



775S61

User Manual

Version 1.0

Published September 2004

Copyright©2004 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 Heatsink and CPU fan	12
2.5 Installation of Memory Modules (DIMM)	13
2.6 Expansion Slots	14
2.7 Jumpers Setup	15
2.8 Onboard Headers and Connectors	16
3 BIOS Setup	18
3.1 BIOS Setup Utility	18
3.1.1 BIOS Menu Bar	18
3.1.2 Legend Bar	18
3.2 Main Menu	19
3.3 Advanced, Security, Power, Boot, and Exit Menus	21
4 Software Support	22
4.1 Installing Operating System	22
4.2 Support CD Information	22
4.2.1 Running Support CD	22
4.2.2 Drivers Menu	22
4.2.3 Utilities Menu	22
4.2.4 ASRock "PC-DIY Live Demo" Program	22
4.2.5 "LGA 775 CPU Installation Live Demo" Program.....	22
4.2.6 Contact Information	22
Appendix	23
1. Advanced Menu	23
2. Security Menu	28
3. Power Menu	29
4. Boot Menu	30
5. Exit Menu	31

Chapter 1 Introduction

Thank you for purchasing ASRock 775S61 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. For advanced users' reference, the Appendix appearing on page 23 offers more advanced BIOS setup 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. You may find the latest memory and CPU support lists on ASRock website as well.

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

1.1 Package Contents

ASRock 775S61 Motherboard

(Micro ATX Form Factor: 9.6-in x 9.0-in, 24.4 cm x 22.9 cm)

ASRock 775S61 Quick Installation Guide

ASRock 775S61 Support CD (including *LGA 775 CPU Installation Live Demo*)

One 80-conductor Ultra ATA 66/100/133 IDE Ribbon Cable

One Ribbon Cable for a 3.5-in Floppy Drive

One ASRock I/O™ Shield

One COM Port Bracket

One ASRock MR Card (Optional)

1.2 Specifications

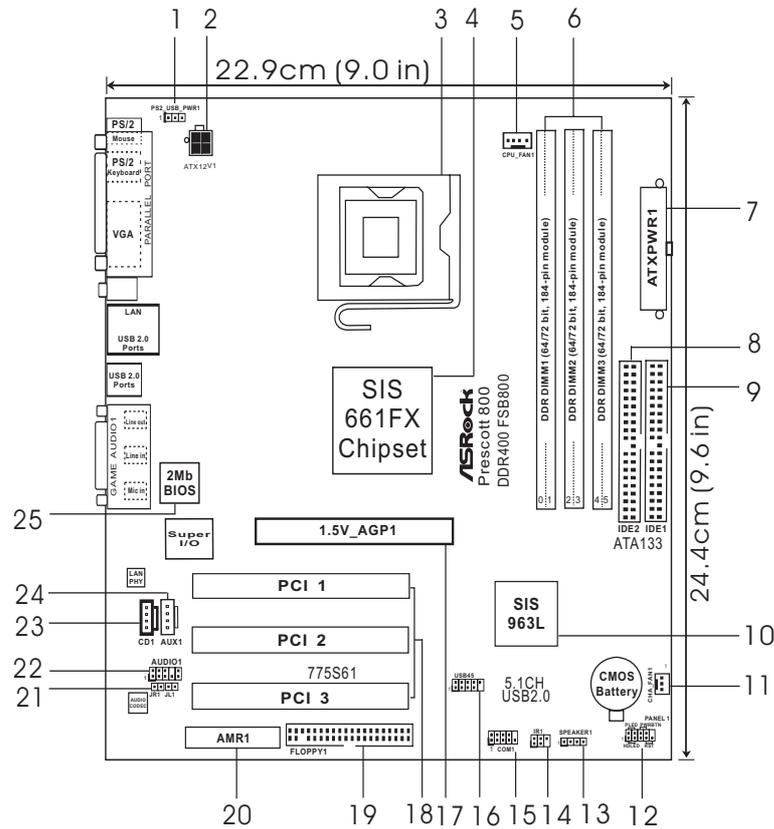
Platform:	Micro ATX Form Factor: 9.6-in x 9.0-in, 24.4 cm x 22.9 cm
CPU:	775-Pin Socket supporting Intel® Pentium® 4 / Celeron® processor (in 775-land LGA package)
Chipsets:	North Bridge: SiS 661FX chipset, FSB @ 800/533MHz, supports Hyper-Threading Technology (see CAUTION 1) South Bridge: SiS 963L chipset, supports USB 2.0, ATA 133
VGA:	SiS Real256E, 32MB-64MB VRAM (share memory)
Memory:	3 DDR DIMM slots: DDR1, DDR2, and DDR3 PC2100 (DDR266) for 3 DDR DIMM slots, Max. 3GB; PC2700 (DDR333) for 2 DDR DIMM slots, Max. 2GB; PC3200 (DDR400) for 1 DDR DIMM slots, Max. 1GB
IDE:	IDE1: ATA 133 / Ultra DMA Mode 6; IDE2: ATA 133 / Ultra DMA Mode 6; Supports up to 4 IDE devices
Floppy Port:	Supports up to 2 floppy disk drives
Audio:	6 channels AC'97 Audio
LAN:	Speed: 802.3u (10/100 Ethernet), supports Wake-On-LAN
Hardware Monitor:	CPU temperature sensing; Chassis temperature sensing; CPU overheat shutdown to protect CPU life (ASRock U-COP) (see CAUTION 2); CPU fan tachometer; Chassis fan tachometer; Voltage monitoring: +12V, +5V, +3.3V, Vcore
PCI slots:	3 slots with PCI Specification 2.2, PCI3 slot shared with AMR
AGP slot:	1 AGP slot, AGP 3.5 compliant, supports 1.5V, 8X / 4X AGP card (see CAUTION 3)
AMR slot:	1 slot, supports ASRock MR card
USB 2.0:	6 USB 2.0 ports: includes 4 default USB 2.0 ports on the rear panel, plus one header to support 2 additional USB 2.0 ports (see CAUTION 4)
ASRock I/O™:	1 PS/2 keyboard port, 1 PS/2 mouse port; 1 VGA port; 1 parallel port: ECP/EPP support;

	1 RJ 45 port; 4 default USB 2.0 ports; Audio Jack: Line Out / Line In / Microphone + Game port
BIOS:	AMI legal BIOS; Supports "Plug and Play"; ACPI 1.1 compliance wake up events; CPU frequency stepless control (only for advanced users' reference, see CAUTION 5)
OS:	Microsoft® Windows® 98SE / ME / 2000 / XP compliant

CAUTION!

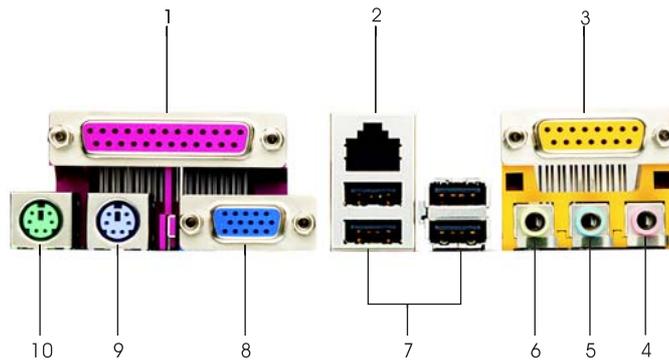
1. About the setting of "Hyper Threading Technology", please check page 23.
2. While CPU overheat is detected, the system will automatically shutdown. Please check if the CPU fan on the motherboard functions properly before you resume the system. To improve heat dissipation, remember to spray thermal grease between the CPU and the heatsink when you install the PC system.
3. Do NOT use a 3.3V AGP card on the AGP slot of 775S61 motherboard! It may cause permanent damage!
4. Power Management for USB 2.0 works fine under Microsoft® Windows® XP SP1/2000 SP4. It may not work properly under Microsoft® Windows® 98/ME. Please refer to Microsoft® official document at <http://www.microsoft.com/whdc/hwdev/bus/USB/USB2support.msp>
5. Although 775S61 offers stepless control, it is not recommended to perform over clocking. When the CPU frequency of 775S61 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 | PS2_USB_PWR1 Jumper | 14 | Infrared Module Connector (IR1) |
| 2 | ATX 12V Connector (ATX12V1) | 15 | Serial Port Connector (COM1) |
| 3 | 775-Pin CPU Socket | 16 | USB 2.0 Header (USB45, Blue) |
| 4 | North Bridge Controller | 17 | AGP Slot (1.5V_AGP1) |
| 5 | CPU Fan Connector (CPU_FAN1) | 18 | PCI Slots (PCI1-3) |
| 6 | 184-pin DDR DIMM Slots (DDR DIMM1-3) | 19 | Floppy Connector (FLOPPY1) |
| 7 | ATX Power Connector (ATXPWR1) | 20 | AMR Slot (AMR1) |
| 8 | Secondary IDE Connector (IDE2, Black) | 21 | JR1 / JL1 Jumpers |
| 9 | Primary IDE Connector (IDE1, Blue) | 22 | Front Panel Audio Connector (AUDIO1) |
| 10 | South Bridge Controller | 23 | Internal Audio Connector: CD1 (Black) |
| 11 | Chassis Fan Connector (CHA_FAN1) | 24 | Internal Audio Connector: AUX1 (White) |
| 12 | System Panel Connector (PANEL1) | 25 | Flash Memory |
| 13 | External Speaker Connector (SPEAKER1) | | |

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

775S61 is a Micro ATX form factor (9.6" x 9.0", 24.4 x 22.9 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

Take note of the following precautions before you install motherboard components or change any motherboard settings.

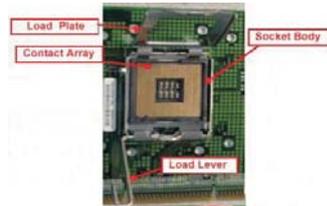
1. Unplug the power cord from the wall socket before touching any component.
2. To avoid damaging the motherboard components due to static electricity, NEVER place your motherboard directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before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



Before you install or remove any component, ensure that the power is switched off or the power cord is detached from the power supply. Failure to do so may cause severe damage to the motherboard, peripherals, and/or components.

2.3 CPU Installation

For the installation of Intel 775-Pin CPU, please follow the steps below.



775-Pin Socket Overview



Before you insert the 775-Pin CPU into the socket, please check if the CPU surface is unclean or if there is any bent pin on the socket. Do not force to insert the CPU into the socket if above situation is found. Otherwise, the CPU will be seriously damaged.

Step 1. Open the socket:

Step 1-1. Disengaging the lever by depressing down and out on the hook to clear retention tab.



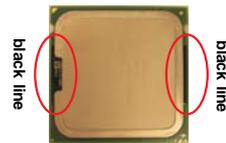
Step 1-2. Rotate the load lever to fully open position at approximately 135 degrees.



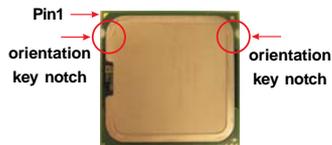
Step 1-3. Rotate the load plate to fully open position at approximately 100 degrees.

Step 2. Insert the 775-Pin CPU:

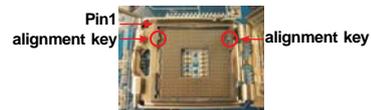
Step 2-1. Hold the CPU by the edges where are marked with black lines.



Step 2-2. Orient the CPU with IHS (Integrated Heat Sink) up. Locate Pin1 and the two orientation key notches.



775-Pin CPU



775-Pin Socket



For proper inserting, please ensure to match the two orientation key notches of the CPU with the two alignment keys of the socket.

Step 2-3. Carefully place the CPU into the socket by using a purely vertical motion.

Step 2-4. Verify that the CPU is within the socket and properly mated to the orient keys.



Step 3. Remove PnP Cap (Pick and Place Cap):

Use your left hand index finger and thumb to support the load plate edge, engage PnP cap with right hand thumb and peel the cap from the socket while pressing on center of PnP cap to assist in removal.



It is recommended to use the cap tab to handle and avoid kicking off the PnP cap.

Step 4. Close the socket:

Step 4-1. Rotate the load plate onto the IHS.

Step 4-2. While pressing down lightly on load plate, engage the load lever.

Step 4-3. Secure load lever with load plate tab under retention tab of load lever.



2.4 Installation of CPU Fan and Heatsink

This motherboard is equipped with 775-Pin socket that supports Intel 775-Pin CPU. Please adopt the type of heatsink and cooling fan compliant with Intel 775-Pin CPU to dissipate heat. Before you installed the heatsink, you need to spray thermal interface material between the CPU and the heatsink to improve heat dissipation. Ensure that the CPU and the heatsink are securely fastened and in good contact with each other. Then connect the CPU fan to the CPU_FAN connector (CPU_FAN1, see page 7, No. 5).

For proper installation, please kindly refer to the instruction manuals of your CPU fan and heatsink.

Below is an example to illustrate the installation of the heatsink for 775-Pin CPU.

Step 1. Apply thermal interface material onto center of IHS on the socket surface.



Step 2. Place the heatsink onto the socket. Ensure fan cables are oriented on side closest to the CPU fan connector on the motherboard (CPU_FAN1, see page 7, No. 5).



Step 3. Align fasteners with the motherboard throughholes.

Step 4. Rotate the fastener clockwise, then press down on fastener caps with thumb to install and lock. Repeat with remaining fasteners.



If you press down the fasteners without rotating them clockwise, the heatsink cannot be secured on the motherboard.

Step 5. Connect fan header with the CPU fan connector on the motherboard.

Step 6. Secure excess cable with tie-wrap to ensure cable does not interfere with fan operation or contact other components.

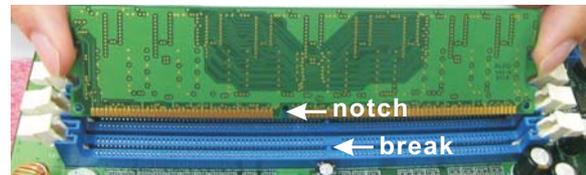
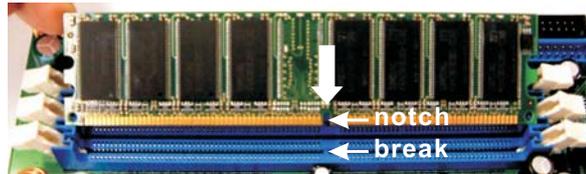
2.5 Installation of Memory Modules (DIMM)

775S61 motherboard provides three 184-pin DDR (Double Data Rate) DIMM slots.



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

- 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.



The DIMM only fits in one correct orientation. It will cause permanent damage to the motherboard and the DIMM if you force the DIMM into the slot at incorrect orientation.

- Step 3. Firmly insert the DIMM into the slot until the retaining clips at both ends fully 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 775S61 motherboard.

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

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

AGP slot: The AGP slot is AGP 3.5 compliant and it supports an 8X / 4X AGP card.



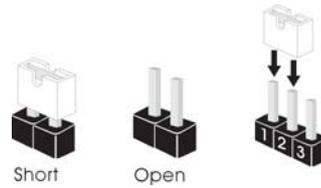
Do NOT use a 3.3V AGP card on the AGP slot of 775S61 motherboard!
It may cause permanent damage!

Installing an expansion card

- Step 1. Before installing the expansion card, please make sure that the power supply is switched off or the power cord is unplugged. Please read the documentation of the expansion card and make necessary hardware settings for the card before you start the installation.
- 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 1)		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.

JR1(see p.7 item 21)	
JL1(see p.7 item 21)	

Note: If the jumpers JL1 and JR1 are short, both front panel and rear panel audio connectors can work.

2.8 Onboard Headers and Connectors



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

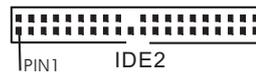
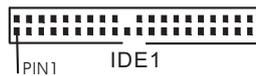
FDD Connector
(33-pin FLOPPY1)
(see p.7, No. 19)



Note: Make sure the red-striped side of the cable is plugged into Pin1 side of the connector.

Primary IDE Connector (Blue)
(39-pin IDE1, see p.7, No. 9)

Secondary IDE Connector (Black)
(39-pin IDE2, see p.7, No. 8)



connect the blue end
to the motherboard

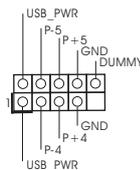


connect the black end
to the IDE devices

80-conductor ATA 66/100/133 cable

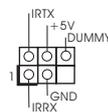
Note: If you use only one IDE device on this motherboard, please set the IDE device as "Master". Please refer to the instruction of your IDE device vendor for the details. Besides, to optimize compatibility and performance, please connect your hard disk drive to the primary IDE connector (IDE1, blue) and CD-ROM to the secondary IDE connector (IDE2, black).

USB 2.0 Header
(9-pin USB45)
(see p.7, No. 16)



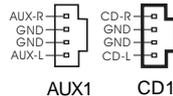
ASRock I/O Plus™ provides you 6 ready-to-use USB 2.0 ports on the rear panel. If the rear USB ports are not sufficient, this USB 2.0 header is available to support 2 extra USB 2.0 ports.

Infrared Module Header
(5-pin IR1)
(see p.7, No. 14)



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

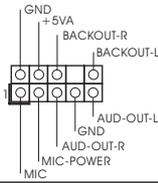
Internal Audio Connectors
(4-pin CD1, 4-pin AUX1)
(CD1: see p.7, No. 23)
(AUX1: see p.7, No. 24)



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

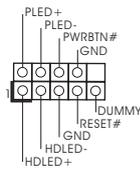
(9-pin AUDIO1)
(see p.7 item 22)



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

System panel connector

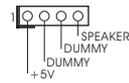
(9-pin PANEL1)
(see p.7 item 12)



This connector accommodates several system front panel functions.

Chassis speaker connector

(4-pin SPEAKER 1)
(see p.7 item 13)



This connector allows you to attach to the chassis speaker.

Chassis fan connector

(3-pin CHA_FAN1)
(see p.7 item 11)



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

CPU fan connector

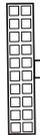
(4-pin CPU_FAN1)
(see p.7 item 5)



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

ATX power connector

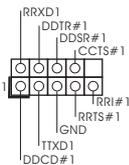
(20-pin ATXPWR1)
(see p.7 item 7)



Connect an ATX power supply to the connector.

Serial port connector

(9-pin COM1)
(see p.7 item 15)



This COM1 connector supports a serial port module.

ATX 12V Connector

(4-pin ATX12V1)
(see p.7 No. 2)



Please note that it is necessary to connect a power supply with ATX 12V plug to this connector so that it can provides sufficient power. Failing to do so will cause the failure to power up.

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.

The BIOS Setup Utility is designed to be user-friendly. It is a menu-driven program, which allows you to scroll through its various sub-menus and select among the predetermined choices.



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.

3.1.1 BIOS Menu Bar

The top of the screen has a menu bar with the following selections:

MAIN	Sets up the basic system configuration
ADVANCED	Sets up the advanced features
SECURITY	Sets up the security features
POWER	Configures Power Management features
BOOT	Configures the default system device that is used to locate and load the Operating System
EXIT	Exits the current menu or the BIOS Setup

To access the menu bar items, press the right or left arrow key on the keyboard until the desired item is highlighted.

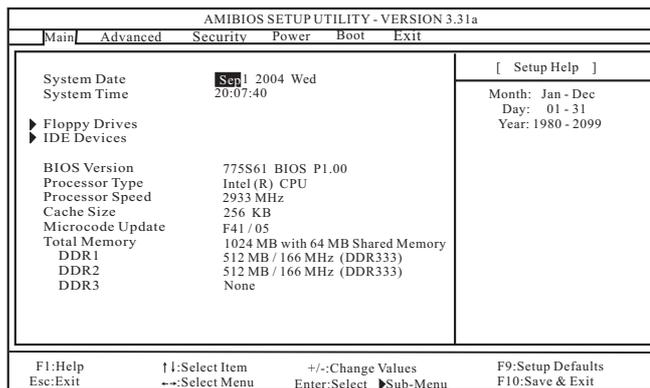
3.1.2 Legend Bar

At the bottom of 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 default value
<F10>	Saves changes and exits Setup

3.2 Main Menu

When you enter the BIOS Setup Utility, the following screen appears.



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: (up 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.

TYPE

To set the type of the IDE device, first, please select "IDE Devices" on Main menu and press <Enter> to get into the sub-menu. Then, select among "Primary IDE Master", "Primary IDE Slave", "Secondary IDE Master", and "Secondary IDE Slave" to make configuration of its type. Below are the configuration options.

AMIBIOS SETUP UTILITY - VERSION 3.31a	
Main	
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 On	
Block Mode On	
Fast Programmed I/O Modes Auto	
32 Bit Transfer Mode On	
Ultra DMA Mode Auto	
F1:Help f1:Select Item +/-:Change Values F9:Setup Defaults	
Esc:Previous Menu Enter:Select ▶Sub-Menu F10:Save & Exit	

[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.

3.3 Advanced, Security, Power, Boot, and Exit Menus

Detailed descriptions of these menus are listed in the Appendix. See page 21.

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. Please 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 "LGA 775 CPU Installation Live Demo" Program

This motherboard is equipped with Intel LGA 775 socket, which is a new CPU socket interface that Intel has released. Since it has several tiny pins, which are easily to be damaged by improper handling, ASRock sincerely presents you a clear installation guide through this "LGA 775 CPU Installation Live Demo". We hope you may check this live demo program before you start the installation of LGA 775 CPU in order to reduce the risks of CPU and motherboard damages caused by any improper handling. To see this Live Demo, you can run Microsoft® Media Player® to play the file. You may find this Live Demo in the motherboard's Support CD through the following path:

```
..\MPEGAV\LGA775INST.DAT
```

4.2.6 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.

Appendix: Advanced BIOS Setup

This section will introduce you the following BIOS Setup menus: “Advanced,” “Security,” “Power,” “Boot,” and “Exit.”

1. Advanced BIOS Setup Menu

AMIBIOS SETUP UTILITY - VERSION 3.31a					
Main	Advanced	Security	Power	Boot	Exit
Spread Spectrum	Disabled	[Setup Help]			
CPU Host Frequency	Auto	<Enter> to enable or disable the feature of spread spectrum.			
Actual Frequency	200MHz				
CPU Ratio Selection	Locked				
DRAM Frequency	Auto				
Flexibility Option	[Disabled]				
Hyper-Threading Technology	Auto				
▶ Chipset Configuration					
▶ Resource Configuration					
▶ Peripheral Configuration					
System Hardware Monitor					
F1:Help	↑↓:Select Item	+/-:Change Values	F9:Setup Defaults		
Esc:Exit	←→:Select Menu	Enter>Select ▶Sub-Menu	F10:Save & Exit		

Spread Spectrum:

This field should always be [Disabled] for better system stability.

CPU Host Frequency:

This shows current CPU host frequency of the installed motherboard.

CPU Ratio Selection:

CPU Ratio is the multiple that times the front side bus frequency will equal the core speed of the installed processor. Whether the option is open or locked is determined by the installed processor.

DRAM Frequency:

If [Auto] is selected, the motherboard will detect the memory module(s) inserted and assigns appropriate frequency automatically.

Flexibility Option:

The default value of this option is [Disabled]. It will allow better tolerance for memory compatibility when it is set to [Enabled].

Hyper-Threading Technology:

To enable this feature, it requires a computer system with an Intel® Pentium®4 processor that supports Hyper-Threading technology and an operating system that includes optimization for this technology, such as Microsoft® Windows® XP. Set to [Auto] if using Microsoft® Windows® XP, or Linux kernel version 2.4.18 or higher. This option will be hidden if the current CPU does not support Hyper-Threading technology.

Chipset Configuration:

AMIBIOS SETUP UTILITY - VERSION 3.31a		
Advanced		
Chipset Configuration		[Setup Help]
AGP Aperture Size	64MB	<Enter> to select the size of mapped memory for graphics data.
Onboard VGA Share Memory	Auto	
USB Controller	Enabled	
USB Device Legacy Support	Disabled	
USB 2.0 Controller	Enabled	
DRAM CAS# Latency	Auto	
MA 1T/2T Select	MA2T	
Vccm Voltage	2.62V	
Defer Function	Auto	
CPU Thermal Throttling	Enabled	
No-Execute Memory Protection	Enabled	
AGP/PCI Fix Frequency	Sync.	

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

AGP Aperture Size: It refers to a section of the PCI memory address range used for graphics memory. It is recommended to leave this field at the default value unless your AGP card requires other sizes.

OnBoard VGA Share Memory: This allows you to select the size of share memory for onboard VGA. Onboard VGA will get better resolution if larger size of share memory is selected.

USB Controller: Use this to enable or disable the use of USB controller.

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

USB 2.0 Controller: Use this to enable or disable the use of USB 2.0 controller.

DRAM CAS# Latency: This parameter controls the latency between the read command and the time the data available.

MA 1T/2T Select: Use this item to meet the timing and loading condition for optimized result of DRAM address/control signals. The default value of this item is [MA2T], and other configuration options are [Auto] and [MA1T].

Vccm Voltage: Use this to select VCCM voltage between [2.62V] and [2.55V].

Defer Function: It allows you to adjust defer function. The default setting is [Auto].

CPU Thermal Throttling: Select [Enabled] will enable P4 thermal control circuit to keep CPU from overheated.

No-Execute Memory Protection: No-Execution (NX) Memory Protection Technology is an enhancement to the IA-32 Intel Architecture. An IA-32 processor with “No Execute (NX) Memory Protection” can prevent data pages from being used by malicious software to execute code. This option will be hidden if the current CPU does not support No-Execute Memory Protection.

AGP/PCI Fix Frequency: Use this item to select AGP frequency to run synchronous or asynchronous with the CPU host frequency among the following sets of values: [72 MHz / 36 MHz], [64 MHz / 32 MHz], [77 MHz / 39 MHz], [67 MHz / 34 MHz], and the default value is [Sync].

P4 input strobe delay control: This option controls strobe timing between CPU and northbridge.

P4 input data delay control: This option controls data timing between CPU and northbridge.

Output DQS control: This option allows you to control the Output DQS. The default setting is [Auto]. When setting is [Manual], the next option [Output DQS] will be adjustable.

Output DQS: It allows you to adjust Output DQS as [+0.0ns], [+0.2ns], [+0.4ns], and [+0.6ns].

IDE Driving: This option will help you to control IDE I/O buffer driving strength. The default setting is [Normal].

[2V] and [2.55V].
fault setting is

Resource Configuration:

AMIBIOS SETUP UTILITY - VERSION 3.31a		
Advanced		
Resource Configuration		[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 ↑: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: This allows you to select [PCI] or [AGP] as the primary graphics adapter.

Peripheral Configuration:

AMIBIOS SETUP UTILITY - VERSION 3.31a		
Advanced		
Peripheral Configuration		[Setup Help]
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+EPP	
EPP Version	1.9	
Parallel Port IRQ	Auto	
Parallel Port DMA Channel	Auto	
OnBoard Midi Port	Disabled	
Midi IRQ Select	5	
OnBoard Game Port	200	
OnBoard IDE	Both	
OnBoard LAN	Enabled	
OnBoard AC'97 Audio	Auto	
OnBoard MC'97 Modem	Auto	
F1:Help ↑:Select Item +/-:Change Values F9:Setup Defaults Esc:Previous Menu Enter:Select ▶Sub-Menu 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: You may select [Enabled] or [Disabled] for this onboard infrared port feature.

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. The default value is [ECP+EPP]. If this option is set to [ECP+EPP], it will show the EPP version in the following item, "EPP Version".

OnBoard Midi Port: Select address for Midi Port or disable Midi Port.

Midi IRQ Select: Use this to select Midi IRQ.

OnBoard Game Port: Select address for Game Port or disable Game Port.

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

OnBoard IDE: You may enable either the primary IDE channel or the secondary IDE channel. Or you may enable both the primary and the secondary IDE channels by selecting [Both]. Set to [Disabled] will disable the both.

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

OnBoard LAN: This allows you to enable or disable the "OnBoard LAN" feature.

OnBoard AC'97 Audio: Select [Disabled], [Auto] or [Enabled] for the onboard AC'97 Audio feature.

OnBoard MC'97 Modem: Select [Auto] or [Disabled] for the onboard MC'97 Modem feature.

System Hardware Monitor: You can 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	
Advanced	
System Hardware Monitor	[Setup Help]
CPU Temperature	35°C / 95°F
M/B Temperature	27°C / 82°F
CPU FAN Speed	3110 RPM
Chassis FAN Speed	N/A
Vcore	1.603 V
+ 3.30V	3.383 V
+ 5.00V	4.780 V
+ 12.00V	12.167 V

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

2. Security Setup Menu

AMIBIOS SETUP UTILITY - VERSION 3.31a			
Main	Advanced	Security	Power Boot Exit
Supervisor Password	Clear		[Setup Help]
User Password	Clear		<Enter> to set the supervisor password.
Set Supervisor Password	[Enter]		
Set User Password	[Enter]		
Password Check	Setup		

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

Supervisor Password: This field shows the status of the Supervisor Password.

[Clear]: No password has been set.

[Set]: Supervisor password has been set.

User Password: This field shows the status of the User Password.

[Clear]: No password has been set.

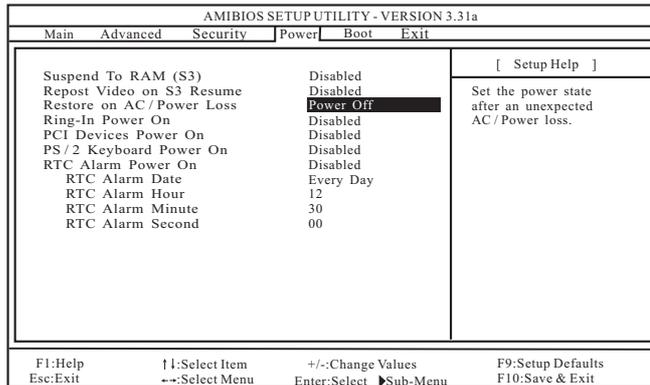
[Set]: User password has been set.

Set Supervisor Password: Press <Enter> to set Supervisor Password. Valid password can be a 1 to 6 alphanumeric characters combination. If you already have a password, you must enter your current password first in order to create a new password.

Set User Password: Press <Enter> to set User Password. Valid password can be a 1 to 6 alphanumeric characters combination. If you already have a password, you must enter your current password first in order to create a new password.

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.

3. Power Setup Menu



Suspend to RAM (S3): This field allows you to select whether to auto-detect or disable the ACPI Suspend-to-RAM (S3) 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. It is recommended to enable this feature under Microsoft® Windows® 98 / ME.

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.

PCI Devices Power On: Use this to enable or disable PCI devices to turn on the system from the power-soft-off mode.

PS/2 Keyboard Power On: Use this to enable or disable PS/2 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.

4. Boot Setup Menu

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

Quick Boot Mode: Enable this mode will speed up the boot-up routine by skipping memory retestings.

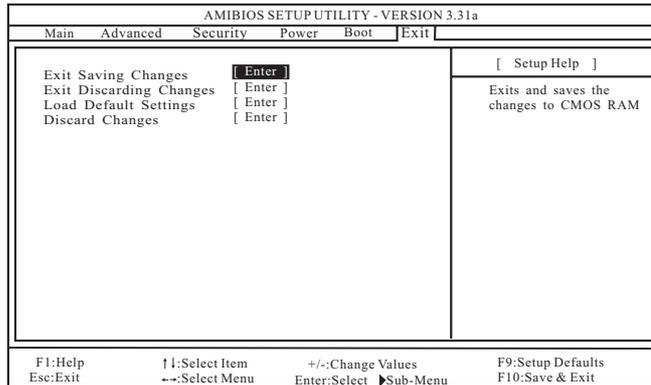
Boot Up Num-Lock: If this is enabled, it will automatically activate the Numeric Lock function after boot-up.

Boot To OS/2: Select [Yes] will enable boot-up to OS/2 operating system.

Boot From Network: Use this to enable or disable "boot from network" feature.

Boot Device Priority: This allows you to set the boot device priority.

5. Exit Menu



Exit Saving Changes: After you enter the sub-menu, the message “Save current settings and exit” will appear. If you press <ENTER>, it will save the current settings and exit the BIOS SETUP Utility.

Exit Discarding Changes: After you enter the submenu, the message “Quit without saving changes” will appear. If you press <ENTER>, you will exit the BIOS SETUP Utility without making any changes to the settings.

Load Default Settings: After you enter the submenu, the message “Load default settings” will appear. If you press <Enter>, it will load the default values for all the setup configuration.

Discard Changes: After you enter the sub-menu, the message “Load setup original values” will appear. If you press <ENTER>, original values will be restored and all changes are discarded.