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CONTENT

⚡ SOLTEK®

SL-67JV
VIA 82C694X SLOT-1

F E A T U R E

■ PROCESSOR

- Supports Intel Celeron / Pentium II / Pentium III (Coppermine) CPUs 300MHz ~ 1GHz or higher.
- Supports 66/ 75*/ 83*/ 100/ 103*/ 105*/ 124*/ 133/ 140*/ 150*MHz system bus speeds.
- Clock multipliers up to 8x.

■ CHIPSET

- VIA 82C694X + 596B (133MHz FSB, 1.5V 4x AGP).

■ SYSTEM MEMORY

- 3x 3.3V DIMM sockets.
- 8MB to 768MB DRAM size.
- ECC or Parity support.

■ SLOT

- 1x AGP slot supports 1x / 2x / 4x mode bus; 5x PCI Bus Master slots; 1x ISA slot.

■ ONBOARD I/O

- 2x Ultra ATA33/66 Bus Master IDE ports.
- 2x USB ports.
- 1x PS/2 mouse connector and 1x PS/2 keyboard connector.
- 1x 2.88MB Floppy port, 2x High Speed 16550A UART ports and 1x IrDA TX / RX Header.

■ POWER

- ATX power supply connector.
- Power-On by LAN(WOL), RTC Alarm, Modem Ring.

■ BIOS

- 2MB FLASH BIOS.
- Licensed AWARD BIOS, supports SCSI / ZIP / LS-120 / CD-ROM boot and ACPI Power Management.
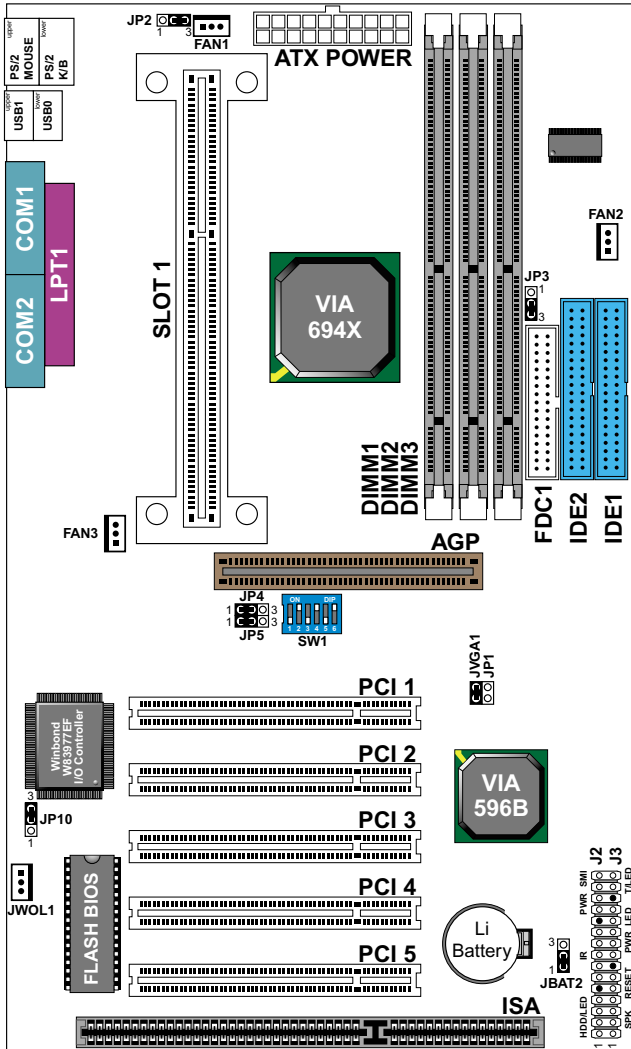
■ FORM FACTOR / PCB

- ATX, 4 layers PCB, 18.5cm x 30.5cm size.

■ OTHER FEATURES

- Supports BIOS Writing Protection.

M O T H E R B O A R D   D I A G R A M

Default setting: Intel Celeron 300A/66MHz; Pentium II/III 450/ 100MHz.

NOTE: For 100MHz/133MHz CPU environment, the SDRAM sepc must comply with PC-100/PC-133 spec.

C P U   C L O C K   S E T T I N G

Manual DIP switches for diverse CPUs	
ON [1 2 3 4 5 6]	**Celeron 233/66 (66MHz * 3.5x)** **Pentium II 350/100 (100MHz * 3.5x)**
ON [1 2 3 4 5 6]	**Celeron 266/66 (66MHz * 4.0x)** **Pentium II 400/100 (100MHz * 4.0x)** **Pentium III 533B/133 (133MHz * 4.0x)** **Pentium III 533EB/133 (133MHz * 4.0x)**
ON [1 2 3 4 5 6]	**Celeron 300/66 (66MHz * 4.5x)** **Pentium II/III 450/100 (100MHz * 4.5x)** **Pentium III 600B/133 (133MHz * 4.5x)** **Pentium III 600EB/133 (133MHz * 4.5x)**
ON [1 2 3 4 5 6]	**Celeron 333/66 (66MHz * 5.0x)** **Pentium II/III 500/100 (100MHz * 5.0x)** **Pentium III 500E/100 (100MHz * 5.0x)** **Pentium III 667/133 (133MHz * 5.0x)** **Pentium III 667B/133 (133MHz * 5.0x)**
ON [1 2 3 4 5 6]	**Celeron 366/66 (66MHz * 5.5x)** **Pentium II/III 550/100 (100MHz * 5.5x)** **Pentium III 550E/100 (100MHz * 5.5x)** **Pentium III 733/133 (133MHz * 5.5x)** **Pentium III 733B/133 (133MHz * 5.5x)**
ON [1 2 3 4 5 6]	**Celeron 400/66 (66MHz * 6.0x)** **Pentium II/III 600/100 (100MHz * 6.0x)** **Pentium III 600E/100 (100MHz * 6.0x)** **Pentium III 800EB/133 (133MHz * 6.0x)**
ON [1 2 3 4 5 6]	**Celeron 433/66 (66MHz * 6.5x)** **Pentium II 650/100 (100MHz * 6.5x)** **Pentium III 650/100 (100MHz * 6.5x)**
ON [1 2 3 4 5 6]	**Celeron 466/66 (66MHz * 7.0x)** **Pentium III 700/100 (100MHz * 7.0x)**
ON [1 2 3 4 5 6]	**Celeron 500/66 (66MHz * 7.5x)** **Pentium III 750/100 (100MHz * 7.5x)** **Pentium III 1000B/133 (133MHz * 7.5x)**
ON [1 2 3 4 5 6]	**Celeron 533/66 (66MHz * 8.0x)** **Pentium III 800/100 (100MHz * 8.0x)**

NOTE: "B" - 133MHz System Bus Frequency;
"E" - processor with "Advanced Transfer Cache".

SW1 DIP1 ~ DIP4: Bus Ratio Select

SW1 DIP1 ~ DIP4 SETTING			
3.0x	ON / 1 2 3 4 5 6	3.5x	ON / 1 2 3 4 5 6
4.0x	ON / 1 2 3 4 5 6	4.5x	ON / 1 2 3 4 5 6
5.0x	ON / 1 2 3 4 5 6	5.5x	ON / 1 2 3 4 5 6
6.0x	ON / 1 2 3 4 5 6	6.5x	ON / 1 2 3 4 5 6
7.0x	ON / 1 2 3 4 5 6	7.5x	ON / 1 2 3 4 5 6
8.0x	ON / 1 2 3 4 5 6		

SW1 DIP5 ~ DIP6: Bus Clock Select

SW1 DIP5 ~ DIP6		JP3: FSB Select
66/100/133MHz Auto Select (default)	ON / 1 2 3 4 5 6	1 / 3
100MHz	ON / 1 2 3 4 5 6	1 / 3
133MHz	ON / 1 2 3 4 5 6	1 / 3

J U M P E R   S E T T I N G
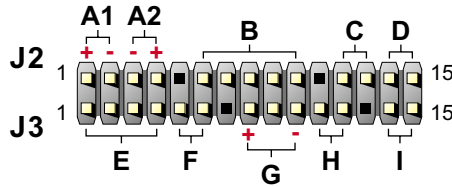
A1 : 1st HDD LED
B. : INFRARED (IR)
D. : SMI
F. : RESET SWITCH
H. : KEYLOCK

A2 : 2nd HDD LED
C. : POWER SWITCH
E. : SPEAKER
G. : POWER LED
I. : SUSPEND LED

FAN#: Onboard FAN (12V) Connector

FAN#	FUNCTION
FAN1	CPU FAN
FAN2	SYSTEM FAN
FAN3	CHASSIS FAN

JP1: Factory Test

This jumper is only for factory test.

JP2: Keyboard Power On

Keyboard Power On	JP2
Disabled (default)	
Enabled	

NOTE 1: If motherboard does not support keyboard power on function, the JP2 will be fixed by jumperwire.
NOTE 2: When the keyboard power on function shows any compatible problem, choose Disabled and report the keyboard model to your vender/ manufacturer.
NOTE 3: Keyboard power on function must be set from the BIOS. Refer to the "Integrated Peripherals" sector.

JP4 / JP5: USB Port Select

USB Port	JP4 / JP5
Redirect USB port to USB connector (default)	JP4 / JP5
Redirect USB port2 to AGP	JP4 / JP5

JP10: Power Lost Resume

This jumper allows user to use the switch of ATX power supply to control ON/ OFF switch directly instead of using the power switch on the motherboard.

Power Lost Resume	JP10
Enabled	1 3
Normal (default)	1 3

NOTE: This feature must work with BIOS. Please refer to the BIOS "Power On After PWR-Fail" sector.

JBAT2: Clear CMOS data

Clear the CMOS memory by shorting this jumper 2 & 3 momentarily, and then remove the cap back to 1 & 2 to retain original CMOS setting.

CMOS Status	JBAT2
Clear CMOS Data	1 3
Retain Data (default)	1 3

JWOL1: Wake On LAN (WOL) Connector

This jumper is designed to use LAN to boot up the system. Connect the wake on signal from LAN card to this connector.

For support WOL, the ATX power supply has to have at least 5V/720mA standby current.

NOTE 1: UNDER WINDOWS 95, USER MUST INSTALL <u>DirectX</u> AND <u>USBSUPP.EXE</u> FOR AGP ENVIRONMEMT.

NOTE 2: "VIA Patch Code", "VIA AGP VxD Driver" & "VIA PCI IRQ Routing Miniport" installation, please refer to Appendix B.

This VIA 82C693A chipset comes with the AWARD BIOS from AWARD Software Inc. Enter the AWARD BIOS program Main Menu by:

1. Turn on or reboot the system. After a series of diagnostic checks, the following message will appear:

PRESS <DEL> TO ENTER SETUP

2. Press the <DEL> key and the main program screen will appear as follows:

CMOS Setup Utility - Copyright (C) 1984-1999 Award Software

Standard CMOS Features	Load Fail-Safe Defaults
Advanced BIOS Features	Load Optimized Defaults
Advanced Chipset Features	Set Supervisor Password
Integrated Peripherals	Set User Password
Power Management Setup	Save & Exit Setup
PnP/PCI Configurations	Exit Without Saving
Frequency/Voltage Control	

Esc : Quit   ↑ ↓ → ← : Select Item
F10 : Save & Exit Setup   (Shift)F2 : Change Color

3. Using the arrows on your keyboard, select an option, and press <Enter>. Modify the system parameter to reflect the options installed in your system.
4. You may return to the Main Menu anytime be pressing <ESC>.
5. In the Main Menu, "SAVE AND EXIT SETUP" saves your changes and reboots the system, and "EXIT WITHOUT SAVING" ignores your changes and exits the program.

STANDARD CMOS FEATURES

Standard CMOS Features allows you to record some basic system hardware configuration and set the system clock and error handling. You only need to modify the configuration values of this option when you change your system hardware configuration or the configuration stored in the CMOS memory gets lost or damaged.

Run the Standard CMOS Features as follows:
1. Choose "STANDARD CMOS FEATURES" from the Main Menu and a screen with a list of options will appear.
2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

CMOS Setup Utility - Copyright (C) 1984-1999 Award Software
Standard CMOS Features

		Item Help
Date (mm:dd:yy)	Thu, Dec 30 1999	
Time (hh:mm:ss)	9 : 52 : 15	Menu Level
IDE Primary Master	Press Enter 13022 MB	
IDE Primary Slave	Press Enter None	
IDE Secondary Master	Press Enter None	
IDE Secondary Slave	Press Enter None	
Drive A	1.44M, 3.5 in.	
Drive B	None	
Video	EGA/VGA	
Halt On	All,But Keyboard	
Base Memory	640K	
Extended Memory	31744K	
Total Memory	32768K	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Date (mm:dd:yy) **Time (hh:mm:ss)**	Set the current date and time.
IDE Primary Master/ **Slave** **IDE Secondary Master/** **Slave**	This field records the specification for all non-SCSI Hard Disk Drives installed in your system. Refer to the following screen to know how to set Hard Disk Drive.

CMOS Setup Utility - Copyright (C) 1984-1999 Award Software
IDE Primary Master

IDE HDD Auto-Detection	Press Enter	Item Help
		Menu Level
IDE Primary Master	Auto	
Access Mode	Auto	
Capacity	13022 MB	
Cylinder	25232	
Head	16	
Precomp	0	
Landing Zone	25231	
Sector	63	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Drive A / B   Set the field to the type(s) of Floppy Disk drive(s) installed in your system.
The choice:
360KB, 5.25in.
1.2MB, 5.25in.
720KB, 3.5in.
1.44MB, 3.5in.
2.88MB, 3.5in.

Video   Set the field to the type of video display card installed in your system.
The choice:
Monochrome,
Color 40x25,
EGA / VGA, (default)
Color 80x25

Halt On   Set this warning feature for the type of errors that will cause the system to halt.
The choice:
All, But Keyboard (defaults)
All, But Diskette
All, But Disk / Key
All Errors
No Errors

3. Press <ESC> and follow the screen instructions to save or disregard your setting.

BIOS FEATURES SETUP

BIOS Features Setup allows you to improve your system performance or set up system features according to your preference.

Run the BIOS Features Setup as follows:

1. Choose "BIOS FEATURES SETUP" from the Main Menu and a screen with a list of options will appear.

CMOS Setup Utility - Copyright (C) 1984-1999 Award Software
Advanced BIOS Features

		Item Help
Virus Warning	Disabled	
CPU Internal Cache	Enabled	Menu Level
External Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	
Quick Power On Self Test	Disabled	
First Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	LS/ZIP	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Enabled	
Boot Up NumLock Status	On	
Gate A20 Option	Fast	
Typematic Rate Setting	Disabled	
Typematic Rate (Chars/Sec)	6	
Typematic Delay (Msec)	250	
Security Option	Setup	
OS Select For DRAM > 64MB	Non-OS2	
Video BIOS Shadow	Enabled	
C80000-CBFFF Shadow	Disabled	
CC0000-CFFFF Shadow	Disabled	
D00000-D3FFF Shadow	Disabled	
D40000-D7FFF Shadow	Disabled	
D80000-DBFFF Shadow	Disabled	
DC0000-DFFFF Shadow	Disabled	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys. An explanation of the <F>keys follows:

<F1>: "Help" gives options available for each item.
<Shift> + <F2>: Change BIOS screen color.
<F5>: Get the previous values. These values are the values with the user started in the current session.
<F6>: Load all options with the BIOS default values.
<F7>: Load all options with the Setup default values.

Virus Warning   Allows you to choose the virus warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep.
The choice: Enabled, Disabled (default)

> *Note: Many diagnostic (or boot manager) programs which attempt to access the boot sector table can cause the above warning message. If you will be running such a program, we recommend that you disable the virus protection first.*

CPU Internal Cache   Choose Enabled (default) or Disabled. This option allows user to enable or disable the CPU internal cache.

External Cache   Choose Enabled (default) or Disabled. This option allows user to enable or disable the external cache memory.

CPU L2 Cache ECC Checking   Choose Enabled (default) or Disabled.

Quick Power On Self Test   Choose Enabled (default) or Disabled. Allows the system to skip certain tests while booting. This will decrease the time needed to boot the system.

First / Second / Third / Boot Other Device   Select your boot device priority.
The choice: Disabled, Floppy, LS/ZIP, SCSI, CDROM, LAN, HDD-0, HDD-1, HDD-2, HDD-3.

Swap Floppy Drive   If the system has two floppy devices, choose enable to assign physical drive B to logical drive A and vice-versa.
The choice: Enabled, Disabled (default)

Boot Up Floppy Seek

Enable tests floppy drives to determine whether they have 40 or 80 tracks.
The choice: Enabled (default), Disabled.

Boot Up NumLock Status

On (default): Activate the NumLock function at boot up.
Off: Close the NumLock function at boot up.

Gate A20 Option

Fast (default): Let chipset controls GateA20.
Normal: A pin in the keyboard controller controls GateA20.

Typematic Rate Setting

Choose Enabled or Disabled (default): Keystrokes repeat at a rate determine by the keyboard controller. When enabled, the typematic rate and typematic delay can be selected.

Typematic Rate (Char / Sec)

The rate at which character repeats when you hold down a key.
The choice: 6, 8 (default), 10, 12, 15, 20, 24, 30.

Typematic Delay (Msec)

The delay before key strokes begin to repeat.
The choice: 250 (default), 500, 750, 1000.

Security Option

Choose System or Setup (default). Select whether the password is required every time the system boots or only when you enter setup.

OS Select for DRAM > 64MB

Select OS2 only if you are running OS/2 operating system with greater than 64MB of RAM on the system.
The choice: OS2, Non-OS2 (default)

Video BIOS Shadow

Enabled copies Video BIOS to shadow RAM for improving performance.
The choice: Enabled (default), Disabled

C8000-CBFFF to DC0000-DFFFF Shadow	These options are used to shadow other expansion card ROMs.

3. Press <ESC> and follow the screen instructions to save or disregard your setting.

Advanced Chipset Features

Advanced Chipset Features changes the values of the chipset registers. These registers control the system options.

Run the Advanced Chipset Features as follows:
1. Choose "ADVANCED CHIPSET FEATURES" from the Main Menu and a screen with a list of options will appear.
2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

CMOS Setup Utility - Copyright (C) 1984-1999 Award Software
Advanced Chipset Features

		Item Help
Bank 0/1 DRAM Timing	SDRAM 10ns	
Bank 2/3 DRAM Timing	SDRAM 10ns	Menu Level
Bank 4/5 DRAM Timing	SDRAM 10ns	
SDRAM Cycle Length	3	
DRAM Clock	Host Clk	
Memory Hole	Disabled	
P2C/C2P Concurrency	Enabled	
Fast R-W Turn Around	Disabled	
System BIOS Cacheable	Disabled	
Video RAM Cacheable	Disabled	
AGP Aperture Size	64M	
AGP-4X Mode	Enabled	
AGP Driving Control	Auto	
AGP Driving Value	DA	
AGP Fast Write	Disabled	
OnChip USB	Disabled	
USB Keyboard support	Disabled	
CPU to PCI Write Buffer	Enabled	
PCI Dynamic Bursting	Enabled	
PCI Master 0 WS Write	Enabled	
PCI Delay Transaction	Enabled	
PCI#2 Access #1 Retry	Enabled	
AGP Master 1 WS Write	Disabled	
AGP Master 1 WS Read	Disabled	
Memory Parity/ECC Check	Disabled	
CPU Vcore Select	Default	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Bank 0/1 2/3 4/5 SDRAM Timing

This item allows you to select the value in this field, depending on whether the board has paged SDRAMs .
The choice: SDRAM 8ns, SDRAM 10ns (default), Normal, Fast, Turbo.

SDRAM Cycle Length

You can select CAS latency time in HCLKs of 2 or 3 (default). The system board designer should have set the values in this field, depending on the DRAM installed. Do not change the values in this field unless you change specifications of the installed DRAM or the installed CPU.

DRAM CLOCK

The setting of this item must depend on the spec of PC100/PC133. For example, if user chooses HCLK + 33M, that means not only the motherboard but also the SDRAM needs to comply with PC-133 spec.
Choice: Host CLK(default), HCLK-33M or HCLK+33M.

Memory Hole

Choose 15M-16M or Disabled (default). In order to improve performance, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory's space below 16MB. Enbable this option will cause memory only connect to 16MB.

P2C / C2P Concurrency

Use default setting.

Fast R / W Turn Around

When disabled, CPU bus will be occupied during the entire PCI operation period.
The choice:
Enabled,
Disabled

System BIOS Cacheable

Choose Enabled or Disabled (default). When Enabled, the access to the system BIOS ROM addressed at F0000H-FFFFFH is cached.

Video RAM Cacheable

Choose Enabled or Disabled (default). When enabled, the access to the VGA RAM addressed is cached.

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AGP Aperture Size	Choose 4, 8, 16, 32, 64 (default), 128 or 256MB. Memory map and graphics data structures can reside in a Graphics Aperture. This area is like a linear buffer. BIOS will automatically report the starting address of this buffer to the O.S.
AGP-4X Mode	This item allows user to enable / disable the AGP-4x (133MHz clock) mode.
AGP Driving Control	The choice: Auto (default), Manual.
AGP Driving Value	Keep the default setting.
AGP Fast Write	The choice: Enabled, Disabled (default).
OnChip USB	This should be enabled if your system has a USB installed on the system board and you wish to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature. The choice: Enabled, Disabled (default).
USB Keyboard Support	Enabled: Enables function when the USB keyboard is being used. Disabled (default): When the AT keboard is being used.
CPU to PCI Write Buffer	The choice: Enabled (default), Disabled.
PCI Dynamic Bursting	The choice: Enabled (default), Disabled.
PCI Master 0 WS Write	The choice: Enabled (default), Disabled.
PCI Delay Transaction	The choice: Enabled (default), Disabled.
PCI #2 Access #1 Retry	The choice: Enabled (default), Disabled.

AGP Master 1 WS Write	The choice: Enabled, Disabled (default).
AGP Master 1 WS Read	The choice: Enabled, Disabled (default).
Memory Parity / ECC Check	Enabled add a parity check to the boot-up memory tests. Select Enabled only if the system DRAM contains parity. The choice: Enabled, Disabled (default)
CPU Vcore Select	The choice: Default (default), +0.05V, +0.1V, +0.2V, +0.3V, +0.4V, -0.05V, -0.1V.

> *Note: Wrong setting of CPU Vcore may cause damage to CPU. In consequence of such a potential risk, we strongly recommend user to leave DEFAULT setting unless user does comprehends how to set accurate CPU Vcore.*

3. Press <ESC> and follow the screen instructions to save or disregard your setting.

INTEGRATED PERIPHERALS

Integrated Peripherals option changes the values of the chipset registers. These registers control system options in the computer.

Run the Integrated Peripherals as follows:

1. Choose "INTEGRATED PERIPHERALS" from the Main Menu and a screen with a list of options will appear.
2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

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Integrated Peripherals

		Item Help
OnChip IDE Channel10	Enabled	Menu Level
OnChip IDE Channel11	Enabled	
IDE Prefetch Mode	Enabled	
Primary Master PIO	Auto	
Primary Slave PIO	Auto	
Secondary Master PIO	Auto	
Secondary Slave PIO	Auto	
Primary Master DMA	Auto	
Primary Slave DMA	Auto	
Secondary Master DMA	Auto	
Secondary Slave DMA	Auto	
Init Display First	PCI Slot	
IDE HDD Block Mode	Enabled	
Power On Function	BUTTON ONLY	
KB Power On Password	Enter	
Hot Key Power On	Ctrl-F1	
KBC input clock	8 MHz	
Onboard FDC Controller	Enabled	
Onboard Serial Port 1	3F8/IRQ4	
Onboard Serial Port 2	2F8/IRQ3	
UART Mode Select	Normal	
UART2 Duplex Mode	Half	
RxD, TxD Active	Hi, Lo	
IR Transmission delay	Enabled	
Onboard Parallel Port	378/IRQ7	
Parallel Port Mode	ECP+EPP	
ECP Mode Use DMA	3	
EPP Mode Select	EPP1.7	
PWRON After PWR-Fail	Off	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

OnChip IDE Channel 0 / 1

The chipset contains a PCI IDE interface with support from two IDE channels. Select Enabled to activate the first and/or the second IDE interface. Select Disabled to deactivate an interface, if you install a primary and/or second add-on IDE interface.
The choice: Enabled(default), Disabled.

IDE Prefetch Mode

Choose Enable(default), Disabled.

Primary Master/Slave PIO Secondary Master/Slave PIO

Choose Auto (default) or Mode 0~4. The BIOS will detect the HDD mode type automatically when you choose Auto. You need to set to a lower mode than Auto when your hard disk becomes unstable.

Primary Master/Slave UDMA Secondary Master/Slave UDMA

Enabled (default): Turn on the onboard IDE function.
Disabled: Turn off the onboard IDE function.

Init Display First

This option allows you to decide to activate PCI Slot or AGP first.
Choose PCI Slot(default), AGP.

KBC input clock

Choose 6MHz, 8MHz(default), 12MHz or 16MHz. There might be a compatible problem when it is above 8MHz.

Onboard FDC Controller

Choose Enabled (default) or Disabled. Choose Disabled when you use an ISA card with FDD function, or choose Enabled to use the onboard FDD connector.

Onboard Serial Port1

Choose Auto (default), 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3 or Disabled. Don't set port 1 & 2 to the same value, except when setting at Disabled.

Onboard Serial Port2

Choose Auto (default), 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3 or Disabled.

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UART Mode Select   Choose Standard (default), HPSIR or ASKIR.

UART2 Duplex Mode   Choose Half (default) or Full.

RxD, TxD Active   Choose Lo,Lo (default) / Lo,Hi / Hi,Hi / Hi,Lo.

> *Note: The above 2 options won't work unless UART2 Mode HPSIR/ASKIR is selected.*

IR Transmission Delay   Enabled: Enable delay when transferring data.
Disabled (default): Disable delay when transferring data.

Onboard Paralle Port   Choose the printer I/O address: 378H/IRQ7 (default), 3BCH/IRQ7, 278H/IRQ5 or Disabled.

Parallel Port Mode   Choose Normal (default), ECP/EPP, SPP mode. The mode depends on the external device connected to this port.

ECP Mode Use DMA   Choose DMA3 (default) or DMA1. Most sound cards use DMA1. Check with your sound card configuration to make sure that there is no conflict with this function.

EPP Mode Select   Choose EPP1.7 (default) or EPP1.9. EPP1.9 supports hardware handshake. This setting is dependent upon your EPP device.

> *Note: The above 2 options will not be displayed unless the EPP/ECP is selected.*

KB Power On Password	When user sets a password for keyboard, the password user set that return the system to Full On state.
Hot Key Power On	Boot up the system via predetermined keyboard hot key. The choice: <Ctrl> + <F1>...<F12>

3. Press <ESC> and follow the screen instructions to save or disregard your setting.

POWER MANAGEMENT SETUP

Power Management Setup changes the system power savings function.

Run the Power Management Setup as follows:
1. Choose "POWER MANAGEMENT SETUP" from the Main Menu and a screen with a list of options will appear.
2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

CMOS Setup Utility - Copyright (C) 1984-1999 Award Software
Power Management Setup

		Item Help
ACPI function	Enabled	Menu Level
Power Management	Press Enter	
ACPI Suspend Type	S1(POS)	
PM Control by APM	Yes	
Video Off Option	Suspend -> Off	
Video Off Method	V/H SYNC+Blank	
MODEM Use IRQ	3	
Soft-Off by PWRBTN	Instant-Off	
Wake Up Events	Press Enter	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

ACPI Function   Enabled: Turn on ACPI function.
                     Disabled (default): Turn off ACPI function.

Power Management   Press enter to next screen as following:
                        The choice: User Define (default), Mix Saving or Max Saving.

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Power Management

Power Management	User Define	Item Help
HDD Power Down	Disabled	Menu Level
Doze Mode	Disabled	
Suspend Mode	Disabled	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
     F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

HDD Power Down   Time is adjustable from 1 to 15 minutes. When the set time
                      has elapsed, the BIOS sends a command to the HDD to power
                      down which turns off the motor.

Doze Mode   This mode sets the CPU speed down to 33MHz.

Suspend Mode   This option allows you to choose the mode for the different
                    timer. The Suspend mode turns off the CPU and saves the
                    energy of the system.

ACPI Suspend Type The choice: S1(POS) (default) or S3 (STR).

PM Control By APM Choose Yes (default) or No. You need to choose Yes when the operating system has the APM functions, otherwise choose No.

Video Off Option The choice: Suspend -> Off (default), All Modes -> Off, Always On.

Video Off Method Choose Blank Screen, DPMS Support or V/H Sync+Blank (default). You can choose either DPMS or V/H Sync+Blank when ther monitor has the Green function. You need to choose Blank when the monitor has neither the Green function.

Modem Use IRQ Assign the IRQ number to the modem which is being used so that the ring signal can wake up the system. The default setting is 3 (COM2).

Soft-Off By PWR-BTTN Instant-Off (default): Turn off the system power at once after pushing the power button.
Delay 4 Sec: Turn off the system power 4 seconds after pushing the power button (to meet PC97/98 spec)

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Wake Up Events

```
┌─────────────────────────────────────────────────────┬──────────────────┐
│  VGA                        OFF                       │    Item Help     │
│  LPT & COM                  LPT/COM                    ├──────────────────┤
│  HDD & FDD                  ON                         │  Menu Level      │
│  DMA/master                 OFF                        │                  │
│  Wake Up On LAN             Disabled                   │                  │
│  Modem Ring Resume          Disabled                   │                  │
│  RTC Alarm Resume           Disabled                   │                  │
│  Date (of Month)             0                         │                  │
│  Resume Time (hh:mm:ss)      0   0   0                 │                  │
│  IRQs Activity Monitoring   Press Enter                │                  │
│                                                        │                  │
│                                                        │                  │
│                                                        │                  │
│                                                        │                  │
│                                                        │                  │
└─────────────────────────────────────────────────────┴──────────────────┘
```

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

VGA
When On of VGA, any activity from one of the listed system peripheral devices or IRQs wakes up the system.
Choice: On(default), Off.

LPT & COM
When On of LPT&COM, any activity from one of the listed system peripheral devices or IRQs wakes up the system.
Choice: LPT/COM(default), NONE, LPT or COM.

HDD & FDD
When On of HDD&FDD, any activity from one of the listed system peripheral devices wakes up the system.
Choice: On(default), Off.

DMA / master
When On, any activity from one of the listed system peripheral devices wakes up the system.
Choice: On, Off(default).

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Wake On LAN	Enabled: Wake on the system from the LAN card (LAN card must support wake on LAN function and the power supply must provide at least 5V/7750mA standby current) Disabled(default): Disable Wake On LAN function.

Modem Ring Resume	An input signal on the serial Ring Indicator (RI) Line (in other words, an incoming call on the modem) awakens the system from a soft off state.

RTC Alarm Resume	When Enabled, you can set the date and time at the which the RTC(Real Time Clock) alarm awakens the system from suspend mode. Choice: Disabled(default), Enabled.

Date (of Month)	Set a certain date when RTC Alarm Resume option is Enabled to awaken the system. This option is concurrent with Resume Time option.

Resume Time (hh:mm: ss)	Set a certain time when RTC Alarm Resume option is Enabled to awaken the system. This option is concurrent with Date option.

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IRQs Activity Monitoring

		Item Help
Primary INTR	ON	Menu Level
IRQ3 (COM 2)	Primary	
IRQ4 (COM 1)	Primary	
IRQ5 (LPT 2)	Primary	
IRQ6 (Floppy Disk)	Primary	
IRQ7 (LPT 1)	Primary	
IRQ8 (RTC Alarm)	Disabled	
IRQ9 (IRQ2 Redir)	Secondary	
IRQ10 (Reserved)	Secondary	
IRQ11 (Reserved)	Secondary	
IRQ12 (PS/2 Mouse)	Primary	
IRQ13 (Coprocessor)	Primary	
IRQ14 (Hard Disk)	Primary	
IRQ15 (Reserved)	Disabled	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Primary INTR

When set to On, any event occurring at will awaken a system which has been powered down.
On(default): The system can not enter the power saving mode when I/O ports or IRQ# is activated.
Off: The system still can enter the power saving mode when I/O ports or IRQ# is activated.

The following is a list of IRQ's(Interrupt ReQuests), which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service.
When set On, activity will neither prevent the system from going into a power management mode nor awaken it.

IRQ3 (COM2)
IRQ4 (COM1)
IRQ5 (LPT2)
IRQ6 (Floppy Disk)
IRQ7 (LPT1)
IRQ8 (RTC Alarm)

3. Press <ESC> and follow the screen instructions to save or disregard your setting.

PnP/PCI CONFIGURATION SETUP

PnP/PCI Configuration Setup defines PCI bus slots.

Run the PnP/PCI Configuration Setup as follows:
1. Choose "PnP/PCI CONFIGURATION SETUP" from the Main Menu and a screen with a list of options will appear.
2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

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PnP/PCI Configurations

		Item Help
PNP OS Installed	No	
Reset Configuration Data	Disabled	Menu Level
Resources Controlled By	Auto(ESCD)	
IRQ Resources	Press Enter	
DMA Resources	Press Enter	
PCI/VGA Palette Snoop	Disabled	
Assign IRQ For VGA	Enabled	
Assign IRQ For USB	Enabled	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

PNP OS Installed

Yes: OS supportsss Plug and Play function.
No (default): OS doesn't support Plug and Play function.

> *Note: BIOS will automatically diable all PnP resources ex-*
> *cept the boot device card when you select Yes on Non-*
> *PnP O.S.*

Reset Configuration Data

Choose Enabled or Disabled (default). Disable retains En-abled PnP configuration data in BIOS and resets the PnP configuration data in the BIOS.

Resources Controlled By

Choose Manual or Auto (ESCD) (default). The BIOS checks the IRQ/DMA channel number on the ISA and PCI card manu-ally if you choose Manual. And th e IRQ/DMA channel num-ber will be checked automatically if you choose Auto.

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IRQ Resources

		Item Help
IRQ-3 assigned to	PCI/ISA PnP	Menu Level
IRQ-4 assigned to	PCI/ISA PnP	
IRQ-5 assigned to	PCI/ISA PnP	
IRQ-7 assigned to	PCI/ISA PnP	
IRQ-9 assigned to	PCI/ISA PnP	
IRQ-10 assigned to	PCI/ISA PnP	
IRQ-11 assigned to	PCI/ISA PnP	
IRQ-12 assigned to	PCI/ISA PnP	
IRQ-14 assigned to	PCI/ISA PnP	
IRQ-15 assigned to	PCI/ISA PnP	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

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DMA Resources

DMA-0 assigned to	PCI/ISA PnP	Item Help
DMA-1 assigned to	PCI/ISA PnP	Menu Level
DMA-3 assigned to	PCI/ISA PnP	
DMA-5 assigned to	PCI/ISA PnP	
DMA-6 assigned to	PCI/ISA PnP	
DMA-7 assigned to	PCI/ISA PnP	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

IRQ-x assigned to **DMA-x assigned to**	Legacy ISA: Manually assigns IRQ / DMA to device. PCI / ISA PnP: BIOS assigns IRQ / DMA to device automatically.
Assign IRQ for VGA	Enabled (default): Add one IRQ to VGA controller. Disabled: Remove IRQ from VGA controller. The system will have extra IRQ for other devices but the VGA controller will still not be disabled (only IRQ will be removed)
Assign IRQ for USB	Enabled (default): Add one IRQ to USB controller. Disabled: Remove IRQ from USB controller. The system will have extra IRQ for other devices but the USB controller will still not be diabled (only IRQ was removed)
PCI / VGA Palette Snoop	The choice: Enabled, Disabled (default).

3. Press <ESC> and follow the screen instructions to save or disregard your setting.

FREQUENCY / VOLTAGE CONTROL

Frequency/Voltage Control option allows user to adjust CPU's settings and retain some informations inside computer when it is working.

Run the Frequency/Voltage Control as follows:
1. Choose "FREQUENCY/VOLTAGE CONTROL" from the Main Menu and a screen with a list of options will appear.
2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

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Frequency/Voltage Control

Auto Detect DIMM/PCI Clk	Enabled	Item Help
Spread Spectrum	Disabled	Menu Level
CPU Host/PCI Clock	Default	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Auto Detect DIMM/PCI clk	Choose Disabled (default) or Enabled. The clock generator will turn off the DIMM clock if this slot is empty.
Spread Spectrum	Choose Disabled (default) or Enabled. This function is designed to EMI test only.
CPU Host Clock (CPU/ PCI)	Select the CPU Host Clock. The choice: default, 66/33MHz, 75/37MHz, 83/41MHz, 124/ 31MHz, 133/33MHz, 140/35MHz, 150/37MHz.

3. Press <ESC> and follow the screen instructions to save or disregard your setting.

LOAD FAIL-SAFE DEFAULTS

Load Fail-Safe Defaults option loads the default system values to the system configuration fields. If the CMOS is corrupted the defaults are loaded automatically.

Choose this option and the following message will appear:

"Load Setup Defaults (Y/N)?   N"

To use the Fail-Safe Defaults, change the prompt to "Y" and press <Enter>.

LOAD OPTIMIZED DEFAULTS

Load Optimized Defaults option loads optimized system values to the system configuration fields.

Choose this option and the following message will appear:

"Load Optimized Defaults (Y/N)?   N"

To use the Optimized Defaults, change the prompt to "Y" and press <Enter>.

SET SUPERVISOR/USER PASSWORD

These two options allow you to set your system passwords. Normally, the supervisor has a higher ability to change the CMOS setup option than the user. The way to set up the passwords for both supervisor and user are as follows:

1. Choose "CHANGE PASSWORD" from the Main Menu and press <Enter>. The following message appears:

    "Enter Password:"

2. The first time you run this option, enter your own password up to 8 characters and press <Enter>. The screen doesn't display the entered characters.
3. After you entered the password, the following message appears prompting you to confirm the password:

    "Confirm Password:"

4. Enter the same password "exactly" as you just typed again to confirm the password and press <Enter>.
5. Move the cursor to Save & Exit Setup to save the password.
6. If you need to delete the password you entered before, choose the Supervisor Password and press <Enter>. It will delete the password that you had before.
7. Move the cursor to Save & Exit Setup to save the option you did, otherwise the old password will still be there the next time you turn your machine on.
8. Press <ESC> to exit to the Main Menu.

> *Note: If you forget or lose the password, the only way to access the system is to clear the CMOS RAM by setting JBAT1. All setup information will be lost and back to default seting. You need to run the BIOS setup program and re-define all settings again.*

SAVE & EXIT SETUP

Save & Exit Setup allows you to save all modifications you have specified into the CMOS memory. Highlight this option on the Main Menu and the following message appears:

SAVE to CMOS and EXIT (Y/N)?   Y

Press <Enter> key to save the configuration changes.

EXIT WITHOUT SAVING

Exit Without Saving allows you to exit the Setup utility without saving the modifications that you have specified. Highlight this option on the Main Menu and following message appears:

Quit Without Saving (Y/N)?   N

You may change the prompt to "Y" and press the <Enter> key to leave this option.

APPENDIX A

FLASH MEMORY UPDATE INSTALLATION

1. Download BIOS files and flash utility from your board vendor. They are: awdflash.exe and .bin file.
2. Copy them to bootable diskette and boot from diskette.
3. The diskette cannot include memory manager e.g. emm386.exe,qemm and himem.sys, otherwise there will appear an error message "insufficient memory".
4. Type "awdflash filename(XXXX.bin)".
5. Next screen will ask you save current bios to file or not? Depend on your diskette capacity, choose Y or N for this option.
6. Then screen ask you programming the flash memory now? type Y for this option.
7. Programming finish,utility will ask you reboot system.
8. Reset system and press DEL key enter bios setup screen.
9. Select LOAD SETUP DEFAULTS, press ENTER, press Y, press F10, press Y
10. Finish update procedure.

APPENDIX B   DRIVER INSTALLATION

If you are using **Windows 98 SE**, you do not need to install the **4-in-1 driver** as the IRQ Routing Driver and the ACPI Registry are already incorporated into the operating system. Users with Windows 98 SE may update the IDE Busmaster and AGP drivers by installing them individually.

PART 1:

1. Put the CD into your CD-ROM.
2. There appears a welcome window.
   (If doesn't, it means that your CD-ROM auto-run function does not enable, but you still can browser the CD via Windows Explorer and change the directory to where your CD-ROM directory is. Then run the **autorun.exe**)
3. Select "**Install Driver**".
4. Select "**Install VIA Chipsets Driver**".
5. Select "I**nstall 4in1 Driver**".
6. Then the program will automatically setup all drivers your system needs.
7. Finally, the system will re-boot.

   NOTE: AFTER INSTALLED " **4in1 Driver**", *USER DOESN'T NEED TO INSTALL ANY OTHER PROGRAM IN PART 2.*

PART 2:

CAUTION!! ALL THE VIA MAINBOARD MUST INSTALL FOLLOWING 3 DRIVERS!!!

VIA Patch Code Installation

Windows95/Windows98:
1. Go to the CD-ROM disk, we suggest the CD-ROM title is D:\.
2. Find and run D:\Patch\Via\patch9x\Setup\Setup.exe
3. Select "Install VIA Chipset Functions' Registry", then it will automatically install this program.
Note! This program should be installed before any other VIA's drivers.

VIA AGP VxD Driver for Windows 9x Installation

Windows95/Windows98:
1. Go to the CD-ROM disk, we suggest the CD-ROM title is D:\.
2. Find and run D:\Driver\Via\Agp\Setup\Setup.exe
3. Select "Install VIA AGP VxD in turbo mode" or "Install VIA AGP VxD normal mode", then it will automatically install this program.

VIA PCI IRQ Routing Miniport for Windows 9x Installation

Windows95/Windows98:

1. Go to the CD-ROM disk, we suggest the CD-ROM title is D:\.
2. Find and run D:\Patch\Via\Virq9x\Setup.exe

Note: Before install Windows98, user must enable two functions for this miniport driver in the BIOS menu, one is "*OnChip USB***" in the "Chipset Features Setup" and another is "***Assign IRQ for USB***" in the "PNP/PCI Configuration Setup".**