



M266A

User Manual

Version 1.0

Published April 2003

Copyright©2003 ASRock INC. All rights reserved.

Copyright Notice:

No part of this manual may be reproduced, transcribed, transmitted, or translated in any language, in any form or by any means, except duplication of documentation by the purchaser for backup purpose, without written consent of ASRock Inc.

Products and corporate names appearing in this manual may or may not be registered trademarks or copyrights of their respective companies, and are used only for identification or explanation and to the owners' benefit, without intent to infringe.

Disclaimer:

Specifications and information contained in this manual are furnished for informational use only and subject to change without notice, and should not be constructed as a commitment by ASRock. ASRock assumes no responsibility for any errors or omissions that may appear in this manual.

With respect to the contents of this manual, ASRock does not provide warranty of any kind, either expressed or implied, including but not limited to the implied warranties or conditions of merchantability or fitness for a particular purpose.

In no event shall ASRock, its directors, officers, employees, or agents be liable for any indirect, special, incidental, or consequential damages (including damages for loss of profits, loss of business, loss of data, interruption of business and the like), even if ASRock has been advised of the possibility of such damages arising from any defect or error in the manual or product.

ASRock Website: <http://www.asrock.com>

Contents

1	Introduction	4
1.1	Package Contents	4
1.2	Specifications	5
1.3	Motherboard Layout	7
1.4	ASRock I/O™	8
2	Installation	9
2.1	Screw Holes	9
2.2	Pre-installation Precautions	9
2.3	CPU Installation	10
2.4	Installation of CPU fan and Heatsink	10
2.5	Installation of Memory Modules (DIMM)	11
2.6	Expansion Slots	12
2.7	Jumpers Setup	13
2.8	Connectors	14
3	BIOS Setup	16
3.1	BIOS Setup Utility	16
3.2	BIOS Setup Utility Main Menu	16
3.3	Legend Bar	17
3.4	Standard CMOS Setup	17
3.5	Advanced CMOS Setup	20
3.6	Advanced Chipset Setup	21
3.7	Power Management Setup	23
3.8	PCI / Plug and Play Setup	24
3.9	Peripheral Setup	25
3.10	Hardware Monitor Setup	27
3.11	Change Supervisor Password / Change User Password	27
3.12	Auto Configuration with Optimal Settings	27
3.13	Save Settings and Exit	27
3.14	Exit Without Saving	27
4	Software Support	28
4.1	Installing Operating System	28
4.2	Support CD Information	28
4.2.1	Running The Support CD	28
4.2.2	Drivers Menu	28
4.2.3	Utilities Menu	28
4.2.4	ASRock "PC-DIY Live Demo" Program	28
4.2.5	Contact Information	28

Chapter 1 Introduction

Thank you for purchasing ASRock M266A motherboard, a reliable motherboard produced under ASRock's consistently stringent quality control. It delivers excellent performance with robust design conforming to ASRock's commitment to quality and endurance.

Chapter 1 and 2 of this manual contain introduction of the motherboard and step-by-step installation guide for new DIY system builders. Chapter 3 and 4 contain basic BIOS setup and Support CD information.



Because the motherboard specifications and the BIOS software might be updated, the content of this manual will be subject to change without notice. In case any modifications of this manual occur, the updated version will be available on ASRock website without further notice.

ASRock website <http://www.asrock.com>

1.1 Package Contents

ASRock M266A motherboard (Micro ATX form factor: 9.6" x 9.6", 24.4 x 24.4 cm)

ASRock M266A Quick Setup Guide

ASRock M266A Support CD

1 Cable for IDE devices (1 x ATA 66/100/133)

1 Cable for floppy drive (1 x ribbon cable)

1 ASRock I/O shield

1 COM port bracket

1 MR card (optional)

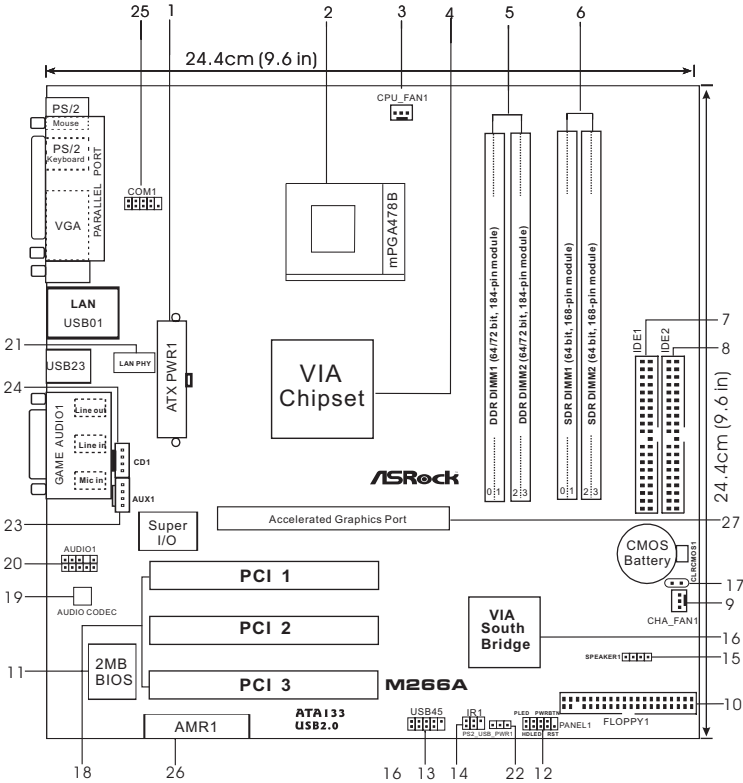
1.2 Specifications

Platform:	Micro ATX form factor (9.6" x 9.6", 24.4 x 24.4 cm)
CPU:	Socket 478 for Intel® Pentium® 4 / Celeron® processor
Chipsets:	North Bridge: VIA P4M266A, FSB@533 MHz; South Bridge: Supports USB 2.0, ATA 133
Clock Generator:	100 MHz - 200MHz
Memory:	2 slots for DDR: DDR1 and DDR2 (PC1600/ PC2100), Max. 2GB; 2 slots for SDR: SDR1 and SDR2 (PC100/ PC133), Max. 2GB
IDE:	IDE1: ATA 133 / Ultra DMA Mode 6; IDE2: ATA 133 / Ultra DMA Mode 6; Can connect up to 4 IDE devices
Floppy Port:	Supports floppy disk drive
Audio:	2 channels AC'97 Audio
LAN:	Speed: 802.3u (10/100 Ethernet), supports Wake-On-LAN
Hardware Monitor:	CPU temperature sensing (ASRock U-COP); Chassis temperature sensing; CPU overheat shutdown to protect CPU life (ASRock U-COP)(see CAUTION 1); Voltage monitoring: +12V, +5V, +3V, Vcore; CPU fan tachometer; Chassis fan tachometer
PCI slots:	3 slots with PCI Specification 2.2
AGP slot:	1 universal AGP slot, supports 3.3V/1.5V, 4X/2X/1X AGP card
AMR slot:	1 slot, supports AMR modem card (optional)
USB 2.0:	4 default USB 2.0 ports and a set of header for two additional USB 2.0 ports upgrade (see CAUTION 2)
ASRock I/O™:	PS/2: 1 keyboard port / 1 mouse port; 1 RJ 45 port; 4 rear default USB 2.0 ports; 1 VGA port; 1 parallel port: ECP/EPP support; Audio Jack: Line Out / Line In / Microphone + 1 Game port
BIOS:	AMI BIOS; Supports "Plug and Play"; ACPI 1.1 compliance wake up events; Supports jumperfree; SMBIOS 2.3.1 support; CPU frequency stepless control (only for advanced users' reference, see CAUTION 3)
OS:	Microsoft® Windows® 98SE / ME / 2000 / XP compliant

CAUTION!

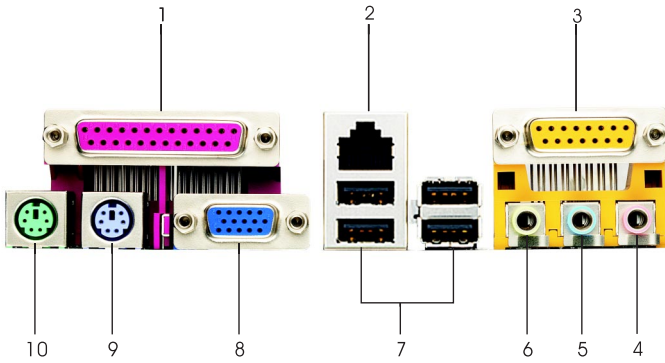
1. While CPU overheat is detected, the system will automatically shutdown. Please check if the CPU fan on the motherboard functions properly before you resume the system. To improve heat dissipation, remember to spray thermal grease between the CPU and the heatsink when you install the PC system.
2. Power Management for USB 2.0 works fine under Microsoft® Windows® XP. It may not work properly under Microsoft® Windows® 98/ME/2000. Please refer to Microsoft® official document at <http://www.microsoft.com/HWDEV/BUS/usb/USB2support.asp>
3. Although M266A offers stepless control, it is not recommended to perform over clocking. When the CPU frequency of M266A is set to perform over clocking, other clocks, such as PCI clock, AGP clock, and Memory clock will also be overclocked proportionally. Frequencies other than the recommended CPU bus frequencies may cause the instability of the system or damage the CPU and the motherboard.

1.3 Motherboard Layout



- | | | | |
|----|--|----|--|
| 1 | ATX power connector (ATXPWR1) | 15 | Speaker connector (SPEAKER 1) |
| 2 | CPU socket | 16 | South Bridge controller |
| 3 | CPU fan connector (CPU_FAN1) | 17 | Clear CMOS (CLRCSMOS1: solder points) |
| 4 | North Bridge controller | 18 | PCI slots (PCI 1-3) |
| 5 | 184-pin DDR DIMM slots (DDR1-2, blue) | 19 | AUDIO CODEC |
| 6 | 168-pin SDRAM DIMM slots (SDR1-2, black) | 20 | Front panel audio connector (AUDIO1) |
| 7 | Primary IDE connector (IDE1, blue) | 21 | LAN PHY |
| 8 | Secondary IDE connector (IDE2, black) | 22 | PS2_USB_PWR1 jumper |
| 9 | Chassis fan connector (CHA_FAN1) | 23 | Internal audio connector: AUX1 (white) |
| 10 | Floppy connector (FLOPPY1) | 24 | Internal audio connector: CD1 (black) |
| 11 | Flash Memory | 25 | Serial port connector (COM1) |
| 12 | System panel connector (PANEL1) | 26 | AMR slot (AMR1) |
| 13 | USB header (USB45, blue) | 27 | AGP slot (Accelerated Graphics Port) |
| 14 | Infrared module connector (IR1) | | |

1.4 ASRock I/O™



- | | | | |
|---|----------------------|----|-----------------------------|
| 1 | Parallel port | 6 | Line Out (Lime) |
| 2 | RJ-45 port | 7 | USB 2.0 ports |
| 3 | Game port | 8 | VGA port |
| 4 | Microphone (Pink) | 9 | PS/2 keyboard port (Purple) |
| 5 | Line In (Light Blue) | 10 | PS/2 mouse port (Green) |

Chapter 2 Installation

M266A is a Micro ATX form factor (9.6" x 9.6", 24.4 x 24.4 cm) motherboard. Before you install the motherboard, study the configuration of your chassis to ensure that the motherboard fits into it.



Make sure to unplug the power cord before installing or removing the motherboard. Failure to do so may cause physical injuries to you and damages to motherboard components.

2.1 Screw Holes

Place screws into the holes indicated by circles to secure the motherboard to the chassis.



Do not over-tighten the screws! Doing so may damage the motherboard.

2.2 Pre-installation Precautions

1. Make sure to unplug the power cord before installing or removing the motherboard. Failure to do so may cause physical injuries to you and damages to motherboard components. Unplug the power cord from the wall socket before touching any component.
2. To avoid damaging the motherboard components due to static electricity, NEVER place your motherboard directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before you handle components.
3. Hold components by the edges and do not touch the ICs.
4. Whenever you remove any component, place it on a grounded antistatic pad or in the bag that comes with the component.

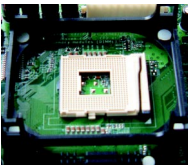
2.3 CPU Installation

- Step 1. Unlock the socket by lifting the lever up to a 90° angle.
- Step 2. Position the CPU directly above the socket such that its marked corner matches the base of the socket lever.
- Step 3. Carefully insert the CPU into the socket until it fits in place.



The CPU fits only in one correct orientation. DO NOT force the CPU into the socket to avoid bending of the pins.

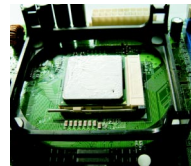
- Step 4. When the CPU is in place, press it firmly on the socket while you push down the socket lever to secure the CPU. The lever clicks on the side tab to indicate that it is locked.



Step 1



Step 2, 3



Step 4

2.4 Installation of CPU Fan and Heatsink

Intel® Pentium 4® and Celeron® CPU requires larger heatsink and cooling fan. Thermal grease between the CPU and the heatsink is also needed to improve heat transfer. Make sure that the CPU and the heatsink are securely fastened and in good contact with each other. For proper installation, please kindly refer to the instruction manuals of vendors of CPU fan and heatsink.

2.5 Installation of Memory Modules (DIMM)

SDRAM (Synchronous DRAM) DIMM (Dual In-line Memory Module) has 168 pins and DDR (Double Data Rate) SDRAM DIMM has 184 pins.



Please make sure to disconnect power supply before adding or removing DIMMs or the system components.



168-pin RAM



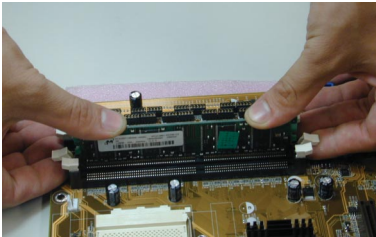
184-pin RAM

The 168-pin SDRAM DIMM slot (black) and 184-pin DDR DIMM slot (blue) can be easily distinguished by the fool-proof design.



Please do not use both 168-pin SDRAM DIMM and 184-pin DDR DIMM at the same time. To optimize the compatibility, it is not recommended to use two different models of the DIMMs at the same time.

- Step 1. Unlock a DIMM slot by pressing the retaining clips outward.
- Step 2. Align a DIMM on the slot such that the notch on the DIMM matches the break on the slot.
- Step 3. Firmly insert the DIMM into the slot until the retaining clip snap back in place and the DIMM is properly seated.



2.6 Expansion Slots (PCI, AMR, and AGP Slots)

There are 3 PCI slots, 1 AMR slot, and 1 AGP slot on M266A motherboard.

PCI slots: PCI slots are used to install expansion cards that have the 32-bit PCI interface.

AMR slot: AMR slot is used to insert an AMR card with v.92 Modem functionality.

AGP slot: The AGP slot is used to install a graphics card.

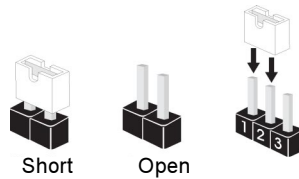
The ASRock AGP slot has a special locking mechanism which can securely fasten the graphics card inserted.



Installing an expansion card

- Step 1. Before installing the expansion card, read the documentation of the expansion card and make necessary hardware settings for the card.
- Step 2. Remove the system unit cover (if your motherboard is already installed in a chassis).
- Step 3. Remove the bracket facing the slot that you intend to use. Keep the screws for later use.
- Step 4. Align the card connector with the slot and press firmly until the card is completely seated on the slot.
- Step 5. Fasten the card to the chassis with screws.
- Step 6. Replace the system cover.

2.7 Jumpers Setup

The illustration shows how jumpers are setup. When the jumper cap is placed on pins, the jumper is “Short”. If no jumper cap is placed on pins, the jumper is “Open”. The illustration shows a 3-pin jumper whose pin1 and pin2 are “Short” when jumper cap is placed on these 2 pins.



Jumper	Setting	Description
PS2_USB_PWR1 (see p.7 item 22)	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>1_2</p>  <p>+5V</p> </div> <div style="text-align: center;"> <p>2_3</p>  <p>+5VSB</p> </div> </div>	Short pin2, pin3 to enable +5VSB (standby) for PS/2 or USB wake up events.

Note: To select +5VSB, it requires 2 Amp and higher standby current provided by power supply.

Clear CMOS

CLRCMOS1
(see p.7 item 17)





Note: These solder points allow you to clear the data in the CMOS. The data in the CMOS includes system setup information such as the system password, date, time, and the system setup parameters. To clear and reset the system parameters to the default setup, please turn off the computer and unplug the power cord, then short the solder points for more than 3 seconds by using metal material, e.g., a paper clip. Please remember to remove the paper clip after clearing the CMOS.



2.7 Connectors



Connectors are NOT jumpers. DO NOT place jumper caps over these connectors.

Connector	Figure	Description
FDD connector (33-pin FLOPPY1) (see p.7 item 10)		

Note: Match the red marking on the floppy ribbon cable with Pin1

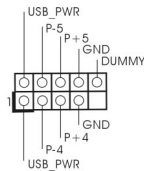
Primary IDE connector (Blue) (39-pin IDE1, see p.7 item 7)	Secondary IDE connector (Black) (39-pin IDE2, see p.7 item 8)
	

connect the blue end to the motherboard  connect the black end to the IDE devices

80-Pin ATA 100/133 cable

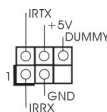
Note: To optimize compatibility and performance, please connect your hard disk drive to the primary IDE connector (IDE1, blue) and CD-ROM to the secondary IDE connector (IDE2, black).

USB 2.0 header
(9-pin USB45)
(see p.7 item 13)



ASRock I/O™ provides you 4 default USB 2.0 ports on the rear panel. If the rear USB ports are not sufficient, this USB 2.0 header is available for 2 additional USB 2.0 ports.

Infrared module connector
(5-pin IR1)
(see p.7 item 14)



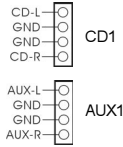
This connector supports an optional wireless transmitting and receiving infrared module.

Internal audio connectors

(4-pin CD1, 4-pin AUX1)

(CD1: see p.7 item 24)

(AUX1: see p.7 item 23)

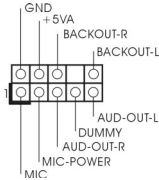


These connectors allow you to receive stereo audio input from sound sources such as a CD-ROM, DVD-ROM, TV tuner card, or MPEG card.

Front panel audio connector

(9-pin AUDIO1)

(see p.7 item 20)

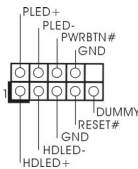


This is an interface for front panel audio cable that allows convenient connection and control of audio devices.

System panel connector

(9-pin PANEL1)

(see p.7 item 12)

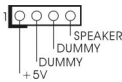


This connector accommodates several system front panel functions.

External speaker connector

(4-pin SPEAKER 1)

(see p.7 item 15)



This connector allows you to attach to an external speaker.

Chassis fan connector

(3-pin CHA_FAN1)

(see p.7 item 9)

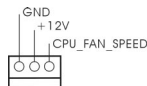


Connect the fan cable to the connector matching the black wire to the ground pin.

CPU fan connector

(3-pin CPU_FAN1)

(see p.7 item 3)



Connect the fan cable to the connector matching the black wire to the ground pin.

ATX power connector

(20-pin ATXPWR1)

(see p.7 item 1)

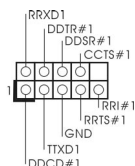


Connect an ATX power supply to the connector.

Serial port connector

(9-pin COM1)

(see p.7 item 25)



This connector supports a serial port module.

Chapter 3 BIOS Setup

3.1 BIOS Setup Utility

This section explains how to configure your system using the BIOS Setup Utility. The Flash Memory on the motherboard stores the BIOS Setup Utility. When you start up the computer, there is a chance for you to run the BIOS Setup. Press <F2> during the Power-On-Self-Test (POST) to enter the BIOS Setup Utility, otherwise, POST continues with its test routines.

If you wish to enter the BIOS Setup after POST, restart the system by pressing <Ctl> + <Alt> + <Delete>, or by pressing the reset button on the system chassis. You can also restart by turning the system off and then back on.



Because the BIOS software is constantly being updated, the following BIOS setup screens and descriptions are for reference purpose only, and may not exactly match what you see on your screen.

3.2 BIOS Setup Utility Main Menu

When you enter the BIOS Setup utility, the following screen appears:

AMIBIOS SETUP UTILITY - VERSION 3.31a			
M266A BIOS P1.0			
Standard CMOS Setup			
Advanced CMOS Setup			
Advanced Chipset Setup			
Power Management Setup			
PCI/Plug and Play Setup			
Peripheral Setup			
Hardware Monitor Setup			
Change Supervisor Password			
Change User Password			
Auto Configuration with Optimal Settings			
Save Savings and Exit			
Exit Without Saving			
F1: Help	↑↓ : Select Item	←/→: Change Values	F9: Setup Defaults
Esc: Exit	→ : Select Menu	Enter: Select	F10: Save & Exit
Set Time, Date, Hard Disk Type ...			

The main menu of the Setup Utility displays a list of the options that are available. The highlighted item is currently selected. Use ↑ ↓ arrow keys to move the highlight bar to select items, then press <Enter> to make configuration for a specific item.

3.3 Legend Bar

At the bottom of all the Setup Screen is a legend bar. The following table lists the keys in the legend bar with their corresponding functions:

Navigation Key(s)	Function Description
<F1>	Displays the General Help Screen
<ESC>	Jumps to the Exit menu or returns to the upper menu from the current menu
↑ / ↓	Moves cursor up or down between fields
← / →	Selects menu to the left or right
+ / -	Increases or decreases values
<Enter>	Brings up a selected menu for a highlighted field
<F9>	Loads all the setup items to the default value
<F10>	Saves changes and exits Setup

3.4 Standard CMOS Setup

This menu lists out the basic information about your system.

Standard CMOS Setup		[Setup Help]
System Date	Apr 10 2003 Thu	Month: Jan - Dec
System Time	20:07:40	Day: 01 - 31
		Year: 1980 - 2099
▶ Floppy Drives		
▶ IDE Devices		
BIOS Version	M266A BIOS P1.00	
Processor Type	Pentium (R) 4 Family CPU	
Processor Speed	2400 MHz	
Cache Size	512 KB	
Microcode Update	F24 / 0F	
Total Memory	224 MB + 32 MB Share Memory	
DDR1	256 MB / 266 MHz	
DDR2	None	
SDR1	None	
SDR2	None	
F1:Help ↑↓:Select Item +/-:Change Values F9:Setup Defaults Esc:Previous Menu Enter>Select ▶Sub-Menu F10:Save & Exit		

System Date [Month/Day/Year]

Set the system date that you specify. Valid values for month, day, and year are Month: [Jan to Dec], Day: [1 to 31], Year: [1980 to 2099]. Use ↑ ↓ keys to move between the Month, Day and Year fields.

System Time [Hour:Minute:Second]

Set the system to the time that you specify. Use ↑ ↓ keys to move between the Hour, Minute and Second fields.

Floppy Drives

Use this to set the type of floppy drives installed.

IDE Devices

Use this to configure IDE devices.

There are two IDE channels (Primary and Secondary) available in your system, and each channel can be installed with one or two devices (Master and Slave).

Use these items to configure each device on the IDE channel.

Highlight "Primary IDE Master" then press <Enter> to display the submenu:

AMIBIOS SETUP UTILITY - VERSION 3.31a	
Primary IDE Master:	[Setup Help]
Type Auto	Select how to set the parameters of drive,
Cylinders	Or
Heads	Select [AUTO] to set all HDD parameters automatically.
Write Precompensation	
Sectors	
Maximum Capacity	
LBA Mode Off	
Block Mode Off	
Fast Programmed I/O Modes Auto	
32 Bit Transfer Mode Off	
Ultra DMA Mode Auto	
F1:Help ↑:Select Item +/-:Change Values F9:Setup Defaults	
Esc:Previous Menu Enter:Select ▶:Sub-Menu F10:Save & Exit	

TYPE

It allows user to select the type of the IDE Drive. Below are the configuration options. After making your selections on this sub-menu, press <ESC> key to return to the upper menu, in which the hard disk drive field will display the size for the hard disk drive that you configured.

[USER]: It allows user to manually enter the number of cylinders, heads, and sectors per track for the drive.



Before attempting to configure a hard disk drive, make sure you have the correct configuration information supplied by the drive manufacturer. Incorrect settings may cause the system to fail to recognize the installed hard disk.

[Auto]: Select [Auto] to automatically detect hard disk drive. If auto-detection is successful, the BIOS Setup automatically fills in the correct values for the remaining fields on this sub-menu. If the auto-detection fails, it may be due to that the hard disk is too old or too new. If the hard disk was already formatted on an older system, the BIOS Setup may detect incorrect parameters. In these cases, select [User] to manually enter the IDE hard disk drive parameters.



After entering the hard disk information into BIOS, use a disk utility, such as FDISK, to partition and format new IDE hard disk drives. This is necessary so that you can write or read data from the hard disk. Make sure to set the partition of the Primary IDE hard disk drives to active.

[CD/DVD]: This is used for IDE CD/DVD drives.

[ARMD]: This is used for IDE ARMD (ATAPI Removable Media Device), such as MO.

Cylinders

This is used to configure the number of cylinders. Refer to the drive documentation to determine the correct value.

Heads

This is used to configure the number of read/write heads. Refer to the drive documentation to determine the correct values.

Write Pre-compensation

Enter Write Pre-compensation sector. Refer to the drive documentation to determine the correct value.

Sectors

This is used to configure the number of sectors per track. Refer to the drive documentation to determine the correct value.

Maximum Capacity

This field shows the drive's maximum capacity as calculated by the BIOS based on the drive information you entered.

LBA Mode

This allows user to select the LBA mode for a hard disk > 512 MB under DOS and Windows; for Netware and UNIX user, select [Off] to disable the LBA mode.

Block Mode

Set the block mode to [On] will enhance hard disk performance by reading or writing more data during each transfer.

Fast Programmed I/O Modes

This allows user to set the PIO mode to enhance hard disk performance by optimizing the hard disk timing.

32 Bit Transfer Mode

It allows user to enable 32-bit access to maximize the IDE hard disk data transfer rate.

Ultra DMA Mode

Ultra DMA capability allows improved transfer speeds and data integrity for compatible IDE devices. Set to [Disabled] to suppress Ultra DMA capability.

3.5 Advanced CMOS Setup

AMIBIOS SETUP UTILITY - VERSION 3.31a		
Advanced CMOS Setup	[Setup Help]	
Quick Boot Mode	Enabled	<Enter> to enable or disable the quick boot mode.
Boot Up Num-Lock	On	
Boot To OS/2	No	
Password Check	Setup	
Boot From Network	Disabled	
▶ Boot Device Priority		
F1:Help ↑:Select Item +/-:Change Values F9:Setup Defaults		
Esc:Previous Menu Enter:Select ▶Sub-Menu F10:Save & Exit		

Quick Boot

This mode speeds up the boot-up routine by skipping memory retestings.

Boot-time Diagnostic Screen: If this option is enabled, the screen will show CPU and hardware information during Power-On-Self-Test (POST) routine.

Boot Up Num-Lock

This automatically activates the Numeric Lock function after boot up.

Boot to OS/2

This enables boot up to OS/2 operating system.

Password Check

Select the check point for "Password Check". Configuration options: [Setup], [Always]. If [Setup] option is selected, the "Password Check" is performed before BIOS setup. If [Always] option is selected, the "Password Check" is performed before both boot-up and BIOS setup.

Boot Device Priority

Use this to select the priority and order of the devices that your system searches for an operating system at start-up time.

3.6 Advanced Chipset Setup

AMIBIOS SETUP UTILITY - VERSION 3.31a	
Advanced Chipset Setup	[Setup Help]
Spread Spectrum	Disabled
CPU Host Frequency	Auto
Actual Frequency	133MHz
CPU Ratio Selection	Locked
SDRAM Frequency	266MHz
AGP Mode	4x
AGP Aperture Size	64MB
OnChip VGA Frame Buffer Size	None
CPU Read DRAM Fast Ready	Disabled
Read Around Write	Disabled
CPU R/W DRAM 0WS	Disabled
PCI Delay Transaction	Disabled
USB Controller	Enabled
USB Device Legacy Support	Disabled

<Enter> to enable or
disable the feature of
spread spectrum.

F1:Help	F4:Select Item	+/-:Change Values	F9:Setup Defaults
Esc:Previous Menu		Enter:Select	F10:Save & Exit
		→:Sub-Menu	

Spread Spectrum

This field should always set to be “Disabled” for better system stability.

CPU Host Frequency

This allows you to set the front side bus - frequency for the installed processor.

[Auto]

The motherboard detects the jumper setup and sets the CPU host frequency automatically.

[Manual]

This allows user to set CPU host frequency manually. However, this is not recommended unless user thoroughly knows the feature. Wrong setup may cause problems during operation.

CPU Ratio Selection

Use this to set the multiple that times the frontside bus frequency must equal to the core speed of the installed processor.

SDRAM Frequency

[Auto]

The motherboard detects the memory module(s) inserted and automatically assigns appropriate frequency.

[other values]

This allows user to select the value as operating frequency.

AGP Mode

The default is 4X. You may also choose 1X or 2X for older version of VGA cards.

AGP Aperture Size

It refers to a section of the PCI memory address range used for graphics memory. We recommend that you leave this field at the default value unless your AGP card requires other sizes.

OnChip VGA Frame Buffer Size

Use this to set the size of the onchip VGA share memory.

Configuration options: [None], [8 MB], [16 MB], [32 MB].

CPU Read DRAM Fast Ready

The default is [Disabled]. Leave on the default value for better system stability.

Read Around Write

The default is [Disabled]. Leave on the default value for better system stability.

CPU R/W DRAM OWS

The default is [Disabled]. Leave on the default value for better system stability.

PCI Delay Transaction

Enable PCI Delay Transaction feature will free the PCI Bus when the CPU is accessing 8-bit ISA cards. Disable this feature when using ISA cards that are not PCI 2.1 compliant.

USB Controller

Use this to enable or disable the use of USB devices.

USB Device Legacy Support

Use this to enable or disable support to emulate legacy I/O devices such as mouse, keyboard,... etc.

3.7 Power Management Setup

Standard CMOS Setup		[Setup Help]
Suspend To RAM <S3>	Disabled	Set the power state after an unexpected AC / Power loss.
Repost Video on S3 Resume	Disabled	
Restore on AC / Power Loss	Power Off	
Ring-In Power On	Disabled	
PME# Power On	Disabled	
Keyboard Power On	Disabled	
RTC Alarm Power On	Disabled	
RTC Alarm Date	Every Day	
RTC Alarm Hour	00	
RTC Alarm Minute	00	
RTC Alarm Second	00	

F1: Help ↑: Select Item +/-: Change Values F9: Setup Defaults
Esc: Previous Menu Enter: Select ▶: Sub-Menu F10: Save & Exit

Suspend to RAM (S3)

This field allows you to select whether to auto-detect or disable the ACPI Suspend-to-RAM feature. Select [Auto] will enable this feature if the system supports it.

Repost Video on S3 Resume

This feature allows you to repost video on S3 resume.

Restore on AC/Power Loss

This allows you to set the power state after an unexpected AC power loss. If [Power Off] is selected, the AC power remains off when the power recovers. If [Power On] is selected, the AC power resumes and the system starts to boot up when the power recovers.

Ring-In Power On

Use this to enable or disable Ring-in signals to turn on the system from the power-soft-off mode.

PME# Power On

Use this to enable or disable PCI PME# to turn on the system from the power-soft-off mode.

Keyboard Power On

Use this to enable or disable keyboard to turn on the system from the power-soft-off mode.

RTC Alarm Power On

Use this to enable or disable RTC (Real Time Clock) to power on the system. If [Enable] is selected, you must fill the RTC Alarm Date / Hour / Minute / Second sub-fields with the actual wake up time you desire.

3.8 PCI / Plug and Play Setup

AMIBIOS SETUP UTILITY - VERSION 3.31a	
PCI / Plug and Play Setup	[Setup Help]
PCI Latency Timer (PCI Clocks) 32	<Enter> to select PCI clocks. Leave on default setting for the best PCI performance.
Primary Graphics Adapter PCI	
F1:Help F11:Select Item +/-:Change Values F9:Setup Defaults Esc:Previous Menu Enter:Select ▶Sub-Menu F10:Save & Exit	

PCI Latency Timer (PCI Clocks)

The default is 32. We recommend you to keep the default value unless your PCI expansion cards' specifications require other settings.

Primary Graphics Adapter

Select AGP or PCI as the primary graphics adapter.

3.9 Peripheral Setup

AMIBIOS SETUP UTILITY - VERSION 3.31a		[Setup Help]
Peripheral Setup		
OnBoard FDC	Auto	<Enter> to enable or disable the floppy drive controller.
OnBoard Serial Port	Auto	
OnBoard Infrared Port	Disabled	
OnBoard Parallel Port	Auto	
Parallel Port Mode	ECP + EPPI	
EPP Version	1.9	
Parallel Port IRQ	Auto	
Parallel Port DMA Channel	Auto	
OnBoard Midi Port	Disabled	
Midi IRQ Select	5	
OnBoard Game Port	200h	
OnBoard IDE	Both	
OnBoard LAN	Enabled	
OnBoard AC'97 Audio	Auto	
F1:Help	↑:Select Item	+/-:Change Values
Esc:Previous Menu		Enter:Select ▶Sub-Menu
		F9:Setup Defaults
		F10:Save & Exit

OnBoard FDC

Use this to enable or disable floppy drive controller.

OnBoard Serial Port

Use this to set addresses for the onboard serial ports or disable serial ports.

Configuration options: [Auto], [Disabled], [3F8 / IRQ4 / COM1], [2F8 / IRQ3 / COM2], [3E8 / IRQ4 / COM3], [2E8 / IRQ3 / COM4].

OnBoard Infrared Port

This allows you to enable or disable the onboard infrared port feature.

Select [Auto] will enable this feature if the infrared module is installed.

OnBoard Parallel Port

Select Parallel Port address or disable Parallel Port.

Configuration options: [Auto], [Disabled], [378], [278].

Parallel Port Mode

Set the operation mode of the parallel port.

OnBoard Midi Port

Select address for Midi Port or disable Midi Port.

Configuration options: [Disabled], [330], [300], [290], [292].

Midi IRQ Select

Use this to select Midi IRQ. Configuration options: [5], [10], [11].

OnBoard Game Port

Select address for Game Port or disable Game Port.

Configuration options: [Disabled], [200h], [208h].

OnBoard IDE

Select [Primary] or [Secondary] to enable either the primary IDE channel or the secondary IDE channel. Or you may select [Both] to enable both IDE channels.

If it is set to [Disabled], it will disable the both.

Configuration options: [Disabled], [Primary], [Secondary], [Both].

OnBoard LAN

Enable or disable onboard LAN feature.

OnBoard AC'97 Audio

Enable or disable onboard AC'97 audio feature.

OnBoard MC'97 Modem

Enable or disable onboard MC'97 modem feature.

3.10 Hardware Monitor Setup

You can select “Hardware Monitor Setup” to check the status of the hardware on your system. It allows you to monitor the parameters for CPU temperature, Motherboard temperature, CPU fan speed, and critical voltage.

AMIBIOS SETUP UTILITY - VERSION 3.31a	
Hardware Monitor Setup	[Setup Help]
CPU Temperature	35°C
M / B Temperature	27°C
CPU FAN Speed	3110 RPM
Chassis Fan Speed	0 RPM
Vcore	1.72V
+ 3.30V	3.31V
+ 5.00V	4.97V
+ 12.00V	12.16V

F1:Help F4:Select Item +/-:Change Values F9:Setup Defaults
Esc:Previous Menu Enter:Select ▶Sub-Menu F10:Save & Exit

3.11 Change Supervisor Password / Change User Password

These two options allow you to specify the supervisor / user password.

Valid

password can be a 1 to 6 alphanumeric characters combination.

3.12 Auto Configuration with Optimal Settings

When you select this option, it will pop up a dialog box that lets you install optimized defaults for all appropriate items in the BIOS Setup Utility. Press <Enter> to install the default values. The optimized default setting place demands on the system that may be greater than the performance level of the components, such as the CPU and the memory. You can cause fatal errors or instability if you install the optimized defaults when your hardware does not support them.

3.13 Save Settings and Exit

Select this item and press <Enter> to save the changes that you have made and exit the BIOS Setup Utility.

3.14 Exit Without Saving

Select this item and press <Enter> to exit the BIOS Setup Utility without saving any changes.

Chapter 4 Software Support

4.1 Install Operating System

This motherboard supports various Microsoft® Windows® operating systems: 98 SE/ ME/ 2000/ XP. Because motherboard settings and hardware options vary, use the setup procedures in this chapter for general reference only. Refer to your OS documentation for more information.

4.2 Support CD Information

The Support CD that came with the motherboard contains necessary drivers and useful utilities that enhance the motherboard features.

4.2.1 Running The Support CD

To begin using the support CD, insert the CD into your CD-ROM drive. The CD automatically displays the Main Menu if "AUTORUN" is enabled in your computer. If the Main Menu did not appear automatically, locate and double click on the file ASSETUP.EXE from the BIN folder in the Support CD to display the menus.

4.2.2 Drivers Menu

The Drivers Menu shows the available devices drivers if the system detects installed devices. Install the necessary drivers to activate the devices.

4.2.3 Utilities Menu

The Utilities Menu shows the applications software that the motherboard supports. Click on a specific item then follow the installation wizard to install it.

4.2.4 ASRock PC-DIY Live Demo Program

ASRock presents you a multimedia PC-DIY live demo, which shows you how to install your own PC system step by step. You can find the file through the following path:

..\MPEGAV\AVSEQ01.DAT

To see this demo program, you can run Microsoft® Media Player® to play the file.

4.2.5 Contact Information

If you need to contact ASRock or want to know more about ASRock, welcome to visit ASRock's website at <http://www.asrock.com>; or you may contact your dealer for further information.