes to the CPU and RAM.

S3 is Suspend to RAM mode. Almost everything but RAM is powered down, all applications are held in the RAM until system is resumed and other components are powered back on.

Power Button Function:

Power off or Suspend

Determines if the power button causes the system to turn off, or go into a Suspended mode.

Restore on AC Power Loss:

Off, On, Or Last State

Allows system to turn itself on in the event of a power loss. Useful for servers and other systems that need to be on at all times.

Wake Up Event Setup

		Help Item
Resume From S3 By USB Device	[Disabled]	
Resume From S3 By PS/2 Keyboard	[Disabled]	
Resume From S3 By PS/2 Mouse	[Disabled]	
Resume By PCI Device (PME#)	[Enabled]	
Resume By PCI-E Device	[Enabled]	
Resume By Onboard LAN	[Enabled]	
Resume By RTC Alarm	[Disabled]	

Enter: Select +/-: Value F10: Save Esc : Exit F1: General Help
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Allows different ways for the system to be resumed from a standby state.

PnP/PCI Configuration

Primary Grahpic's Adapter	[PCI-E]	Help Item
PCI Latency Timer	[64]	
PCI Slot 1 IRQ	[Auto]	
PCI Slot 2 IRQ	[Auto]	
> IRQ Resource Setup	[Press Enter]	

Enter: Select +/-/: Value F10: Save Esc : Exit F1: General Help
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Primary Graphic's Adapter:

PCI-E or Internal

Set which graphics card will be the primary when both the onboard and add in graphics card are being used.

PCI Latency Timer:

Determines how long a device can utilize the PCI bus before having to hand it over to another device on the BUS.

- 32
- 64
- 96
- 128
- 160
- 182
- 224
- 248

PCI Slot 1 IRQ:

7, 10, or 11

Allows you to manually set IRQ for the PCI slot.

PCI Slot 2 IRQ:

7, 10, or 11

Allows you to manually set IRQ for the PCI slot.

IRQ Resource Setup

IRQ3	[Available]	Help Item
IRQ4	[Available]	
IRQ5	[Available]	
IRQ7	[Available]	
IRQ9	[Available]	
IRQ10	[Available]	
IRQ11	[Available]	
IRQ14	[Available]	
IRQ15	[Available]	

Enter: Select +/-: Value F10: Save Esc : Exit F1: General Help
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Allows you to set certain IRQ address to reserved. Which will not allow the system to utilizes that resource.

H/W Monitor

FAN 1 Mode Setting	[Full On mode]	Help Item
- - - -PC Health Status - - - -		
CPU Temperature	: XX'C/XX'F	
System Temperature	: XX'C/XX'F	
CPU FAN Speed	: XXXX RPM	
SYS FAN 1 Speed	: XXXX RPM	
CPU Vcore	: 1.200 V	
3.3V	: 3.300 V	
5V	: 5.000 V	
12V	: 12.000 V	
5V SB	: 5.000 V	
Enter: Select +/-: Value F10: Save Esc : Exit F1: General Help F6: Load Optimized Defaults F7 : Load Fail-Safe Defaults		

System Hardware Monitor lets you view the system fans, the temperatures and the voltages running to various components.

Fan 1 Mode Setting:

Full On Mode – Fans run as fast as possible to keep system cool.

Automatic Mode – Allows you to set temperature limits, minimum and maximum values as to when the system fans will turn on.

PWM Manually Mode – Allows you to manually set a non-variable speed for the fans.

Cell Menu

		Help Item
Current CPU Frequency	2.40GHz (266x9)	
Current FSB Frequency	1067 MHz	
Current DRAM Frequency	800 MHz	
<hr/>		
Intel EIST	[Enabled]	
System Clock Mode	[Manual]	
FSB Clock (MHz)	[800]	
Memory Clock (MHz)	[667]	
<hr/>		
> Advanced DRAM Configuration	[Press Enter]	
<hr/>		
Adjust PCIE Frequency	[100]	
Auto Disabled DIMM/PCI Frequency	[Enabled]	
<hr/>		
Adjust DDR Voltage (V)	[1.90]	
Adjust NB Voltage (V)	[1.55]	
<hr/>		
Spread Spectrum	[Enabled]	

Enter: Select +/-: Value F10: Save Esc : Exit F1: General Help
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Intel EIST:

Enabled or Disabled

Allows the CPU's speed to be controller by the operating system.

System Clock Mode:

Auto- Motherboard detects proper running speeds for components

Linked – Allows for manual adjusting of FSB speeds, but keeps memory and CPU linked to improve stability

Manual – Allows for unlinked control of the FSB of both memory and CPU

Advanced DRAM Configuration:

Allows the timings for memory to be changed.

Adjust PCIE Frequency:

100 – 115

For overclocking PCI-E Bus

Auto Disabled DIMM/PCI Frequency:

Enabled or Disabled

Adjust DDR Voltage:

1.8v – 2.4v

Manually set the voltage of memory.

Adjust NB Voltage:

1.5v – 1.7v

Manually set the Northbridge Voltage.

Advance DRAM Configuration

Memory Timings	[Manual]	Help Item
tCL (CAS Latency)	[Auto]	
tRCD	[Auto]	
tRP	[Auto]	
tRAS	[Auto]	
Command Per Clock (CMD)	[Auto]	
tRRD	[Auto]	
tRC	[Auto]	
tWR	[Auto]	
tWTR	[Auto]	

Enter: Select +/-: Value F10: Save Esc : Exit F1: General Help
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Memory timings should typically be set to Auto, in some instances you may be required to change timings, be sure to check with the memory manufacturer for the optimal settings for your type of RAM.

tCL:
 Column Address Strobe

tRCD:
 RAS to CAS Delay; time require between RAS and CAS access

tRP:
 Precharge; the time required to switch from one row to the next row, for example, switch internal memory banks.

tRAS:
 Active to precharge delay; this is the delay between the precharge and activation of a row.

Command Per Clock:
 Number of cycles it takes to address all memory.