FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modification made to this equipment void the user's authority to operate this equipment.

This equipment generates, uses, and radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

* Reorient or relocate the receiving antenna.
* Increase the separation between the equipment and receiver.
* Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
* Consult the dealer or an experienced radio/TV technician for help.
* All external cables connecting to this basic unit must be shielded.

C. D. C. Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations or the Canadian Department of Communications.

CE Mark

This equipment is in conformity with the EMC directive.

Overview

The information in this document is subject to change without notice and should not be construed as a commitment by the manufacturer.

The manufacturer assumes no responsibility for any errors that might appear in this document.

The software described in this document is furnished under a license and may be used or copied only in accordance with the terms of such license. No responsibility is assumed for the use or reliability of software or equipment that is not supplied by the manufacturer or its affiliated companies.

Copyright Notice

Trademark

Other product and company names mentioned herein may be trademarks and/ or service marks of their respective owners.

Intel and Pentium are registered trademarks of Intel Corporation.

Nvidia and nforce is registered trademark of Nvidia.

Sis is registered trademark of Silicon Integrated Systems Corporation.

PS/2 is registered trademark of International Business Machines Corporation.

VIA is registered trademark of VIA Technologies, Inc.

ATI is registered trademark of ATI Technologies, Inc.

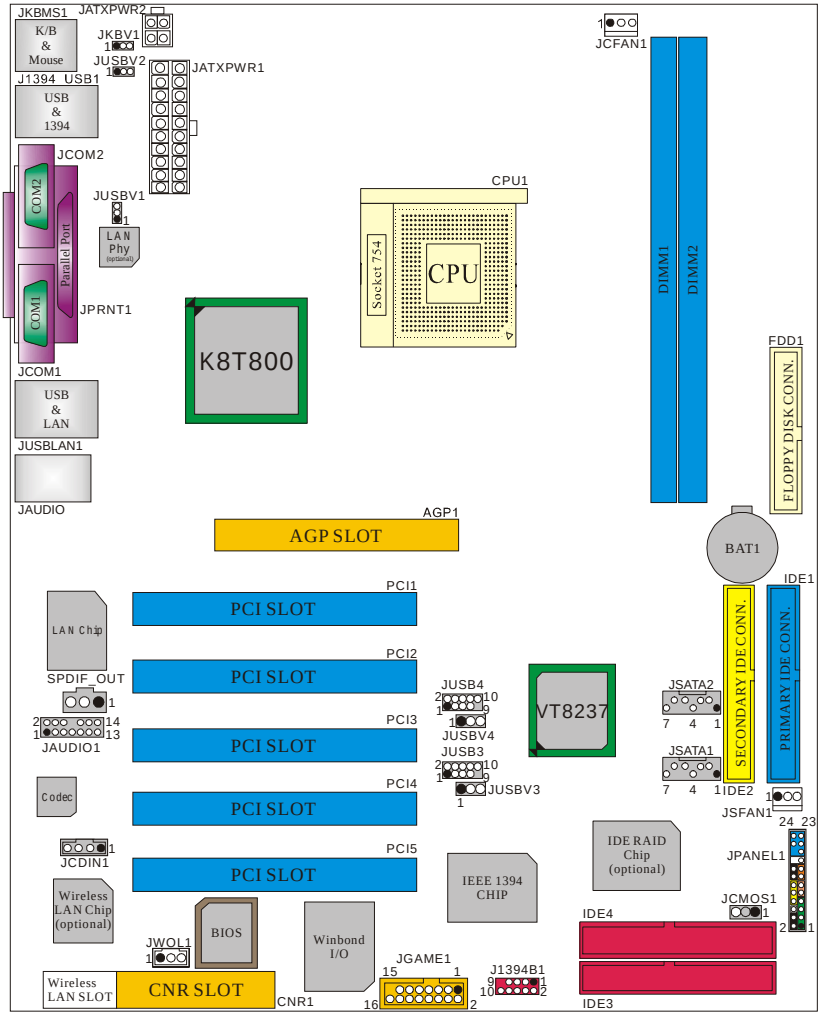
AMD is registered trademark of Advanced Micro Devices, Inc.

Important Safety Information

1. Please read these safety instructions carefully.
2. Please keep this User's Manual for later reference.
3. Please disconnect this equipment from AC outlet before cleaning. Don't use liquid or sprayed detergent for cleaning. Use moisture sheet or clothe for cleaning.
4. For pluggable equipment, the socket-outlet shall be installed near the equipment and shall be easily accessible.
5. Please keep this equipment from humidity.
6. Lay this equipment on a reliable surface when install. A drop or fall could cause injury.
7. Do not leave this equipment in an environment unconditioned, storage temperature above 40°C, it may damage the equipment.
8. The openings on the enclosure are for air convection hence protect the equipment from overheating. DO NOT COVER THE OPENINGS.
9. Make sure the voltage of the power source when connect the equipment to the power outlet.
10. Place the power cord such a way that people can not step on it. Do not place anything over the power cord. The power cord must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product.
11. All cautions and warnings on the equipment should be noted.
12. If the equipment is not use for long time, disconnect the equipment from mains to avoid being damaged by transient over-voltage.
13. Never pour any liquid into ventilation openings, this could cause fire or electrical shock.
14. Never open the equipment. For safety reason, qualified service personnel should only open the equipment.
15. If one of the following situations arises, get the equipment checked by service personnel:
    a. The Power cord or plug is damaged.
    b. Liquid has penetrated into the equipment.
    c. The equipment has been exposed to moisture.
    d. The equipment has not work well or you can not get it work according to user's manual.
    e. The equipment has dropped and damaged.
    f. If the equipment has obvious sign of breakage

Table of Contents

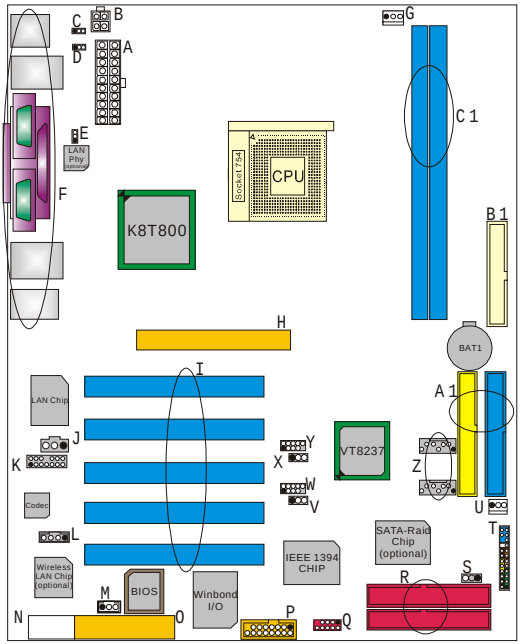
Section 1. Layout of K8VHA Pro



NOTE: "●" represents the first pin.

Section 2. Component Index

This section helps you to locate the components in the motherboard and to find the details about them.



A. ATX Power Connector (JATXPWR1)
B. ATX Power Connector (JATXPWR2)
C. Power Source Selection for Keyboard and Mouse (JKBV1)
D. Power Source Selection for USB (JUSBV2)
E. Power Source Selection for USB (JUSBV1)
F. Back Panel Connectors
G. CPU Fan Connector (JCFAN1)
H. Accelerated Graphics Port Slot (AGP1)
I. PCI BUS Slots (PCI 1-5)
J. Digital Audio Connector (SPDIF_OUT)
K. Front Audio Header (JAUDIO1)
L. CD-ROM Audio-In Header (JCDIN1)
M. Wake On LAN Header (JWOL1)
N. Wireless LAN Slot (optional)
O. Communication Network Riser Slot (CNR1)
P. Game Port Header (JGAME1)
Q. Front 1394 header (J1394B1)
R. IDE-Raid Connectors (IDE3-4) (optional)
S. Clear CMOS Function (JCMOS1)
T. Front Panel Connector (JPANEL1)
U. System FAN Header (JSFAN1)
V. Power Source Selection for USB (JUSBV3)
W. Front USB Header (JUSB3)
X. Power Source Selection for USB (JUSBV4)
Y. Front USB Header (JUSB4)
Z. Serial ATA Connectors (JSATA1-2)
A1. IDE Connectors (IDE1-2)
B1. Floppy Disk Connector (FDD1)
C1. DIMM Modules (DIMM1/ DIMM2)

Section 3. K8VHA Pro Features

In this section, you shall find all the information about the motherboard in your computer, including its features, layout, component index, various jumpers, headers, connectors, and also the installation guide to help you a quick and correct installation of your system.

A. Hardware

CPU

* Supports Socket 754.
* Supports AMD Athlon™ 64 K8/ ClawHammer™ processor with 6.4 GB.
* Processor interface via Hyper-Transport™ Technology.
* 800/ 600/ 400/ 200 clock rates with "Double Data Rate" style operation for 1600/ 1200/ 800/ 400 MT/s in both directions simultaneously.

Chipset

* North Bridge: VIA K8T800.
* South Bridge: VIA VT8237.

Main Memory

* Supports 72-bit (64-bits + 8-bits ECC) DDR SDRAM.
* Supports 266, 333, 400 and 200 MHz DDR technologies.
* Maximum memory size is 2 GB.

Super I/O

Chip: Winbond W83697HF.

- Low Pin Count Interface.
- Integrate hardware monitor functions.

Slots

* Five 32-bit PCI bus master slots.
* One CNR slot.
* One AGP 4X/ 8X slot.
* One wireless LAN slot. (optional)

On Board IDE

* Supports four IDE disk drives.
* Supports PIO Mode 5, Bride Mode and Ultra DMA 33/ 66/ 100/ 133 Bus Master Mode.

LAN Chip (optional)

* Chip: Realtek RTL8100C/ RTL8110S.
* Supports 10 Mb/s, 100 Mb/s auto-negotiation operation. (1000Mb/s only for RTL8110S.)
* Half/ Full duplex capability.
* Supports ACPI, PCI power management.

LAN PHY (optional)

* Chip: Realtek RTL8201BL.
* Supports 10/ 100 Mb/s operation. (1000Mb/s operation only for RTL8110s)
* Half/ Full duplex operation.
* Supports MII interface.

Wireless LAN - Air Link™ (optional)

* Chip: Realtek RTL8180.
* Full compliance with IEEE802.11b specifications.
* Supports Advanced Configuration Power management Interface (ACPI) and PCI power management system for modern operating systems.
* Supports remote wake-up in both ACPI and APM environments.
* Keeps network maintenance costs low and eliminates usage barriers.
* Uses one RF card for Wireless LAN.

IEEE 1394 Chip

* Chip: VIA VT6307.
* Support 2 ports with transfer up to 400 mb/s.
* Compliant with PCI specification v2.2.

On Board AC'97 Sound Codec

* Chip: CMI9739A.
* Compliant with AC'97 specification.
* AC97 2.2 interface.
* Supports 6 channels.

IDE RAID Chip (optional)

* Supports RAID Level 0, RAID Level 1, RAID Level 0+1 and JBOD.
* Complies with PCI Local Bus Specification Revision 2.2.
* Dual channel master mode hard disk controller supporting four Enhanced IDE devices.
* Transfer rate up to 22 MB/s to cover PIO mode 4, multi-word DMA mode 2 drivers and beyond.
* Extension to UltraDMA-133 interface for up to 133 MB/s transfer rate.
* Supports UltraDMA-mode0.

On Board Peripherals

a. Rear side

- 2 serial ports, 1 parallel port. (SPP/EPP/ECP mode)
- Audio ports in vertical position.
- 1 RJ-45 LAN jack. (optional)
- PS/2 mouse and PS/2 keyboard.
- 4 USB2.0 ports.
- 1 IEEE1394 (Firewire™) connector. (optional)

b. Front Side

- 1 floppy port supports 2 FDDs with 360K, 720K, 1.2M, 1.44M and 2.88 Mbytes.
- 4 USB2.0 ports.
- 1 front audio header, 1 S/PDIF Out header.
- 1 IEEE1394 (Firewire™) port. (optional)

Dimensions

ATX Form Factor: 24.4 cm x 30.5 cm (W X L)

B. BIOS & Software

BIOS

* Award legal BIOS.
* APM1.2.
* ACPI.
* USB Function.

Software

* Supports Warpspeeder™, 9th Touch™, BootBlocker™, WinFlasher™, FLASHER™ and StudioFun™ (optional).
* Offers the highest performance for Windows 98 SE, Windows 2000, Windows Me, Windows XP, SCO UNIX, etc.

Section 4. Package contents

Check what you have bought before you start your DIY action. If there are anything missing, please contact your dealer immediately.

* HDD Cable x 1
* FDD Cable x 1
* User's Manual x 1
* Fully Setup Driver CD x 1
* StudioFun! Application CD x 1 (optional)
* USB 2.0 Cable x 1 (optional)
* S/PDIF Cable x 1 (optional)
* Rear I/O Panel for ATX Case x 1
* Serial ATA Cable x 1 (optional)
* Serial ATA Power Switch Cable x 1 (optional)
* Front IEEE 1394 Cable x 1 (optional)

Section 5. Installation and Setup

In this section, you will learn how to install the CPU, DDR Module, and also how to set up jumpers and all the information about the components on the motherboard. Not only can you find the installation steps, but also the details and locations of the components on the motherboard.

1. CPU Installation

The motherboard supports VIA processor in the 754 pin package. The motherboard uses a CPU socket called PGA754 for easy CPU installation. When you are installing the CPU, make sure the CPU has a cooling fan attached on the right to prevent overheating. If you do not find the cooling fan, contact your dealer and make sure to install them before turning on the computer.

Step1: Pull the lever sideways away from the socket and then raise the lever up to a 90-degree angle.

Step2: Look for the white dot/cut edge. The white dot/cut edge should point towards the lever pivot. The CPU will fit only in the correct orientation.

Step3: Hold the CPU down firmly, and then close the lever.

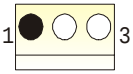
Step4: Put the CPU fan on the CPU and buckle it. Connect the CPU fan power cable to the JCFAN1. This completes the installation.

Step 1 Step 2 Step 3 Step 4

2 Central Processing Unit: CPU

These fan headers support cooling fans built in the computer. Orient the fans to make the heat sink fins to allow air flow to go across the onboard heat sinks instead of the expansion slots. The fan wiring and plug may be different according to the fan manufacturer. Connect the fan cable to the connector while matching the black wire to the ground pin.

(1) CPU Fan Headers: JCFAN1



Pin	Assignment
1	Ground
2	+12V
3	FAN RPM Sense

(2) System Fan Header: JSFAN1

Pin	Assignment
1	Ground
2	+12V
3	FAN RPM Sense

3. Installing DDR Module

1. Unlock a DIMM slot by pressing the retaining clips outward. Align a DIMM on the slot such that the notch on the DIMM matches the break on the slot.

2. Insert the DIMM firmly and vertically into the slot until the retaining chip snap back in place and the DIMM is properly seated.

4. DDR DIMM Modules: DIMM1/ DIMM2

DRAM Access Time: 2.5V Unbuffered/ no registered DDR SDRAM
PC2100/ PC2700/ PC3200 Type required.

DRAM Type: 128MB/ 256MB/ 512MB/ 1GB DIMM Module. (184 pin)

Total Memory Size with Unbuffered DIMMs

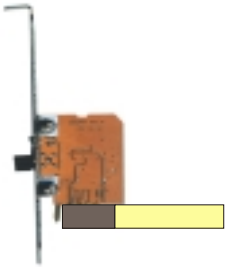
DIMM Socket Location	DDR Module	Total Memory Size (MB)
DIMM1	64MB/ 128MB/ 256MB/ 512MB/ 1GB *1	Max is 2GB
DIMM2	64MB/ 128MB/ 256MB/ 512MB/ 1GB *1	

Only for reference

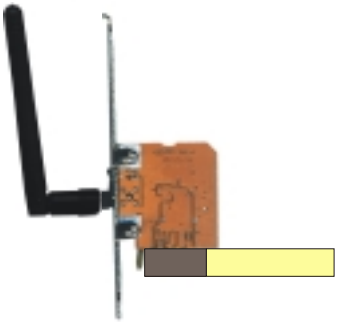
5. Wireless LAN Card Installation (optional)

1. Align the wireless LAN on the slot such a way that wireless LAN card matches in the slot. Be sure to face the wireless LAN card with its components towards the inner part of the motherboard.

2. Insert the wireless LAN card vertically and firmly into the slot till the wireless card is properly seated.



3. Screw the brackets.
4. Insert the wireless LAN antenna by turning it clockwise.



6. How to set up Jumpers?

The illustration shows how to set up jumpers. When the Jumper cap is placed on pins, the jumper is “close”. If no jumper cap is placed on the pins, the jumper is ”open”. The illustration shows a 3-pin jumper whose pin1and 2 are “close” when jumper cap is placed on these 2 pins.

Jumper open

Jumper close

Pin1-2 close

7. Jumpers, Headers, Connectors & Slots:

(1) Floppy Disk Connector: FDD1

The motherboard provides a standard floppy disk connector that supports 360K, 720K, 1.2M, 1.44M and 2.88M floppy disk types. This connector supports the provided floppy drive ribbon cables.

(2) Hard Disk Connectors: IDE1/ IDE2

The motherboard has a 32-bit Enhanced PCI IDE Controller that provides PIO Mode 0~4, Bus Master, and Ultra DMA 33/ 66/ 100/ 133 functionality. It has two HDD connectors IDE1 (primary) and IDE2 (secondary).
The IDE connectors can connect a master and a slave drive, so you can connect up to four hard disk drives. The first hard drive should always be connected to IDE1.

(3) Peripheral Component Interconnect Slots: PCI1-5

This motherboard is equipped with 5 standard PCI slots. PCI stands for Peripheral Component Interconnect, and it is a bus standard for expansion cards. This PCI slot is designed as 32 bits.

(4) Accelerated Graphics Port Slot: AGP1

Your monitor will attach directly to that video card. This motherboard supports video cards for PCI slots, but it is also equipped with an Accelerated Graphics Port (AGP). An AGP card will take advantage of AGP technology to improve video efficiency and performance, especially with 3D graphics.

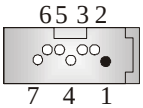
(5) Communication Network Riser Slot: CNR1

The CNR specification is an open Industry Standard Architecture, and it defines a hardware scalable riser card interface, which supports modem only.

(6) Serial ATA Connector: JSATA1/ JSATA2

The motherboard has a PCI to SATA Controller with 2 channels SATA interface. It satisfies the SATA 1.0 spec and can transfer data with 1.5GHz speed.

Pin	Assignment	Pin	Assignment
1	Ground	2	TX+
3	TX-	4	Ground
5	RX-	6	RX+
7	Ground		



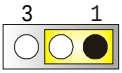
(7) IDE-Raid Connector: IDE3/ IDE4 (optional)

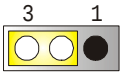
This connector supports RAID0 or RAID1 or RAID 0+1 configuration through the onboard Parallel ATA (VT6410) controller chip. You can use the IDE feature to set up a disk array configuration and to support additional IDE devices. However, it can only support master mode IDE HDD.

(8) Clear CMOS Jumper: JCMOS1

This jumper helps you to clear the Real Time Clock (RTC) Ram in CMOS. You can erase the CMOS RTC Ram data to clear the CMOS memory of date, time, and system setup parameters.

JCMOS1	Assignment
Pin 1-2 Close	Normal Operation (default)
Pin 2-3 Close	Clear CMOS Data





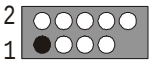
* Clear CMOS Procedures:

1. Remove AC power line.
2. Set the jumper to "Pin 2-3 Close".
3. Wait for five seconds.
4. Set the jumper to "Pin 1-2 Close".
5. Power on the AC.
6. Reset your desired password or clear the CMOS data.

(9) Front USB Header: JUSB3/ JUSB4

The motherboard provides two USB 2.0 Pin Header. USB 2.0 technology increases data transfer rate up to a maximum of 480 Mbps, which is 40 times faster than USB 1.1, and is ideal for connecting high-speed USB interface peripherals such as USB HDD, digital cameras, MP3 players, printers, modems, etc.

Pin	Assignment	Pin	Assignment
1	+5V(fused)	2	+5V(fused)
3	USBP4-	4	USBP5-
5	USBP4+	6	USBP5+
7	Ground	8	Ground
9	KEY	10	NC



(10) Power Source Selection for USB: JUSBV1/ JUSBV2/ JUSBV3/ JUSBV4

JUSBV1/ JUSBV2/ JUSBV3/ JUSBV4	Assignment	Description
Pin 1-2 close	+5V	JUSBV1: 5V for USB port located at the JUSBLAN1 connector port. JUSBV2: 5V for USB port located at the J1394_USB1 connector port. JUSBV3: 5V for USB port located at the JUSB3 connector port. JUSBV4: 5V for USB port located at the JUSB4 connector port.
1  3 Pin 2-3 close	+5V Standby Voltage	JUSBV1: JUSBLAN1 port powered with standby voltage of 5V. JUSBV2: J1394_USB1 port powered with standby voltage of 5V. JUSBV3: JUSB3 port powered with standby voltage of 5V. JUSBV4: JUB4 port powerered with standby voltage of 5V.

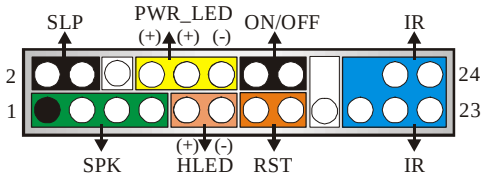
Note: 1. In order to support this function "Power-on the sytem via USB devices", "JUSBV1/JUSBV2/ JUSBV3/ JUSBV4" jumper cap should be placed on pin 2-3 respectively.

2. Use +5V Standby Voltage for S3 mode.

(11) Front Panel Connector: JPANEL1

The connector is for electrical connection to the front panel switches and LEDs.

Pin	Assignment	Function	Pin	Assignment	Function
1	+5V		2	Sleep Control	Sleep Button
3	NA	Speaker	4	Ground	
5	NA	Connector	6	NA	NA
7	Speaker		8	Power LED (+)	Power LED
9	HDD LED (+)	Hard Drive	10	Power LED (+)	
11	HDD LED (+)	LED	12	Power LED (-)	
13	Ground	Reset	14	Power Button	Power-on Button
15	Reset Control	Button	16	Ground	
17	NA		18	KEY	
19	NA	IrDA	20	KEY	IrDA Connector
21	+5V	Connector	22	Ground	
23	IRTX		24	IRRX	

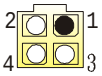


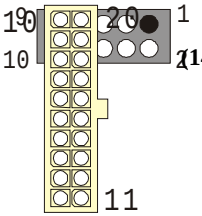
(13) Power Connectors: JATXPWR1/ JATXPWR2

The motherboard supports ATX power supply for the power system. Before installing the power supply connector, please make sure that all components are installed properly.

PIN	Assignment	PIN	Assignment
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	Ground	13	Ground
4	+5V	14	PS_ON
5	Ground	15	Ground
6	+5V	16	Ground
7	Ground	17	Ground
8	PW_OK	18	-5V
9	Standby Voltage +5V	19	+5V
10	+12V	20	+5V

PIN	Assignment	PIN	Assignment
1	+12V	3	Ground
2	+12V	4	Ground





(14) Front 1394 Header: J1394B1

Pin	Assignment	Pin	Assignment
1	A1+	2	A1-
3	Ground	4	Ground
5	B1+	6	B1-
7	+12V	8	+12V
9	KEY	10	NA

(15) Digital Audio Connector: SPDIF_OUT

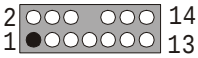
The connector is used to connect SPDIF (Sony & Philips Digital Interconnect Format) interface for digital audio transmission.

Pin	Assignment
1	+5V
2	SPDIF_OUT
3	Ground

(16) Front Panel Audio Header: JAUDIO1

The connector allows you to connect to the front panel audio.

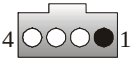
Pin	Assignment	Pin	Assignment
1	Mic In	2	Ground
3	Mic Power	4	Audio Power
5	RT Line Out	6	RT Line Out
7	Reserved	8	Key
9	LFT Line Out	10	LFT Line Out
11	RT Line In	12	RT Line In
13	LFT Line In	14	LFT Line In



(17) CD-ROM Audio-In Header: JCDIN1

This header allows you to receive stereo audio input from sound sources, such as CD-ROM, TV Tuner, MPEG card, etc.

Pin	Assignment
1	Left Channel Input
2	Ground
3	Ground
4	Right Channel Input

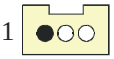


(18) Game Header: JGAME1

Pin	Assignment	Pin	Assignment
1	+5V	2	+5V
3	Joystick B Button 1	4	Joystick A Button 1
5	Joystick B Coordinate X	6	Joystick A Coordinate X
7	MIDI Output	8	Ground
9	Joystick B Coordinate Y	10	Ground
11	Joystick B Button 2	12	Joystick A Coordinate Y
13	MIDI Input	14	Joystick A Button 2
15	NA	16	+5V

(19) Wake On LAN Header: JWOL1

Pin	Assignment
1	+5V_SB
2	Ground
3	Wake up

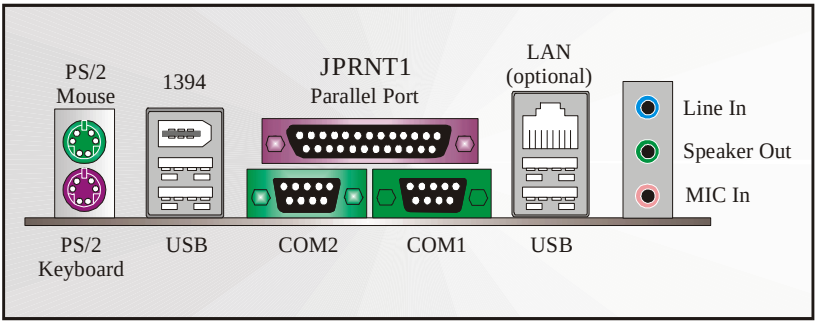


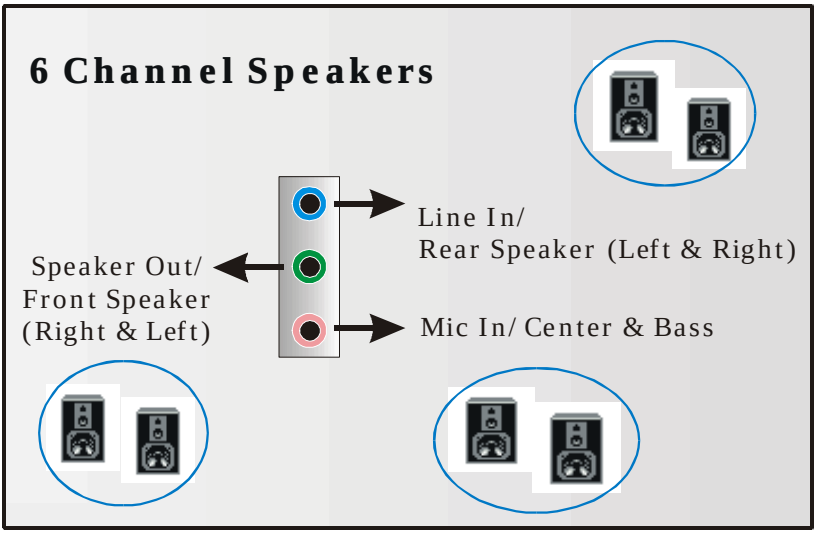
JWOL1

(12) Power Source Selection for Keyboard and Mouse: JKBV1

JKBV1	Assignment	Description	
Pin 1-2 close	+5V	5V for keyboard and mouse	1
Pin 2-3 close	+5V Standby voltage	5V standby for keyboard and mouse to power on your system	1

(20) Back Panel Connectors





Section 6. Trouble Shooting

PROBABLE	SOLUTION
No power to the system at all; power light doesn't illuminate; fan inside power supply does not turn on. Indicator light on keyboard does not turn on.	* Make sure power cable is securely plugged in.* Replace cable. * Contact technical support.
System inoperative. Keyboard lights are on, power indicator lights are lit, and hard drive is spinning.	* Using even pressure on both ends of the DIMM, press down firmly until the module snaps back in places.
System does not boot from hard disk drive, but it can be booted from CD-ROM drive.	* Check cable running from disk to disk controller board. Make sure both ends are securely plugged in; check the drive type in the standard CMOS setup. * Backing up the hard drive is extremely important. All hard disks are capable of breaking down at any time.
System only boots from CD-ROM. Hard disk can be read and applications can be used but booting from hard disk is impossible.	* Back up data and applications files. Reformat the hard drive. Re-install applications and data using backup disks.
Screen message says "Invalid Configuration" or "CMOS Failure."	* Review system's equipment. Make sure correct information is in setup.
Cannot boot system after installing second hard drive.	* Set master/slave jumpers correctly. * Run SETUP program and select correct drive types. Call drive manufacturers for compatibility with other drives.
Error message reading "SECTOR NOT FOUND" or other error messages not allowing certain data to be retrieved.	* Back up any salvageable data. Then, low-level format, partition, and high-level format the hard drive. Re-install all saved data when completed.

PROBABLE	SOLUTION
Scree is blank.	* Check the power connectors to monitor and to system. Make sure monitor is connected to display card.
Screen goes blank periodically.	* Disable screen saver.
Memory problem.	* Reboot computer. Reinstall memory, and make sure that all memory modules are installed in correct sockets.
Computer virus.	* Use anti-virus programs to detect and clean viruses.
Keyboard failure.	* Reconnect keyborad. Check keys again. If no improvement, replace keyboard.
No display on screen.	* If possible, connect monitor to another system. If no color still, replace monitor.
C: drive failure.	* Check hard drive cable.
Missing operating system on hard drive.	* Run setup and select correct drive type.
Certain keys do not function.	* Replace keyboard.
Keyboard is locked, no keys function.	* Unlock keyboard.

StudioFun!™

Introduction

StudioFun!™ is a media-player based on optimized GNU/Linux distribution to bring a "Room Theater" experience into life. It plays DVD, VCD, MP3, Audio CD and other multimedia. Furthermore, Users can take snapshots of video and customize the saved images as screensavers or photo slideshows. Of course, the images can be stored in USB mass storage devices like flash disks and USB floppy disks.

Hardware Requirements

The supported hardware list of StudioFun! updates regularly. So please check the "hwreq.txt" located in the root of StudioFun! CD to get the latest supporting information.

Installation and Usage

Please refer to the manual, located in the "Manual" folder under the root of StudioFun! CD, to get the most updated and detailed information of StudioFun. The manual comes in 3 different formats - Word format, PDF file format, or HTML format. Users can choose the favorite one.

WarpSpeeder™

Introduction

[WarpSpeeder™], a new powerful control utility, features three user-friendly functions including Overclock Manager, Overvoltage Manager, and Hardware Monitor.

With the Overclock Manager, users can easily adjust the frequency they prefer or they can get the best CPU performance with just one click. The Overvoltage Manager, on the other hand, helps to power up CPU core voltage and Memory voltage. The cool Hardware Monitor smartly indicates the temperatures, voltage and CPU fan speed as well as the chipset information. Also, in the About panel, you can get detail descriptions about BIOS model and chipsets. In addition, the frequency status of CPU, memory, AGP and PCI along with the CPU speed are synchronically shown on our main panel.

Moreover, to protect users' computer systems if the setting is not appropriate when testing and results in system fail or hang, [WarpSpeeder™] technology assures the system stability by automatically rebooting the computer and then restart to a speed that is either the original system speed or a suitable one.

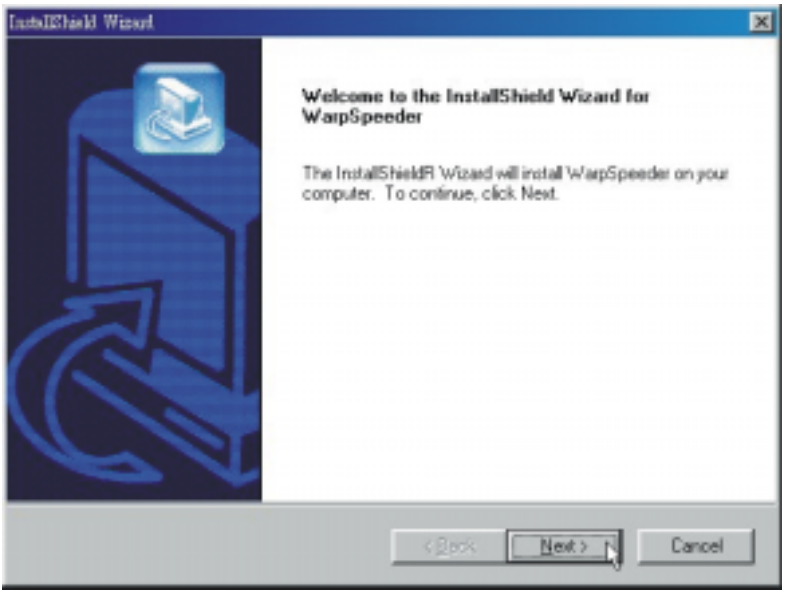
System Requirement

OS Support: Windows 98 SE, Windows Me, Windows 2000, Windows XP

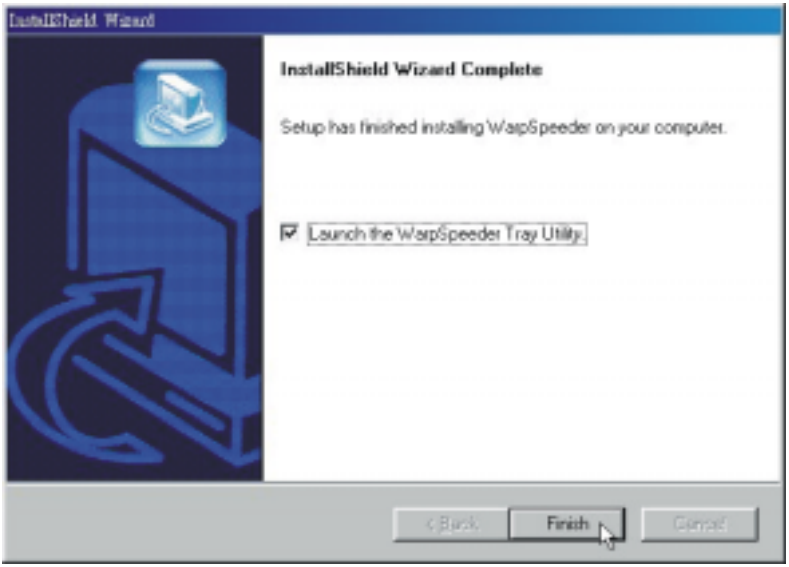
DirectX: DirectX 8.1 or above. (The Windows XP operating system includes DirectX 8.1. If you use Windows XP, you do not need to install DirectX 8.1.)

Installation

1. Execute the setup execution file, and then the following dialog will pop up. Please click "Next" button and follow the default procedure to install.



2. When you see the following dialog in setup procedure, it means setup is completed. If the "Launch the WarpSpeeder Tray Utility" checkbox is checked, the Tray Icon utility and [WarpSpeeder™] utility will be automatically and immediately launched after you click "Finish" button.



Usage

The following figures are just only for reference, the screen printed in this user manual will change according to your motherboard on hand.

[WarpSpeeder™] includes 1 tray icon and 5 panels:

1. Tray Icon:

Whenever the Tray Icon utility is launched, it will display a little tray icon on the right side of Windows Taskbar.

This utility is responsible for conveniently invoking [WarpSpeeder™] Utility. You can use the mouse by clicking the left button in order to invoke [WarpSpeeder™] directly from the little tray icon or you can right-click the little tray icon to pop up a popup menu as following figure. The "Launch Utility" item in the popup menu has the same function as mouse left-click on tray icon and "Exit" item will close Tray Icon utility if selected.

2. Main Panel

If you click the tray icon, [WarpSpeeder™] utility will be invoked. Please refer do the following figure; the utility's first window you will see is Main Panel.

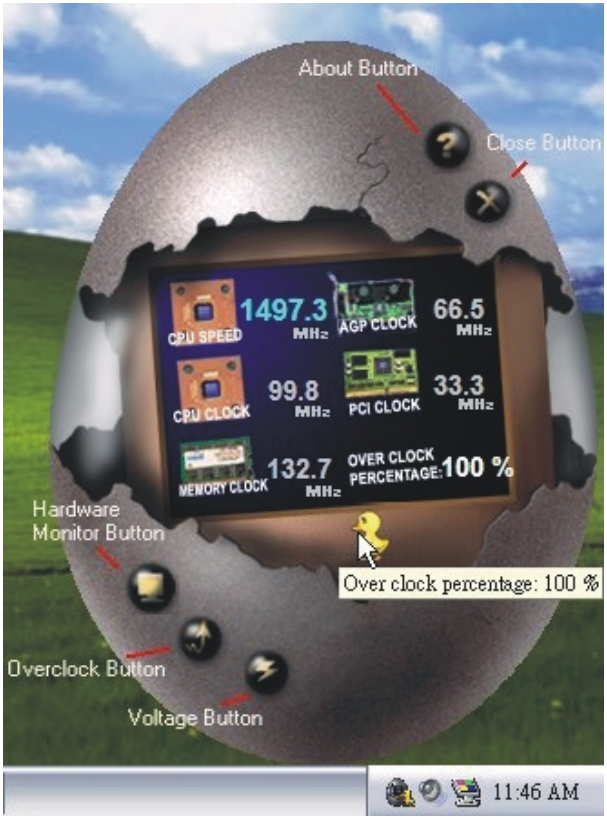
Main Panel contains features as follows:

a. Display the CPU Speed, CPU external clock, Memory clock, AGP clock, and PCI clock information.

b. Contains About, Voltage, Overclock, and Hardware Monitor Buttons for invoking respective panels.

c. With a user-friendly Status Animation, it can represent 3 overclock percentage stages:

Duck walking => overclock percentage from 100% ~ 110 %
Duck running => overclock percentage from 110% ~ 120%
Duck burning => overclock percentage from 120% ~ above



3. Voltage Panel

Click the Voltage button in Main Panel, the button will be highlighted and the Voltage Panel will slide out to up as the following figure.

In this panel, you can decide to increase CPU core voltage and Memory voltage or not. The default setting is "No". If you want to get the best performance of overclocking, we recommend you click the option "Yes".

4. Overclock Panel

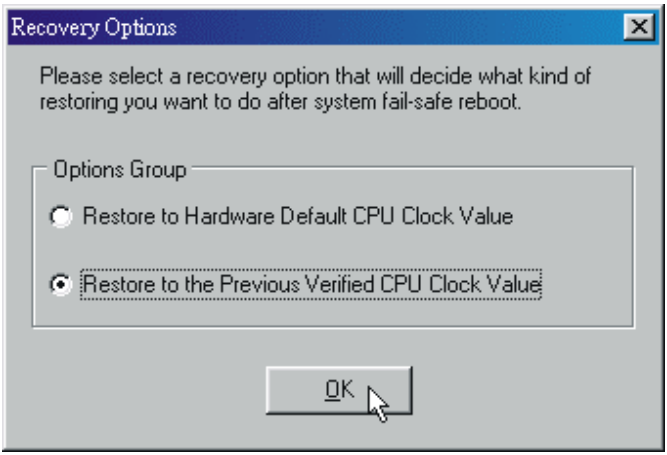
Click the Overclock button in Main Panel, the button will be highlighted and the Overclock Panel will slide out to left as the following figure.

Overclock Panel contains these features:

a. "-3MHz button", "-1MHz button", "+1MHz button", and "+3MHz button": provide user the ability to do real-time overclock adjustment.

Warning: Manually overclock is potentially dangerous, especially when the overclocking percentage is over 110 %. We strongly recommend you verify every speed you overclock by click the Verify button. Or, you can just click Auto overclock button and let [WarpSpeeder™] automatically gets the best result for you.

b. "Recovery Dialog button": Pop up the following dialog. Let user select a restoring way if system need to do a fail-safe reboot.



c. "Auto-overclock button": User can click this button and [WarpSpeeder™] will set the best and stable performance and frequency automatically. [WarpSpeeder™] utility will execute a series of testing until system fail. Then system will do fail-safe reboot by using Watchdog function. After reboot, the [WarpSpeeder™] utility will restore to the hardware default setting or load the verified best and stable frequency according to the Recovery Dialog's setting.

d. "Verify button": User can click this button and [WarpSpeeder™] will proceed a testing for current frequency. If the testing is ok, then the current frequency will be saved into system registry. If the testing fail, system will do a fail-safe rebooting. After reboot, the [WarpSpeeder™] utility will restore to the hardware default setting or load the verified best and stable frequency according to the Recovery Dialog's setting.

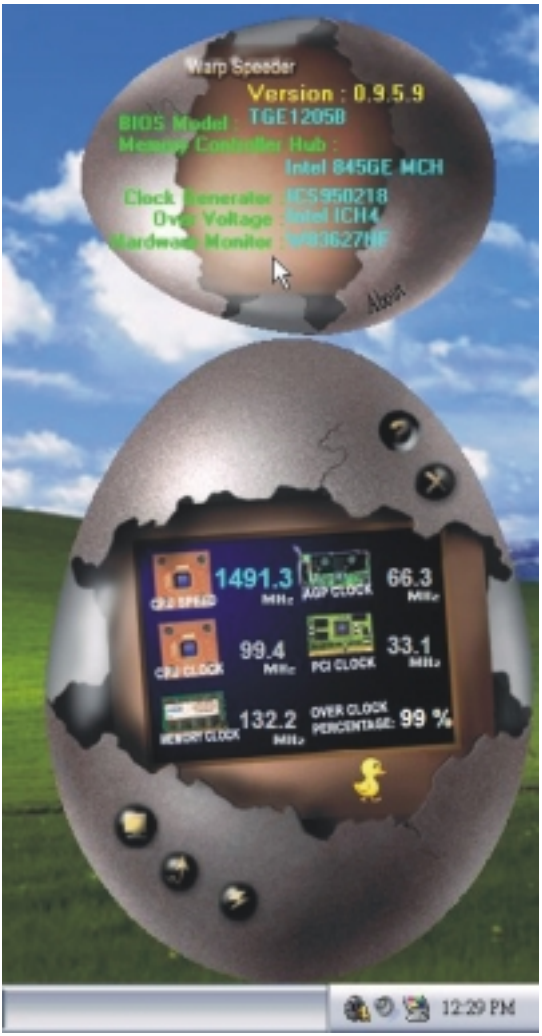
Note: Because the testing programs, invoked in Auto-overclock and Verify, include DirectDraw, Direct3D and DirectShow tests, the DirectX 8.1 or newer runtime library is required. And please make sure your display card's color depth is High color (16 bit) or True color(24/32 bit) that is required for Direct3D rendering.

5. Hardware Monitor Panel

Click the Hardware Monitor button in Main Panel, the button will be highlighted and the Hardware Monitor panel will slide out to left as the following figure.
In this panel, you can get the real-time status information of your system. The information will be refreshed every 1 second.

6. About Panel

Click the About button in Main Panel, the button will be highlighted and the About Panel will slide out to up as the following figure.
In this panel, you can get model name and detail information in hints of all the chipset that are related to overclocking. You can also get the mainboard's BIOS model and the Version number of [WarpSpeeder™] utility.



Note: Because the overclock, overvoltage, and hardware monitor features are controlled by several separate chipset, [WarpSpeeder™] divide these features to separate panels. If one chipset is not on board, the correlative button in Main panel will be disabled, but will not interfere other panels' functions. This property can make [WarpSpeeder™] utility more robust.

09/3/2003