Declaration of conformity

$C \in$

QUANTUM DESIGNS(HK) LTD.
20th Floor, Devon House, Taikoo Place, 979 King's Road,
Quarry Bay, Hong Kong

declares that the product
Mainboard
K8V800/K8VM800

is in conformity with

(reference to the specification under which conformity is declared in
accordance with 89/336 EEC-EMC Directive)

☑ EN 55022	Limits and methods of measurements of radio disturbance characteristics of information technology equipment	
☑ EN 50081-1	Generic emission standard Part 1: Residential, commercial and light industry	
☑ EN 50082-1	Generic immunity standard Part 1: Residential, commercial and light industry	

European Representative:

QDI COMPUTER (UK) LTD	QDI COMPUTER (SCANDINAVIA) A/S
QDI SYSTEM HANDEL GMBH	QDI EUROPE B. V.
QDI COMPUTER (FRANCE) SARL	QDI COMPUTER HANDELS GMBH
LEGEND QDI SPAIN S.L .	QDI COMPUTER (SWEDEN) AB

Signature : _Xu Wenge_   Place / Date :   HONG KONG/2003

Printed Name : ___Xu Wenge___   Position/ Title :   Assistant President

Declaration of conformity

FCC

Trade Name:	QDI Computer (U. S . A.) Inc.
Model Name:	**K8V800/K8VM800**
Responsible Party:	QDI Computer (U. S. A.) Inc.
Address:	41456 Christy Street
	Fremont, CA 94538
Telephone:	(510) 668-4933
Facsimile:	(510) 668-4966
Equipment Classification:	FCC Class B Subassembly
Type of Product:	Mainboard
Manufacturer:	**Quantum Designs (HK) Inc.**
Address:	20th Floor, Devon House, Taikoo Place
	979 King's Road, Quarry Bay, HONG
	KONG

Supplementary Information:

This device complies with Part 15 of the FCC Rules. Operation is subject to
the following two conditions : (1) this device may not cause harmful
interference, and (2) this device must accept any interference received,
including interference that may cause undesired operation.
Tested to comply with FCC standards.

Signature : *Ku Wenye*   Date :   2003

Chapter 1

Chapter 2

Chapter 3

Appendix

Caution

Be sure to unplug the AC power supply before adding or re-moving expansion cards, RAM or other system peripherals, other-wise your mainboard and RAM might be seriously damaged.

Caution

Be sure to add some Silicone Grease between the CPU and the heatsink to keep them fully contacted to meet the heat sink require-ment.

Note:

This manual is suitable for K8V800/K8VM800 series of mainboards. Each mainboard is carefully designed for the PC user who wants different features.

K8V800: support VIA K8T800 + VIA VT 8237 chipset

K8VM800: support VIA K8M800 + VIA VT 8237 chipset

-6A: with 6 channel Audio, without onboard LAN

-L: without onboard Audio, with onboard LAN

-F: with IEEE 1394 port

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Chapter 1

Introduction

K8V800/K8VM800 series of mainboards utilize VIA K8T800/K8M800+VIA VT8237 chipset, providing a fully compatible, high performance and cost-effective ATX platform. The new integrated technologies, together with AC'97 audio(2/6-channel), 8 USB 2.0, 2 SATA, and ATA133/100/66/33, give customers an advanced, multimedia solution at reasonable price. It provides HyperTransport™ technology to support AMD Athlon™ 64 Socket 754 processors and the DDR266/333/400 memory. It also provides advanced features such as Wake up by USB devices, Wake-on-LAN and Keyboard Password Power-on functions. Suspending to RAM, the optimal implementation of the Advanced Configuration and Power Interface makes the PC's power consumption drop to the lowest possible level and enable quick wakeup.

Key Features

Form factor
- ATX form factor of 305mm x 230mm

Microprocessor
- Supports AMD Athlon™ 64 Socket 754 CPU
- Supports HyperTransport™ technology

System memory
- Supports DDR266/333/400 SDRAM
- Supports 64/128/256/512Mb technology up to 2GB
- Provides two 184-pin DDR SDRAM interfaces

Onboard IDE
- Supports Independent timing of up to 4 drives
- Supports Ultra ATA 33/66/100/133, PIO mode
- Two fast IDE interfaces supporting four IDE devices including IDE hard disks and CD ROM drives

2

Onboard LAN(optional)
- 10/100 Mbit/sec Ethernet support
- 10/100M LAN interface built-in on board

USB 2.0
- USB 2.0 compliant, operates at 480Mbps, about 40X times faster than USB 1.1 which currently works at a snails pace of just 12Mbps
- Provides 8 USB 2.0 ports

Onboard I/O
- One floppy port supporting up to two 3.5″ or 5.25″ floppy drives with 360K/720K/1.2M/1.44M /2.88M format
- Two high speed 16550 compatible COMs with 16 byte send/receive FIFO
- One parallel port supports SPP/EPP/ECP mode
- Supports PS/2 mouse and PS/2 keyboard
- Provides one IrDA connector
- All I/O ports can be enabled/disabled in the BIOS setup

Onboard Audio
- AC'97 2.2 Specification Compliant
- Provides onboard Line-in Jack, Microphone-in Jack, Speaker-out Jack Connector

6-channel Onboard Audio(available on -6A mainboard)
- AC'97 2.3 Specification Compliant
- Provides Front left&right, Rear left&right/Line-in Jack and Center&Woofer/Microphone-in Jack,which can be specified by software

AGP Interface
- Provides one standard VGA connector and integrated AGP unit(available on K8VM800 mainboard)
- AGP connector supports AGP 3.0 including AGP 8X data transfers

Advanced features
- PCI 2.2 Specification Compliant
- Provides Trend ChipAwayVirus On Guard
- Supports Windows 98/2000/ME/XP soft-off
- Supports Wake-on-LAN
- Supports Keyboard Password Power-on function

3

Onboard SATA
- Supports hot-plug
- Two SATA devices including SATA HDD and CDROM/DVD ROM devices
- Supports 150Mbps transfer rate.

BIOS
- Licensed advanced AWARD(Phoenix) BIOS, supports flash ROM, plug and play ready
- Supports IDE CDROM/SCSI/USB boot up.

IEEE 1394 Ports(Optional)
- Supports two IEEE 1394a ports

Green function(optional)
- Supports ACPI power status: S0 (full-on), S1 (power on suspend), S3 (suspend to RAM), S4(suspend to Disk, depends on OS) and S5 (soft-off)

Main Expansion Slots and Connectors

Slot/Port (Quantity)	Description
PCI(5)	PCI slots
IDE(2)	IDE ports
FLOPPY(1)	Floppy Drive port
DDR(2)	DIMM socket
USB(8)	USB connectors
AGP(1)	AGP slot
LAN(1)	LAN connector
COM(2)	COM connectors
PARALLEL(1)	Parallel connector
IrDA(1)	IrDA connector

Chapter 2

Installation Instructions

This section covers External Connectors and Jumper Settings. Refer to the mainboard layout chart for locations of all jumpers, external connectors, slots and I/O ports. Furthermore, this section lists all necessary connector pin assignments for your reference. The particular state of the jumpers, connectors and ports are illustrated in the following figures. Before setting the jumpers or inserting these connectors, please pay attention to the direction.

External Connectors

PS/2 Keyboard/Mouse Connector

PS/2 keyboard connector is for the usage of PS/2 keyboard. If using a standard AT size keyboard, an adapter should be used to fit this connector. PS/2 mouse connector is for the usage of PS/2 mouse.

PS/2 Mouse connector

PS/2 Keyboard connector

USB1, USB2, USB3, USB4 and LAN Connectors(optional)

(LAN connector is only available on -L mainboard)

Four USB ports are for connecting USB devices. The RJ-45 connector is for onboard LAN.

LINK   ACTIVE

LAN (optional)

USB1

USB2

USB3

USB4
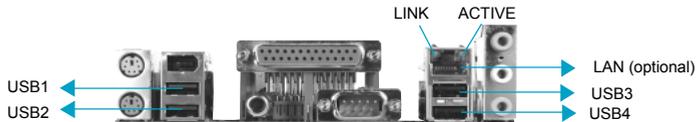
Parallel Port, Serial Port Connectors (COM1) and SPDIF Out port

The parallel port connector can be connected to a parallel device such as a printer. The serial port COM1 connector can be connected to a serial port device such as a serial port mouse. You can enable/disable them and choose the IRQ or I/O address in "Integrated Peripherals" from AWARD BIOS SETUF.

The S/PDIF (Sony / Philips Digital Interface) input allow your digital audio input from digital audio devices (optional). The S/PDIF output is capable of providing digital audio data or compressed AC3 data to an external Dolby digital decoder.

Parallel Port

SPDIF OUT

COM1
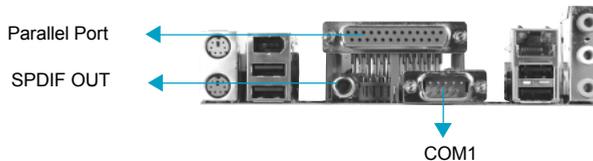
Warning: Be sure to unplug the AC power supply before adding or removing expansion cards or other system peripherals, otherwise your mainboard and expansion cards might be seriously damaged.

6

Line-in jack, Microphone-in jack, Speaker-out jack

The Line-in jack can be connected to devices such as a cassette or minidisc player to playback or record. The Microphone-in jack can be connected to a microphone for voice input. The Speaker-out jack allows you to connect speakers or headphones for audio output from the internal amplifier.

Line in

Speaker out

Microphone in

6-Channel Audio

This mainboard utilizes VT1616 chip providing 6-channel Audio, which consists of Front Left, Front Right, Rear Left, Rear Right, Center and Woofer for a complete surround sound effect. When 6-Channel audio is available, the front Left&Right jack can be connected to the Front speskers, the Back Left&Right jack can be connected to the rear speakers and the Center&Woofer jack can be connected to the center speaker and woofer.

Microphone function is offered by F_AUDIO Connector on the mainboard now.

If set 2-Channel Audio mode on -6A or -6AL mainboard, you can connect two speakers to the Front Left&Right jack, at the same time use the Rear Left&Right jack as Line in jack, and use the Center&Woofer jack as Microphone in jack.

Line in/Rear Left&Right

Speaker out/Front left&right

Microphone in/Center&Woofer
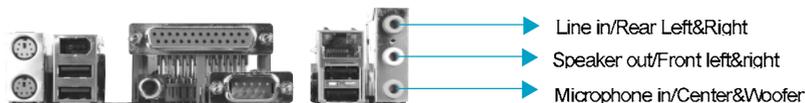
IEEE 1394 Port (optional)

The IEEE 1394 port is for connecting IEEE 1394 device.

IEEE 1394 port

7
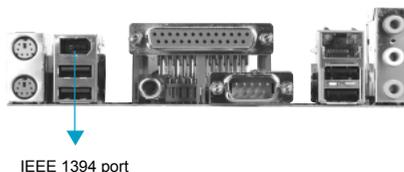
ATX 12V Power Supply Connector & Power Switch (POWER SW)

The power switch (POWER SW) should be connected to a momentary switch. When powering up your system, first turn on the mechanical switch of the power supply (if one is provided), then push once the power switch. When powering off the system, you needn't turn off the mechanical switch, just push once the power switch. The mainboard only support ATX12V power.

+12V Power Supply Connector

1

GND ——— 12V
GND ——— 12V

ATX Power Supply Connector

3.3V 3.3V GND 5V GND 5V GND PS-OK 5VSB 12V

1

20

3.3V -12V GND PS-ON GND GND GND -5V 5V 5V

1 POWER SW

8
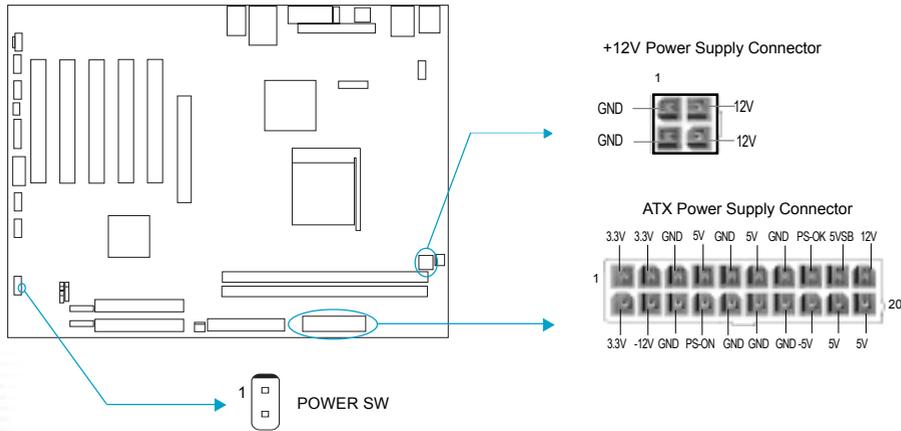
Note: If you change "Soft-off by PWR-BTTN" from default "Instant-off" to "Delay 4 Sec" in the "POWER MANAGEMENT SETUP" section of the BIOS, the power switch should be pressed for morethan 4 seconds before the system powers down.

Hard Disk LED Connector (HDD_LED)

The connector connects to the case's IDE indicator LED indicating the activity status of IDE hard disk. The connector has an orientation. If one way doesn't work, try the other way.

Reset Switch (RESET)

The connector connects to the case's reset switch. Press the switch once, the system resets.

Power LED Connector (PWR_LED)

The system provides different states according to front panel mounted LED.
a single-color power LED:
When the system is in S0 status, the LED is on.   When the system is in S1,S3, S5 status, the LED is off. The connector has an orientation.
a dual-color power LED:
Pin2 and Pin4 drive different color lights. When the system is in S0 status, the LED is green on. When the system is in S1 or S3 status, the LED is yellow. When the system is in S5 status, the LED is off.
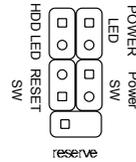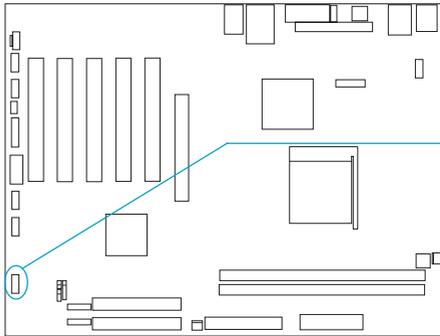
	HDD LED		POWER LED	POWER SW
HDD LED	HDD LED(+)	PWR LED(+)		
	HDD LED(-)	PWR LED(-)		
RESET SW	G N D	P O W E R		
	P O W E R	G N D		
	RESERVE	EMPTY		

9

USB5,6; USB7,8

Besides USB1,2,3,4 on the back panel, K8V800/K8VM800 series of mainboards also have 10-pin headers on board which may connect to front panel USB cable(optional) to provide additional four USB ports.

USB5,6		
+5V		+5V
DT0-		DT1-
DT0+		DT1+
GND		GND
CUT		NC

USB7,8		
+5V		+5V
DT0-		DT1-
DT0+		DT1+
GND		GND
CUT		NC
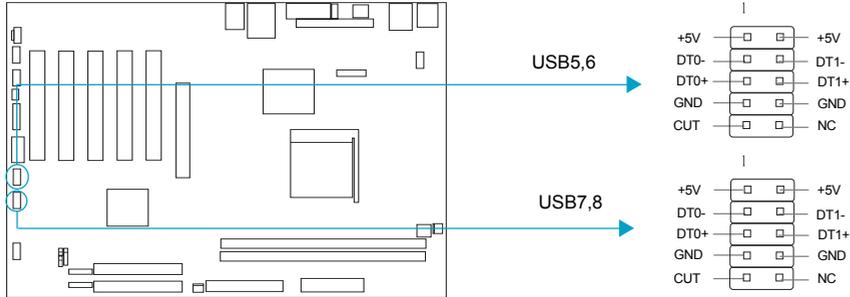
Infrared Header (IrDA)

This connector supports wireless transmitting and receiving device. Before using this function, configure the settings for IR Address, IR Mode and IR IRQ from the "INTEGRATED PERIPHERALS" section of the CMOS SETUP.

IrDA

1
VCC
CUT
IRRX
GND
IRTX
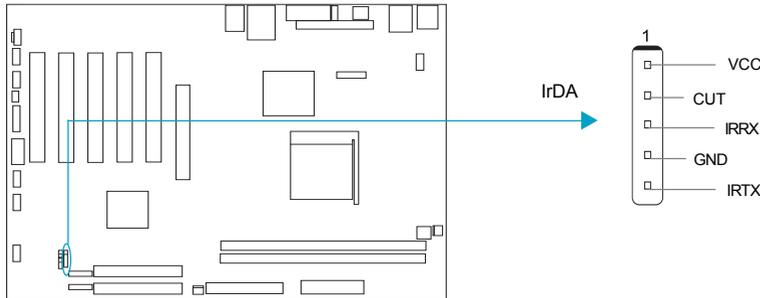
Wake-Up On LAN (WOL)(available on -L mainboard)

Through the Wake-Up On LAN function, a wake event occurring from the network can wake up the system. If this function is to be used, please be sure an ATX 12V power supply and a LAN adapter which supports this function are used. Then connect this header to the relevant connector on the LAN adapter, set "modem ring resume" as Enabled in the "POWER MANAGEMENT SETUP" section of the CMOS SETUP. Save and exit, then boot the operating system once to make sure this function takes effect.

WOL

1 +5V standby
   GND
   Signal for waking up
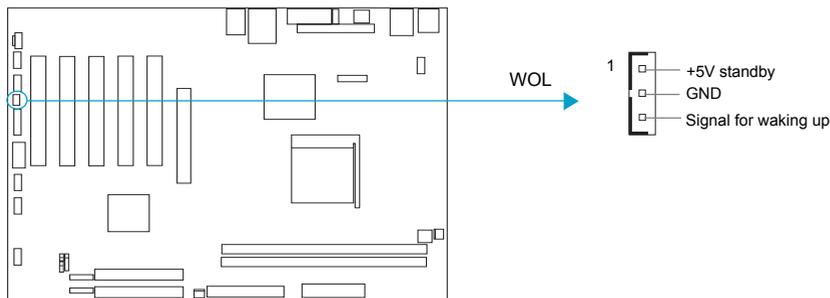
IEEE 1394_1 port(optional)

Besides one 1394 port on the back panel, the mainboard also have one 10-pin header on board to provide IEEE 1394 port.

A0+   1   A0-
GND   GND
B0+   B0-
VCC   VCC
CUT   GND

1394_1

11
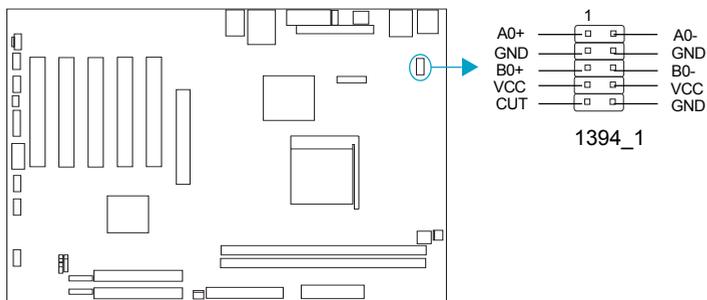
Audio Connectors (CD_IN)

CD_IN is Sony standard CD audio connector, it can be connected to a CD-ROM drive through a CD audio cable.

CD_IN   CD Left Channel
GND
CD Right Channel
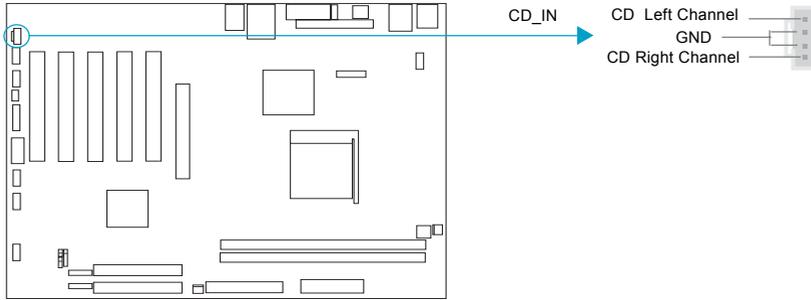
Fan Connectors (CPUFAN, CHSFAN)

The fan speed of these three fans can be detected and viewed in "PC Health" section of the CMOS SETUP.

CHSFAN   GND +12V SENSE

CPUFAN   SENSE +12V GND
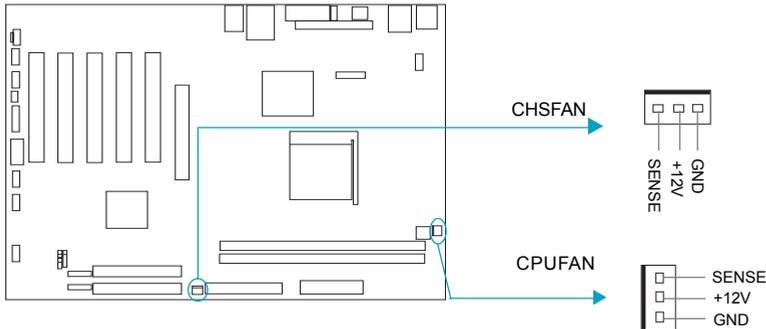
Audio Interface(F_Audio)(Optional)

The audio interface provides two kinds of audio output choices: the FrontAudio and the RearAudio. Their priority level is as sequence. When the FrontAudio is available, the RearAudio(in-case speakers) will be cut off. An onboard amplifier is provided for the earphone. When the FrontAudio is absent, Pin9 and Pin10, Pin5 and Pin6 must be short connected, otherwise the Rear output has no signal.

F_AUDIO

(F Audio Interface)

Pin No.	Symbol	Pin No.	Symbol
1	MIC_IN	2	A_GND
3	MIC_BIAS	4	A_VCC
5	FR_OUT	6	FR_IN
7	NC	8	(Cut away)
9	FL_OUT	10	FL_IN
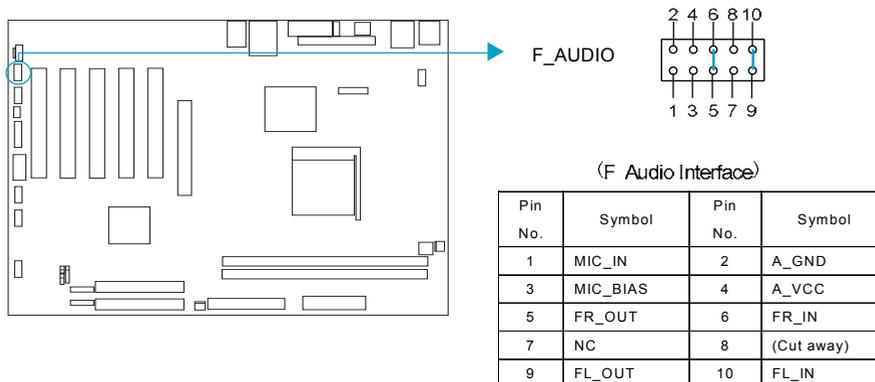
Onboard SATA(SATA1, SATA2)

The mainboard provides two Serial ATA connectors,SATA is a storage interface that is compliant with SATA 1.0 Specification.With speed of up to 150Mbps.you can connect Serial ATA cable to Serial ATA hard disk.

SATA1/SATA2

GND RX+ RX- GND TX- TX+ GND

13
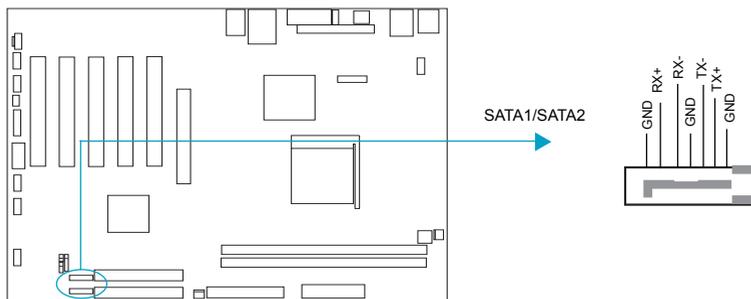
UART COM2

Besides COM1 on the back panel, the mainboard also supply a COM2 connector which connects with serial mouse, MODEM and other serial device.

COM2
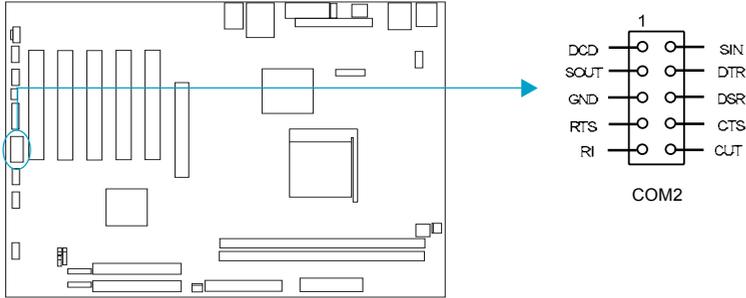
GAME Port

The mainboard provides a 16-pin connector for connecting an external game/MIDI port.

GAME_PORT
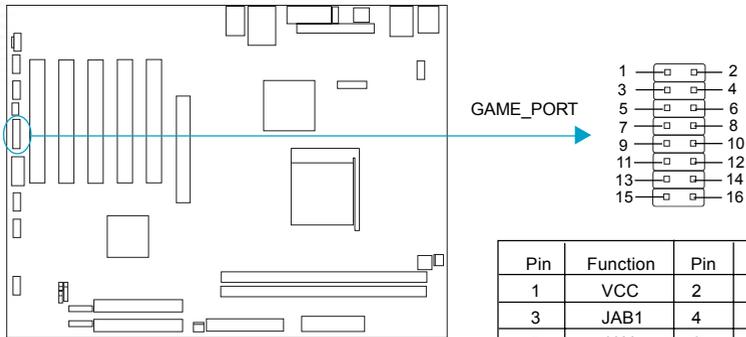
Pin	Function	Pin	Function
1	VCC	2	VCC
3	JAB1	4	JBB1
5	JAX	6	JBX
7	GND	8	MIDIOUT
9	GND	10	JBY
11	JAY	12	JBB2
13	JAB2	14	MIDIIN
15	VCC	16	CUT

6CH-BRACKET Connector(optional)

The SPDIF input allow your digital audio input from digital audio devices.(optional) The 6CH_BRACKET output is capable of providing digital audio data or compressed AC3 data to

an external Dolby digital decoder.

```
                                            1
                    SURR_L_OUT  ──┤ □  □ ├──  SURR_R_OUT
                     CENT_OUT  ──┤ □  □ ├──  LFE_OUT
                       A_GND  ──┤ □  □ ├──  CUT
                   SPDIF_OUT  ──┤ □  □ ├──  A_VCC
                          NC  ──┤ □  □ ├──  A_GND

                           6CH  BRACKET
```
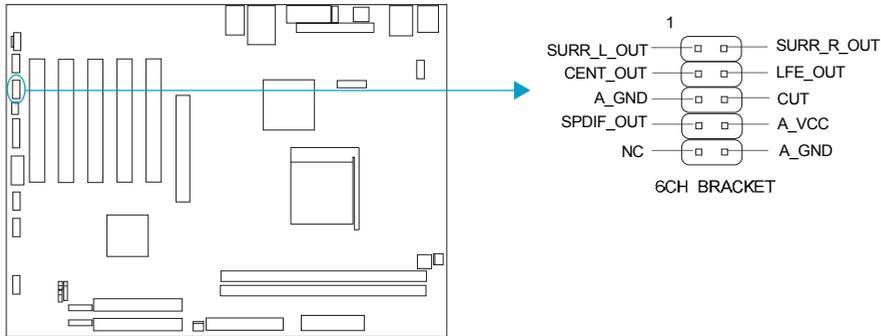
Onboard VGA Connector(JVIDEO)(only for K8VM800 mainboard)

It allows you to connect the secone VGA device through VGA cable.

```
           15 13 11 9  7  5   3  1
           │  │  │  │  │  │   │  │
    JVIDEO  □  □  □  □  □  □   □  □
            □  □  □  □  □  □   □  □
           │  │  │  │  │  │   │  │
           16 14 12 10 8  6   4  2
```

Pin	Function	Pin	Function
1	RED	2	GREEN
3	BLUE	4	NC
5	RGB_GND	6	RGB_GND
7	RGB_GND	8	RGB_GND
9	VCC	10	RGB_GND
11	NC	12	SPD2
13	HSYNC	14	VSYNC
15	SPLK2	16	CUT
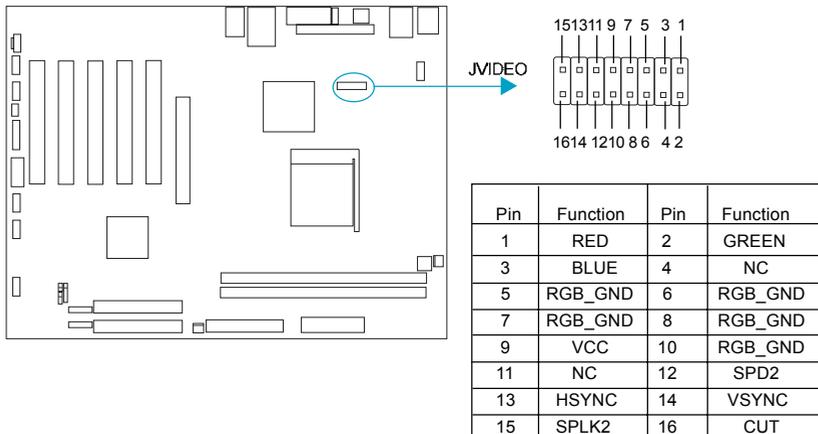
Jumper Settings

Jumpers are located on the mainboard, the clear CMOS jumper JCC, enable keyboard pass-word power-on function jumper JKB etc. Pin 1 for all jumpers are located on the side with a thick white line (Pin1→ [▫ ▫ ▫]), referring to the mainboard's silkscreen. Jumpers with three pins will be shown as [■ ■ ▫]　to represent pin1 & pin2 ("1-2") closed and [▫ ■ ■] to represent pin2 & pin3 ("2-3") closed.

Jumper	Symbol	Description	Represent
[▫ ▫ ▫]	[■ ■ ▫]	1-2	set pin1 and pin2 closed
	[▫ ■ ■]	2-3	set pin2 and pin3 closed
[▫ ▫]	[■ ■]	close	set the pins closed
	[▫ ▫]	open	set the pins opened

Clear CMOS (JCC)

If you want to clear CMOS, unplug the AC power supply first, close JCC (pin3 & pin2) once, set JCC back to the normal status with pin2 & pin1 connected, then power on the system.

Normal status
1
2
3

Clear CMOS

(Unplug the AC power supply)
1
2
3
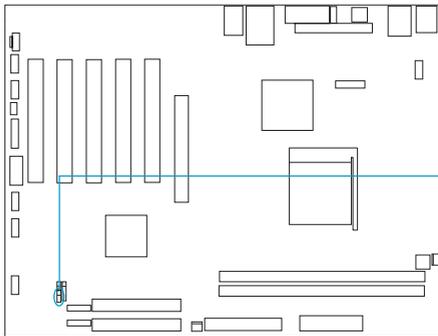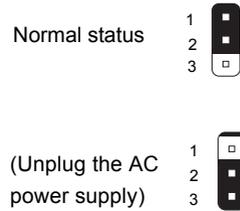
BIOS-Protection Jumper (JAV)

The BIOS of the mainboard is inside the FWH. If the jumper JAV is set as closed, the system BIOS is protected from being attacked by serious virus such as CIH virus, you will be unable to flash the BIOS to the mainboard in this status.

JAV

Flash Write
Disabled

Flash Write
Enabled
(default)
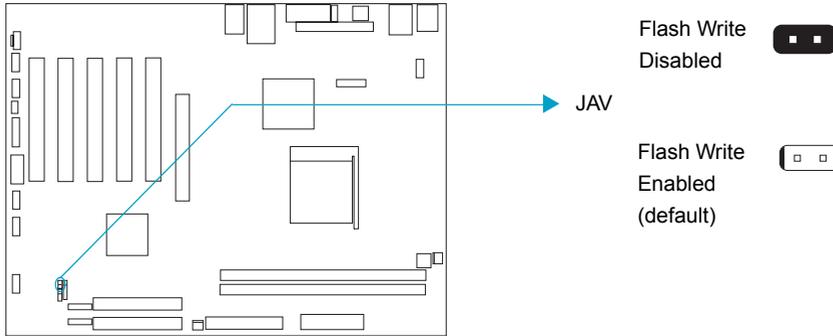
The DMI (Desktop Management Interface) system information such as the CPU type/speed, memory size, and expansion cards will be detected by the onboard BIOS and stored in the flash ROM. Whenever the system hardware configuration is changed, DMI information will be updated automatically. However, setting jumper JAV as closed makes flashing BIOS and updating DMI information impossible. Therefore, set JAV as open when changing the system hardware configuration, or the error message "Unknown Flash Type" will be displayed on the screen, and DMI information may not be updated.

17

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BIOS Description

The mainboard uses AWARD BIOS Setup program that provides a Setup utility for users to modify the basic system configuration. The information is stored in CMOS RAM so it retains the Setup information when the power is turned off. This chapter provides you with the overview of the BIOS Setup.

19

AWDFLASH.EXE

This is a flash memory write/read utility used for the purpose of upgrading your BIOS when necessary. Before doing so, please note:

- **We strongly recommend you only upgrade BIOS when encounter problems.**

- **Before upgrading your BIOS, review the description below to avoid making mistakes, destroying the BIOS and resulting in a non-working system.**

When you encounter problems, for example, you find your system does not support the latest CPU released after our current mainboard, you may therefore upgrade the BIOS, please don't forget to set JAV as open and disable the "Flash Write Protect" item in AWARD BIOS CMOS Setup first .

Follow the steps exactly for a successful upgrade.
1. Create a bootable system floppy diskette by typing Format A:/s from the DOS prompt under DOS6.xx or Windows 9x environment.
2. Copy AWDFLASH.EXE(version>=8.24q) from the directory \Utility located on QDI Driver CD to your new bootable diskette.
3. Download the updated BIOS file from the Website (http://www.qdigrp.com). Please be sure to download the suitable BIOS file for your mainboard.
4. Decompress the file download, copy the BIOS file (xx.bin) to the bootable diskette, and note the checksum of this BIOS which is located in readme file.
5. Reboot the system from the bootable diskette created.
6. Then run the AWDFLASH utility at the A**:** prompt as shown below:

   A:\AWDFLASH xxxx.bin

   Follow the instruction through the process. Don't turn off power or reset the system until the BIOS upgrade has been completed.

If you require more detailed information concerning AWDFLASH Utility, for example, the different usage of parameters, please type A:\>AWDFLASH /?

Note: Because the BIOS Software will be updated constantly, the following BIOS screens and descriptions are for reference purposes only and may not reflect your BIOS screens exactly.

AWARD BIOS Description

Entering Setup

Power on the computer, when the following message briefly appears at the bottom of the screen during the POST (Power On Self Test), press <Del> key to enter the AWARD BIOS CMOS Setup Utility.

Press <Del> to enter SETUP

When you have entered, the Main Menu (Figure 1) appears on the screen. Use the arrow keys to select among the items and press the <Enter> key to accept or enter the sub-menu.

Figure-1 Main Menu

Load Optimized Defaults
The Optimized Defaults are common and efficient. It is recommended users load the optimized defaults first, then modify the needed configuration settings.

Standard CMOS Features Setup
The basic CMOS settings included in "Standard CMOS Features" are Date, Time, Hard Disk Drive Types, Floppy Disk Drive Types, and VGA etc. Use the arrow keys to highlight the item, then use the <PgUp> or <PgDn> keys to select the value desired in each item.

Figure-2   Standard CMOS Setup Menu

For the items marked, press enter, a window will pop up as shown below. You can view detailed information or make modifications.
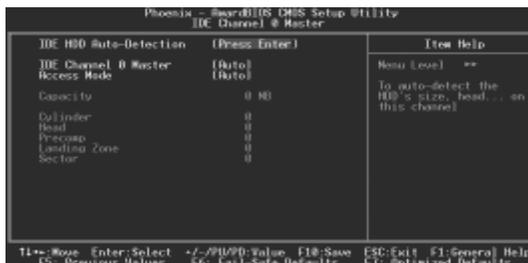
Figure-2-1   IDE Primary Master Setup Menu

Hard Disk

Primary Master/Primary Slave/Secondary Master/Secondary Slave

These categories identify the HDD types of 2 IDE channels installed in the computer system. There are three choices provided for the Enhanced IDE BIOS: None, Auto, and Manual. 'None' means no HDD is installed or set; 'Auto' means the system can auto-detect the hard disk when booting up; by choosing 'Manual', the related information should be entered regarding the following items. Enter the information directly from the keyboard and press < Enter>:

CYLS	number of cylinders	HEAD	number of heads
PRECOMP	write pre-compensation	LANDZ	landing zone
SECTOR	number of sectors	MODE	HDD access mode

The Award BIOS supports 3 HDD modes: CHS, LBA and LARGE.

CHS

Generic access mode in which neither the BIOS nor the IDE controller will make any transfor-mation during accessing. The maximum number of cylinders, heads and sectors for CHS mode are 1024,16 and 63.

If the user sets his HDD to CHS mode, the maximum accessible HDD size will be 528 mega-bytes even though its physical size may be greater than that.

LBA (Logical Block Addressing) mode

A new HDD accessing method to overcome the 528 Megabyte bottleneck. The number of cylinders, heads and sectors shown in setup may not be the number physically contained in the HDD.

During HDD accessing, the IDE controller will transform the logical address described by sector, head and cylinder number into its own physical address inside the HDD.

LARGE mode

Some IDE HDDs contain more than 1024 cylinder without LBA support (in some cases, users do not want LBA). The Award BIOS provides another alternative to support these kinds of HDD.

BIOS tricks DOS (or other OS) into divising the number of cylinders is less than 1024 by dividing it by 2. At the same time, the number of heads is multiplied by 2. A reverse transformation process will be made inside INT13h in order to access the right HDD address.

If using Auto detect, the BIOS will automatically detect the IDE hard disk mode and set it as one of the three modes.

Remark

To support LBA or LARGE mode of HDDs, there must be some softwares involved which are located in Award HDD Service Routine(INT13h).It may fail to access a HDD with LBA (LARGE) mode selected if you are running under an Operating System which replaces the whole INT 13h.

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Video

Set this field to the type of video display card installed in your system.

EGA/ VGA	Enhanced Graphics Adapter / Video Graphic Array. For EGA, VGA, SEGA, SVGA or PGA monitor adapters.
CGA 40	Color Graphic Adapter, powering up in 40 column mode.
CGA 80	Color Graphic Adapter, powering up in 80 column mode.
MONO	Monochrome adapter, including high resolution monochrome adapters.

Halt On

This category determines whether or not the computer will stop if an error is detected during powering up.

No errors	The system boot will not stop for any errors detected.
All errors	Whenever the BIOS detects a non-fatal error, the system will stop and you will be prompted.
All, But Keyboard	The system boot will not stop for a keyboard error; but it will stop for all other errors.
All, But Diskette	The system boot will not stop for a disk error; but it will stop for all other errors.
All, But Disk/Key	The system boot will not stop for a keyboard or disk error, but it will stop for all other errors.

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Memory

This is a Display-Only Category, determined by POST (Power On Self Test) of the BIOS.

Base Memory	The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.
Extended Memory	The BIOS determines how much extended memory is presented during the POST.
Total Memory	Total memory of the system.

QDI Innovation features
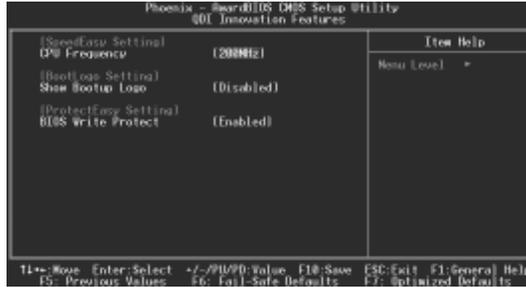
Figure-3   QDI Innovation features Menu

The following indicates the options for each item and describes their meaning.

Item	Option	Description
[SpeedEasy setting]		
CPU Frequency	*Min=166* *Max=233*	Select the multiplication of processor core frequency. If a Ratio locked processor is installed, this item will be hidden. This item is only for users understanding all the CPU parameters.
[BootLogo setting]		
Show Bootup Logo	*Enabled*	The full screen EPA logo can be shown when system boots show up.
	Disabled	Close this function.
[ProtectEasy setting]		
BIOS Write Protect	*Enabled* *Disabled*	This option is for protecting the system BIOS, when enabled, writing to BIOS area is to be discarded.

Advanced BIOS Features Setup
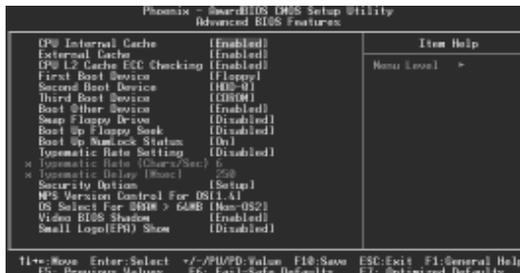
Figure-4   Advanced BIOS Features Menu

The following indicates the options for each item and describes their meaning.

Item	Option	Description
CPU Internal Cache	*Enabled*	Enables CPU internal cache.
	Disabled	Disables CPU internal cache.
External Cache	*Enabled*	Enables CPU external cache.
	Disabled	Disables CPU external cache.
CPU L2 Cache ECC Checking	*Enabled*	Enables CPU cache ECC checking.
	Disabled	Disables CPU cache ECC checking.
First (Second, Third) Boot Device	*Disabled* *Floppy*	Select Your Boot Device Priority. It could be Disabled, Floppy, LS120, HDD-0, HDD-1, HDD-2, HDD-3, ZIP100,USB-FDD, SCSI, CDROM, LAN, USB-CDROM, USB-HDD
Boot Other Device	*Enabled*	Enables boot other device.
	Disabled	Disables boot other device.
Swap Floppy Drive	*Enabled* *Disabled*	If the system has two floppy drives, choose enable to assign physical drive B to logical drive A and vice-versa.

● Boot Up Floppy Seek	*Enabled* *Disabled*	Tests floppy drives to determine whether they have 40 or 80 tracks.
● Boot Up NumLock Status	*On* *Off*	Keypad is used as number keys. Keypad is used as arrow keys.
● Typematic Rate Setting	*Enabled* *Disabled*	Keystrokes repeat at a rate determined by the keyboard controller - when enabled, the typematic ate and typematic delay can be selected.
● Typematic Rate (chars/sec)	*6-30*	The rate at which character repeats when you hold down a key.
● Typematic Delay (Msec)	*250-1000*	The delay before keystrokes begin to repeat.
● Security Option	*Setup* *System*	Select whether the password is required every time the system boot or only when you enter setup.
● MPS Version Control for OS	*1.1/1.4*	Set the MPS Version Control for OS.
● OS Select For DRAM>64MB	*Non-OS2* *OS2*	Select OS2 only if you are running OS/2 operating system with more than 64MB of RAM.
● Video BIOS Shadow	*Enabled* *Disabled*	Video BIOS will be copied to RAM. Video Shadow will increase the video speed. Invalidates this feature.
● Small Logo(EPA) show	*Enabled* *Disabled*	The EPA logo will be shown automatically when system boots up, otherwise, no logo appears on the screen.

Advanced Chipset Features Setup
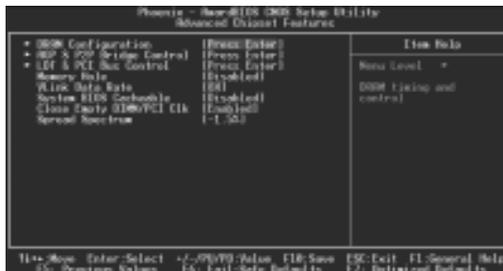
Figure-5   Advanced Chipset Features Menu

The following indicates the options for each item and describes their meaning.

Item	Option	Description
DRAM Configuration	*Press Enter*	Press enter to set the items about DDR RAM.
AGP & P2P Bridge Control	*Press Enter*	Press enter to set the items about AGP.
LDT & PCI Bus Control	*Press Enter*	Press enter to set the items about LDT&PCI.
Memory hole	*15M-16M*	Memory hole at 15-16M is reserved for expanded ISA card.
	Disabled	Do not set this memory hole.
Vlink Date rate	*4X/8X*	Set the vlink date rate.
System BIOS Cacheable	*Enabled*	Besides conventional memory, system BIOS area is also cacheabl
	Disabled	Video BIOS area is not cacheable.
Close Empty DIMM/PCI Clk	*Enabled*	Enabled close empty DIMM or PCI clock.
	Disabled	Disabled close empty DIMM or PCI clock.
Spread Spectrum	*-1.5%~+/-0.75%*	Set Clock Spread Spectrum to reduce EMI.
	Disabled	Disable Clock Spread Spectrum.

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DRAM Configuration

Item	Option	Description
DDR Timing setting by	*Auto* *Manual*	DDR Timing is defined automatically. Sets DDR Timing manually.
Max Memclock(MHz)	*100/133/166/200*	Set the memory clock.
CAS# Latency	*CL=2.0/2.5/3.0*	Define the latency between the SDRAM read command and the time the data actually becomes available.
RAS# to CAS# Delay (tRCD)	*2/3/4/5/6/7 Bus Clocks*	Define the latency between the SDRAM active command and the Read / Write command.
Min RAS# Active Time(tRAS)	*6/13/14/15 Bus Clocks*	Define the number of SDRAM clocks used for SDRAM parameters.
Row Precharge Time (tRP)	*2/3/4/5/6 Bus Clocks*	Define the idle clocks after issuing a precharge command to the SDRAM.

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AGP & P2P Bridge Control

Item	Option	Description
AGP Aperture Size	*32/64/128/256M*	Set the effective size of the Graphics Aperture to be used in the particular GART Configuration.
AGP mode	*1x/2x/4x*	Set the AGP mode.
AGP Driving Control	*Auto* *Manual*	The default setting is recommended.
AGP Driving Value	*00-FF*	Sets AGP driving value.
AGP Fast Write	*Enabled* *Disabled*	Enables AGP Fast Write. Disables AGP Fast Write.

Item	Option	Description
● AGP Master 1 WS Write	*Enabled* *Disabled*	Enables AGP Master 1 WS Write. Disables AGP Master 1 WS Write.
● AGP Master 1 WS Read	*Enabled* *Disabled*	Enables AGP Master 1 WS Read. Disables AGP Master 1 WS Read.

LDT & PCI Bus Control

Item	Option	Description
● Upstream LDT Bus Width	*8bit/16bit*	Set upstream LDT bus width.
● Downstream LDT Bus Width	*8bit/16bit*	Set downstream LDT bus width.
● LDT Bus Frequency	*Auto* *200MHz* *400MHz* *600MHz* *800MHz*	Set LDT bus frequency.
● PCI1 Master 0 WS Write	*Enabled* *Disabled*	Enables PCI1 Master 0 WS Write. Disables PCI1 Master 0 WS Write.
● PCI2 Master 0 WS Write	*Enabled* *Disabled*	Enables PCI2 Master 0 WS Write. Disables PCI2 Master 0 WS Write.
● PCI1 Post Write	*Enabled* *Disabled*	Enables PCI1 Post Write. Disables PCI1 Post Write.
● PCI2 Post Write	*Enabled* *Disabled*	Enables PCI2 Post Write. Disables PCI2 Post Write.
● PCI Delay Transaction	*Enabled* *Disabled*	Enables PCI Delay Transaction. Disables PCI Delay Transaction.

Power Management Setup

Figure-6   Power Management Setup Menu

The following indicates the options for each item and describes their meaning.

Item	Option	Description
ACPI function	*Enabled*	Enable ACPI function.
	Disabled	Disable this function.
ACPI Suspend Type	*S3(POS)* *S1(STR)* *S1&S3*	Select the ACPI suspend type.
Power Management Optional	*User Define*	Users can configure their own Power Management Timer.
	Min Saving	Pre - defined timer values are used. All timers are in their MAX values.
	Max Saving	Pre - defined timer values are used. All timers are in their MIN values.
HDD Power Down	*Disabled*	HDD's motor will not be off by timer.
	1 - 15 Min	Define the continuous HDD idle time before the HDD enters power saving mode (motor off).
Suspend Mode	*Disabled*	The system never enter Suspend mode by timer.
	1Min *~1H*our	Define the continuous idle time before the system enters Suspend mode. If any items defined in "PM Events" are on and activated, the system will be woken up.

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●	Video Off Option	*Suspend->Off*	Screen blanks after the system enters either standby mode or suspend mode.
		Always On	Screen is always on.
●	Video Off Method	*Blank Screen*	The system BIOS will only blank off the screen when disabling video.
		V / H SYNC + Blank	In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA card to monitor.
		DPMS Support	This function is enabled only for VGA cards supporting DPMS. **Note: When the green monitor does not detect the V/H-SYNC signals, the electron gun will be turned off.**
●	MODEM Use IRQ	*3,4,5,7,9, 10,11*	Special Wake-up event for Modem.
		NA	This function is not applied.
●	Soft-Off by PWR-BTTN	*Instant-Off*	The system will immediately power off once the power button is pressed.
		Delay 4 sec	The system will power off when power button is pressed for 4 seconds.
●	Run VGABIOS if S3 Resume	*Auto*	The VGA device could be initialized automatically when system was waken up from S3 status.
		Yes	Enable VGA device be initialized when system was waken up from S3 status.
		No	Disable VGA device be initialized when system was waken up from S3 status.
●	IRQ/Event Activity Detect	*Press Enter*	Enters to set the following items.
●	PS2KB Wakeup Select	*Password*	Use PS/2 Keyboard password wake up.
		Hot Key	Use PS/2 Keyboard hot key wake up.

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Item	Option	Description
⚫ PS2KB Wakeup From S3/S4/S5	*Ctrl + F1~F12*	Use PS/2 Keyboard Ctrl + F1~F12 wake up.
	Any Key	Use PS/2 Keyboard any key wake up.
	Power	
	Wake	
	Disable	Do not Use PS/2 Keyboard wake up.
⚫ PS2MS Wakeup From S3/S4/S5	*Enabled*	Use PS/2 mouse wake up.
	Disabled	Disables PS/2 mouse wake up.
⚫ VGA	*On*	VGA active reloads global timer.
	Off	VGA active has no influence to global timer.
⚫ LPT&COM	*LPT, COM*	Sets the options of these items to reload global
	LPT/COM	timer.
	None	LPT&COM active has no influence to global timer.
⚫ HDD&FDD	*On*	HDD&FDD active reloads global timer.
	Off	HDD&FDD active has no influence to global timer.
⚫ PCI Master	*On*	PCI Master active reloads global timer.
	Off	PCI Master active has no influence to global timer.
⚫ Power On by PCI Card	*Enabled*	Enables to wake up by PCI card.
	Disabled	Disables to wake up by PCI card.
⚫ Modem Ring Resume	*Enabled*	Enables modem ring to resume.
	Disabled	Invalidate this function.
⚫ RTC Alarm Resume	*Enabled*	RTC alarm can be used to generate a wake event to power up the system which is in power-off status. You can set any date or any time to power up the system.
	Disabled	Invalidate this function.
⚫ Date(of Month)		Sets the date of RTC.
⚫ Resume Time		Sets the resume time of RTC.

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Item	Option	Description
● IRQs Activity Monitoring	*Press Enter*	Reloads global timer.
● Primary INTR	*On* *Off*	Allows wake-up from IRQ. Does not allow wake-up from IRQ.
● IRQ3~IRQ15	*Enabled* *Disabled*	Enables IRQ3~IRQ15 to wake up. Disables IRQ3~IRQ15 to wake up.

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PNP/PCI Configurations Setup

Figure-7   PNP/PCI Configurations Setup Menu

The following indicates the options for each item and describes their meaning.

| Item	Option	Description
PNP OS Installed	*Yes*	Device resources assigned by PnP OS.
	No	Device resources assigned by BIOS.
Reset Configuration Data	*Enabled*	The system BIOS will reset configuration data once then automatically set this item as disabled.
	Disabled	Disables this function.
Resources Controlled By	*Manual*	Assigns the system resources (IRQ and DMA) manually .
	Auto(ESCD)	Assigns system resources (IRQ and DMA) automatically by BIOS.
PCI/VGA Palette Snoop	*Enabled*	Enables PCI/VGA Palette Snoop.
	Disabled	Disables PCI/VGA Palette Snoop.
Assign IRQ For VGA	*Enabled*	Assigns the needed IRQ for the VGA card.
	Disabled	Does not assign an IRQ for the VGA card, in order to release the IRQ.
Assign IRQ For USB	*Enabled*	Assigns the needed IRQ for the USB card.
	Disabled	Does not assign an IRQ for the USB card, in order to release the IRQ.

Integrated Peripherals
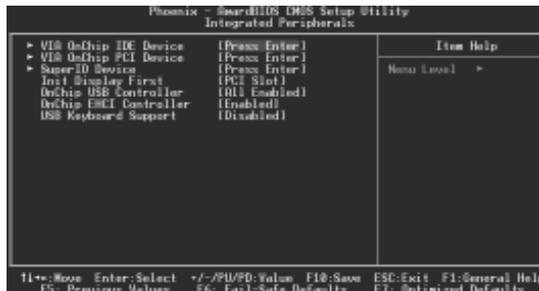
Figure-8 Integrated Peripherals Menu

The following indicates the options for each item and describes their meaning.

Item	Option	Description
VIA OnChip IDE Device	*Press Enter*	Enters to set the following items.
OnChip SATA	*Enabled*	Enables OnChip SATA.
	Disabled	Disables OnChip SATA.
SATA Mode	*RAID*	Set SATA mode.
	IDE	
IDE DMA transfer access	*Enabled*	Enables IDE DMA transfer access.
	Disabled	Disables IDE DMA transfer access.
OnChip IDE Channel 0/1	*Enabled*	Enables OnChip IDE First/Second Channel.
	Disabled	Disables OnChip IDE First/Second Channel.
IDE Prefetch Mode	*Enabled*	Enables IDE Prefetch Mode.
	Disabled	Disables IDE Prefetch Mode.
Primary/ Secondary Master/Slave PIO	*Mode 0 ~ 4*	Defines the IDE primary/secondary master/slave PIO mode.
	Auto	The IDE PIO mode is defined by auto-detection.

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●	Primary/ Secondary Master/Slave UDMA	*Auto*	Ultra DMA mode will be enabled if an ultra DMA device is detected.
		Disabled	Disables this function.
●	IDE HDD Block Mode	*Enabled*	Allows IDE HDD to read/write several sectors once.
		Disabled	IDE HDD only reads/writes a sector once.
●	VIA OnChip PCI Device	*Press Enter*	Enters to set the following items.
●	VIA-3058 AC97 Audio	*Auto*	Enables the AC97 Audio.When CT5880 onboard, this item will hide.
		Disabled	Disables the AC97 Audio.
●	VIA-3043 Onchip Lan	*Enabled*	Enables the onchip Lan.
		Disabled	Disables the onchip Lan.
●	USB device function	*Enabled*	Supports USB device function.
		Disabled	Does not support USB device function.
●	Super IO Device	*Press Enter*	Enters to set the following items.
●	Onboard FDC Controller	*Enabled*	Onboard floppy drive controller is enabled.
		Disabled	Onboard floppy drive controller is disabled.
●	Onboard Serial Port 1/2	*3F8/IRQ4* *2F8/IRQ3* *3E8/IRQ4* *2E8/IRQ3*	Defines the onboard serial port address and required interrupt number.
		Auto	Onboard serial port address and IRQ are auto-matically assigned.
		Disabled	Onboard serial port is disabled.
●	UART Mode Select	*Normal*	Defines Serial Port as standard serial port.
		IrDA	Supports IRDA mode.
		ASK IR	Supports SHARP ASK-IR protocol with maximum baud
		SCR	rate up to 57600bps.

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UR2 Duplex Mode	*Half /Full*	Default is recommended.
Onboard Parallel Port	*378/IRQ7* *278/IRQ5* *3BC/IRQ7*	Defines onboard parallel port address and IRQ channel.
	Disabled	Onboard parallel port is disabled.
Parallel Port Mode	*SPP* *EPP,ECP* *ECP+EPP*	Defines the parallel port mode as Standard Parallel Port (SPP), Enhanced Parallel Port (EPP), or Extended Capabilities Port (ECP).
ECP Mode Use DMA	*1, 3*	Sets DMA for ECP mode use.
Game Port Address	*201,209*	Sets Game Port address. When CT5880 onboard, this item will hide.
	Disabled	Disables Game Port.
MIDI Port Address	*300/330*	Sets Midi Port address. When CT5880 onboard, this item will hide.
	Disabled	Disables Midi port.
MIDI Port IRQ	*5,10*	Sets Midi Port IRQ. When CT5880 onboard, this item will hide.
Init Display First	*PCI Slot* *AGP*	Initialize the PCI VGA first. Initialize the AGP first.
OnChip USB Controller	*Enabled* *Disabled*	Enables all Onchip USB controller. Disables all Onchip USB controller.
OnChip EHCI Controller	*Enabled* *Disabled*	Enables all Onchip EHCI controller. Disables all Onchip EHCI controller.
USB Keyboard Support	*Enabled* *Disabled*	Supports USB keyboard under legacy OS. Does not support USB keyboard under legacy OS.

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PC Health Status

Figure-9 PC Health Status Menu

The following indicates the options for each item and describes their meaning.

Item	Option	Description
Shutdown Temperature	*$60^0C/140^0F$* *$65^0C/149^0F$* *$70^0C/158^0F$*	The system will shut down automatically under the ACPI OS when the CPU temperature reaches the previous setting, $60^0C/140^0F$, $65^0C/149^0F$, $70^0C/158^0F$.
	Disabled	The system remains on regardless of how much the CPU temperature is.
Vcore VCCVID +3.3 V +5 V +12 V +3.3V Standby +5V Standby		Display current voltage value including all significant voltages of the mainboard.
Voltage Battery		Display the voltage of battery.
CPU/System Temperature		The temperature of CPU/System.
CHSFAN Speed CPUFAN Speed		RPM (Revolution Per Minute) Speed of fan. Fan speed value is based on an assumption that tachometer signal is two pulses per revolution. In other cases, you should regard it relatively.

Password Setting

When this function is selected, the following message appears at the center of the screen to assist you in creating a password.

ENTER PASSWORD

Type the password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection.

To disable password, just press <Enter> when you are prompted to enter password. A message will confirm the password being disabled. Once the password is disabled, the system will boot and you can enter BIOS Setup freely.

PASSWORD DISABLED

If you have selected "**System**" in "Security Option" of "BIOS Features Setup" menu, you will be prompted for the password every time the system reboots or any time you try to enter BIOS Setup.

If you have selected "**Setup**" at "Security Option" from "BIOS Features Setup" menu, you will be prompted for the password only when you enter BIOS Setup.

Supervisor Password has higher priority than User Password. You can use Supervisor Password when booting the system or entering BIOS Setup to modify all settings. Also you can use User Password when booting the system or entering BIOS Setup but can not modify any setting if Supervisor Password is enabled.

Boot with BIOS defaults

If you have made all the changes to CMOS values and the system can not boot with the CMOS values selected in setup, clear CMOS after power-down, then power on again. System will boot with BIOS default settings.

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Appendix

QDI Utility CD

A QDI Utility CD is supplied with this mainboard, the contents contained in it are showed as below:

1. Driver Install

Using this choice, you can install all the drivers for your mainboard . You should install the drivers in order, and you need to restart your computer until all the drivers are installed.

A. Chipset software
B. Serial ATA(optional)
C. USB2.0 Driver(optional)
D. VGA(optional)
E. Network Driver(optional)
F. Audio Driver(optional)
G. DirecrX

2. Accessory

A. Norton AntiVirus 2003
B. QFlashV1.0(optional)

3. Browse CD

You could read all the contents contained in this CD, including Utility and Documents. The files included in Utility are:

A. Awd824Q.exe
B. Cblogo.exe
C. Lf.exe

The files included in Documents are:

A. Adobe Acrobat Reader V5.0

Norton AntiVirus

When you install Norton AntiVirus and accept options, your computer is safe. Norton AntiVirus automatically checks boot records for viruses at system startup, checks programs for viruses at the time you use them, scans all local hard drives for viruses once per week, and monitors your computer for any activity that might indicate the work of a virus in action. It also scans files you download from the internet and checks floppy disks for boot viruses when you use them.

The list below shows the most important tasks Norton AntiVirus helps you perform:Scan for viruses on your computer;Remove viruses from your computer;Update your virus protection with LiveUpdate;Quarantine an infected file. you can go to the Symantec Web site to view an online tutorial: http://www.symantec.com/techsupp/tutorial

Using 6-Channel Audio

The mainboard is equipped with Realtek VT1616 chip, which provides support for 6-channel audio output, including 2 Front, 2 Rear, 1 Center and 1 Subwoofer channel. The section will tell you how to install and use 6-channel audio function on the board.

Installing the Audio Driver

You need to install the driver for Realtek VT1616 chip to function properly before you can get access to 6-channel audio operations. Follow the procedures described below to install the drivers for different operating systems.

1. Insert the companion CD into the CD-ROM drive. The setup screen will automatically appear.
2. Select the Sound Driver.

Attaching speakers

To perform multichannel audio operation, connect multiple speakers to the system.

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Line Out (Center and Subwoofer channels)

Line Out (Rear channels)

Line Out (Front channels)
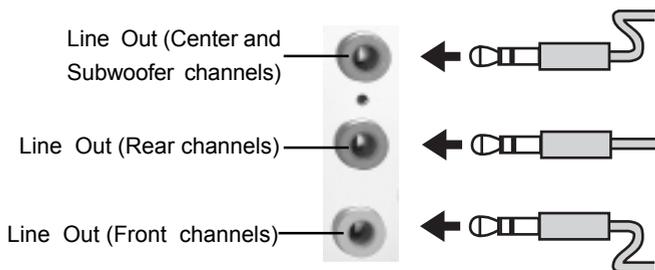
Selecting 6-Channel Setting

1. Click the Volume control icon ![icon] from the window tray at the bottom of the screen.

2. Click the "Options" and then "Advanced controls".
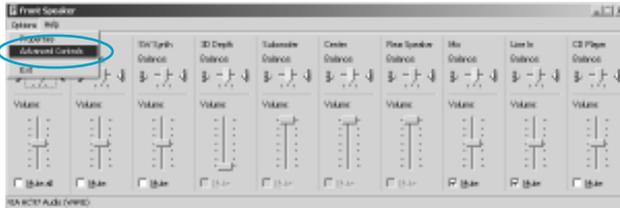
3. Then click the "Advanced" of front speaker.

4. The following window appears, select the "Smart 5.1 Enable", then click "Close".

5. Then click the "Advanced" of rear speaker.
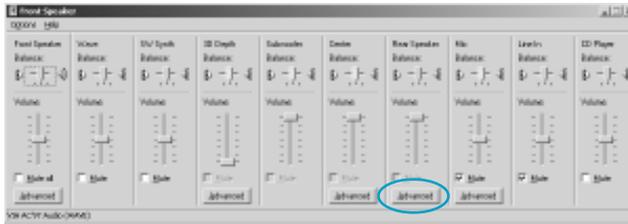
6. The following window appears, select the "Magic 5.1 Enable", then click "Close".

7. Open the Control panel of windows 2000, select the Sound, Speech, and Audio Devices, and then Sounds and Audio Devices, the following window appears. Click the "Audio" tab.

8. Click the "Advanced".
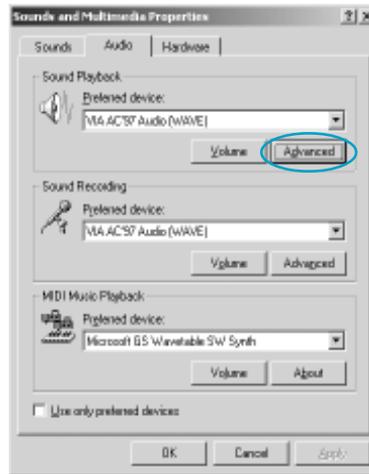
9. The following window appears, and select the "5.1 surround sound speakers".
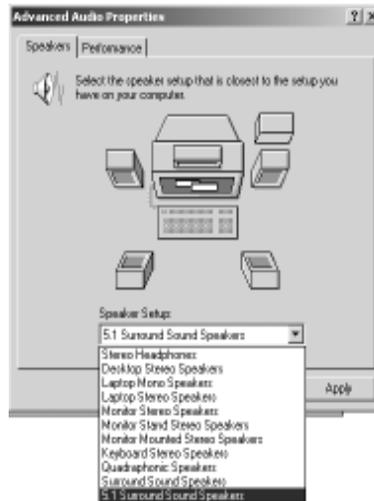
CPU Installation Procedures

1. Pull the lever sideways away from the socket. Then, raise the lever up to a 90-degree angle.
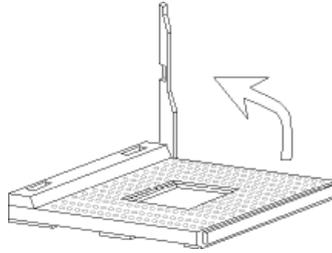
2. Look for the cut edge. The cut edge should point towards the lever pivot. The CPU will only fit in the correct orientation. If the CPU is correctly installed, the pins should be completely embedded into the socket and can not be seen.

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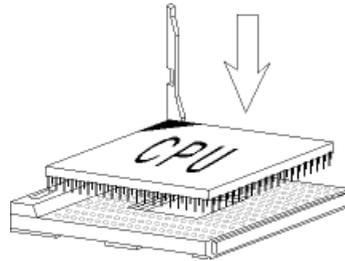
3. Hold the CPU down firmly, and then close the lever to complete installation.

Warning: *Overheating will seriously damage the CPU and system, always make sure the cooling fan can work properly to protect the CPU from overheating.*

Mainboard Layout
K8V800/K8VM800

Note:
The layout includes all options.
It is for your reference only.

Top :PS/2 Mouse
Bttm:PS/2 Keyboard

Top :Line in
Midd: Spk out
Bttm:Mic in

Top :LAN
Bttm:USB3,4

COM1　　SPDIFOUT

LPT

Top :1394
Bttm:USB1,2

CD_IN

F_AUDIO 6CH_BRACKET WOL

GAME_MIDI

COM2

USB5_6

USB7_8

PCI 5

PCI 4

PCI 3

PCI 2

PCI 1

AGP

1394_1

JVIDEO(available on K8VM800 mainboard)

North Bridge

Socket 754

South Bridge

CPUFAN

ATX 12V

DDR1

DDR2

1　　3
2　　4
　　5

JAV JCC IrDA

SATA2

IDE2

SATA1

IDE1

CHSFAN

FDD

ATX PWR

1.HDD_LED　　2.RESET　　3.PWR_LED　　4.POWER SW　　5.RESERVE