VIA MVP3 AT SYSTEM BOARD

OPERATION MANUAL

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TRADEMARKS

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NOTE

The "LOAD SETUP DEFAULTS" function loads the default settings directly from BIOS default table, these default settings are the best-case values that will optimize the system performance and increase the system stability. This strongly recommended when you first receive this system board, or the system CMOS data is corrupted.

Move the selection bar to "LOAD SETUP DEFAULTS" and then press the "ENTER" key and then the SETUP default values will be loaded into the system. (Please refers to the Chapter 4 AWARD BIOS SETUP procedures in this manual.)

NOTICE

Information presented in this manual has been carefully checked for reliability; however, no responsibility is assumed for inaccuracies. The information contained in this manual is subject to change without prior notice.

1. INTRODUCTION

1.1 SYSTEM OVERVIEW

This mainboard is an AT form-factor PCI Local Bus Pentium system board with the updated AGP technology designed onboard. The most updated VIA MVP3 chipset for 100MHz Front Side Bus (FSB) is designed on the board.

This mainboard is designed for the high performance Pentium or other equivalent processors for high-end application and it is a true GREEN-PC computer system. The FSB clock speed can be adjusted to 100MHz when we are installing the processors with 100MHz FSB speed.

This system board supports the Peripheral Component Interconnect (PCI) Local Bus standard (PCI Specification Rev. 2.1 compliant). It not only breaks through the I/O bottlenecks of the traditional ISA mainboard, but also provides the ultra high performance for networking and multi-user environments.

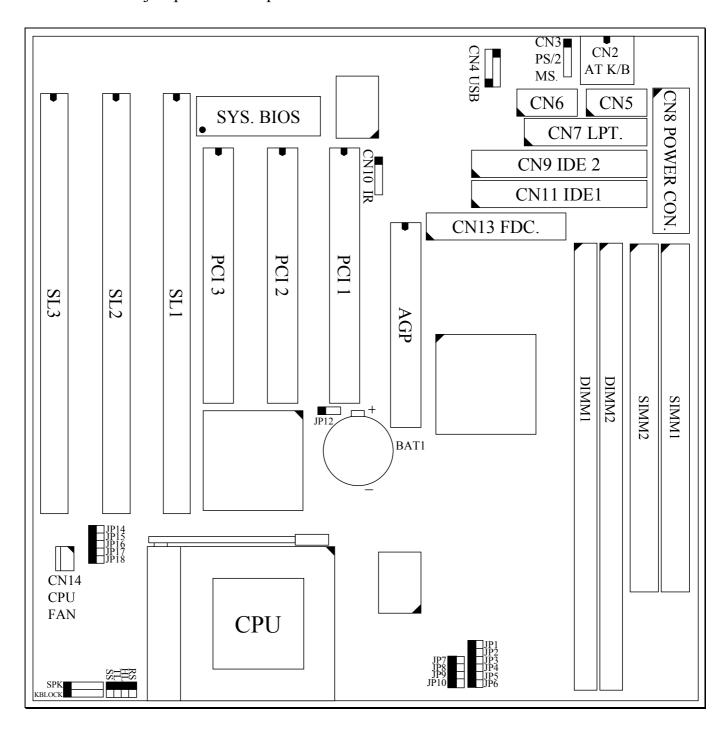
The mainboard has built-in two channels PIO and Bus Master Enhanced PCI IDE port, one Floppy Disk control port, two high speed Serial ports (UARTs), one multi-mode Parallel port, one AT keyboard port, one PS/2 mouse port, one IR port, two USB ports.

The Accelerated Graphic Port (A.G.P.) on the board is designed for the updated AGP 3D video display card. Unlike the traditional PCI-based display cards, AGP technology provides lightening data throughput to fully facilitate the 3Diminsional and multimedia graphic display. The data transfer rate on the AGP port can be as fast as 133MHz and it is much faster than the traditional 33MHz PCI VGA cards.

The AGP is a new video display technology and it requires the device driver or new operating system to enable the accelerated graphic feature. Windows® 98 will supports AGP directly, but Windows® 95 still needs the appropriate device drivers to enable the AGP feature. Please don't worry about the device driver, you can always find the device driver included in the AGP card.

1.2 SYSTEM BOARD LAYOUT

Explanation: The connectors, jumpers and components which has the black point marked on the corner means the location of pin-1 side of the connector, jumper and component.



2. FEATURES

2.1 MAINBOARD SPECIFICATIONS

☐ Chipset VIA MVP3 (VT82C598MVP, VT82C586B) and Winbond W83877F / TF. \square CPU Intel : Pentium processor and OverDrive processor 90 / 100 / 120 / 133 / 150 / 166 / 200 / 233 MHz. Cyrix: 6x86 / 6x86L - P150+ / P166+ / P200+. 6x86MX - PR166 / PR200 / PR233,6x86MII - PR266/PR300 AMD: K5 - PR90 / PR100 / PR120 / PR133 / PR150 / PR166. K6 / PR2-166 / -200 / -233 / -266/ -300 K6-2 (3D)/300/333./350/366/380/400 : Win Chip C6-180 / 200 / 225 / 240. ☐ CPU Voltage (1).CPU I/O voltage : "+3.3V DC" or "+3.5V DC". (2). CPU CORE voltage: +1.3V DC $\sim +3.5V$ DC. ☐ System Clock 60 / 66 / 75 / 83 / 95 / 100 MHz □ Memory DRAM: Three banks, each bank can be single or double sided, 8MB up to 1GB. Supports fast page mode (FPM), Extended Data Out (EDO), and SDRAM memory (Use 72-pin SIMM module x 2, and 168-pin DIMM module x 2). Support +3.3V DC operating voltage on DIMM sockets. SRAM: 512KB pipelined burst SRAM on board. \square BIOS AWARD System BIOS. 128KB x 8 Flash ROM (for Plug & Play BIOS).

□ Expansion Slots

AGP Slots: 32-bit x 1 (Supports 1x/2x AGP graphics cards) PCI Slots: 32-bit x 3 (All Master / Slave, PCI 2.1 Compliant).

ISA Slots: 16-bit x 3 (PCI / ISA slot share one slot).

□ IDE Ports

Two channel PIO and "Ultra DMA/33" Bus Master PCI IDE ports, which will connect maximum 4 IDE devices like IDE Hard Disk and ATAPI CD-ROM device. PIO Mode 4 transfer rate up to 14 Mbytes/s transfer rates and supports "Ultra DMA/33" mode transfers up to 33 Mbytes/sec.

□ USB Ports

Two Universal Serial Bus (USB) ports.

□ Super I/O Ports

- 1.Two high speed NS16C550 compatible Serial ports (UARTs).
- 2.One SPP / EPP / ECP mode Bi-directional parallel port.
- 3. One Floppy Disk Control port.

☐ IR Port

One HPSIR and ASKIR compatible Infrared port.

☐ Mouse and Keyboard

Supports PS/2 Mouse connector, PS/2 Keyboard connector (optional) and AT Keyboard connector.

☐ Software compatibility

MS-DOS, Windows NT, OS/2, UNIX, NOVELL, MS Windows, CAD/CAM, Windows 98 (Beta), ...etc.

□ **DIMENSION**

Width & Length: 220 mm x 220 mm.

Height : 3/4 inches with components mounted.

PCB Thickness: 4-layers, 0.05 inches normal.

Weight : 20 ounces.

□ ENVIRONMENT

Operating Temperature : 10°C to 40°C. (50°F to 104°F).

Require Airflow : 50 linear feet per minute across CPU. Storage Temperature : -40 °C to 70 °C. (-40 °F to 158 °F).

Humidity : 0 to 90% non-condensing.

Altitude : 0 to 10,000 feet.

3. HARDWARE SETUP

This chapter explains how to configure the mainboard hardware. When you are installing the mainboard, you will have to make jumper settings and cable connections. Please refer to the following sections for the details:

3.1 UNPACKING

The system board package contains the following parts:

- This system board.
- Operation manual.
- Cable set for IDE and I/O device.
- A CD diskette which includes device driver and utility program

The mainboard contains electric sensitive components which can be easily damaged by static electricity, please leave the mainboard sealed in its original packing until when installation.

Unpacking and installation shall be done on a grounded anti-static mat. The operator will have to wear an anti static wristband, grounded at the same point as the anti-static mat.

Inspect the mainboard carton to see whether there is any obvious damage. Shipping and handling may cause damage to your board. Be sure there is no shipping or handling damages on the board before proceeding.

After opening the motherboard color box, extract the mainboard and place it only on a grounded anti-static surface with the component side up. Inspect the board again to see whether there is any damage.

Press on all of the socket IC's to make sure that they are properly seated. Do this only with the board placed on a firm flat surface.

3.2 HARDWARE CONFIGURATION

Before the system board is ready for operating, the hardware must be configured to make sure it will work properly with different environment. To configure the system board is a simple task, only a few jumpers, connectors, cables and sockets needs to be selected and installed.

3.2.1 CONNECTORS

A connector is two or more pins that are used make connections to the system standard accessories (such as power, mouse, printer,...etc.). The following is a list of connectors on board, as well as descriptions of each individual connector.

(A) BAT1 Non-rechargeable battery (Using 3V Lithium battery: CR2032)

Pin # Assignment

- + Battery Positive
- Ground
- **(B) CN2** AT Keyboard connector

Pin # AssignmentPin # Assignment1 Keyboard Clock2 Keyboard Data3 No Connection4 Ground

3 No Connection 4 Ground 5 +5V DC

(C) CN3 PS/2 Mouse connector

Pin # Assignment

Mouse Data

No Connection

Ground

4 • 4 +5V DC

Mouse Clock

(D) CN4 USB (Universal Serial Bus) connector

Caution: Please make sure of the correction to the connector, wrong connector will destroy the mainboard.

	(USB2)	<u>Pin #</u>	5	1	<u>Pin #</u>		(USB1)
Ground	(BLACK WIRE)	5	•	•	1	+5V DC	(RED WIRE)
Ground	(BLACK WIRE)	4		•	2	DATA-	(WHITE WIRE)
DATA+	(GREEN WIRE)	3			3	DATA+	(GREEN WIRE)
DATA-	(WHITE WIRE)	2			4	Ground	(BLACK WIRE)
+5V DC	(RED WIRE)	1 (5	Ground	(BLACK WIRE)
			1	5			

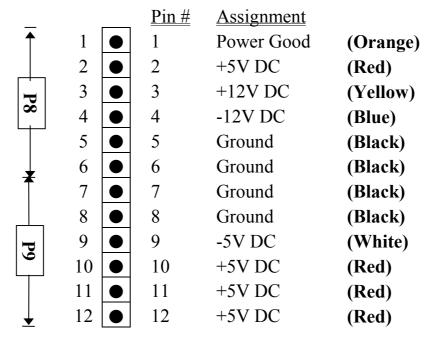
- (E) CN5 COM A (Serial Port 1) connector
- (F) CN6 COM B (Serial Port 2) connector

1	2	<u> Pin #</u>	Assignment	<u>Pin #</u>	<u>Assignment</u>
		1	DCD (Data Carrier Detect)	2	RD (Received Data)
		3	TD (Transmit Data)	4	DTR (Data Terminal Ready)
		5	Ground	6	DSR (Data Set Ready)
		7	RTS (Request To Send)	8	CTS (Clear To Send)
•		9	RI (Ring Indicator)	10	No Connection
9	10				

(G) CN7 Parallel Port Connector (Supports SPP/EPP/ECP mode, using IRQ7 or IRQ5, ECP modes use DMA channel 3 or channel 1, and it can be programmed by CMOS setup)

1	14	<u>Pin #</u>	<u>Assignment</u>	<u>Pin #</u>	<u>Assignment</u>
		1	STROBE-	14	AUTO FEED-
		2	Data Bit 0	15	ERROR-
		3	Data Bit 1	16	INIT-
		4	Data Bit 2	17	SLCT IN-
		5	Data Bit 3	18	Ground
		6	Data Bit 4	19	Ground
		7	Data Bit 5	20	Ground
		8	Data Bit 6	21	Ground
		9	Data Bit 7	22	Ground
		10	ACK-	23	Ground
		11	BUSY	24	Ground
		12	PE	25	Ground
		13	SLCT	26	No Connection
13	26				

(H) CN8 AT Power connector



HARDWARE SETUP

- (I) CN9 IDE 2 connector (Secondary IDE Port, using IRQ15)
- (J) CN10 IR (Infrared Rays) transmission connector

	<u>Pin #</u>	<u>Assignment</u>
•	1	+5V DC
	2	No Connection
	3	IR Receive
•	4	Ground
	5	IR Transmit

- (K) CN11 IDE 1 connector (Primary IDE Port, using IRQ14)
- (L) CN13 Floppy Disk Control Port connector (Using IRQ6, DMA channel 2)
- (M) CN14 CPU Cooling Fan Power connector (optional)

<u>Pin #</u>	<u>Assignment</u>
1	Ground
2	+12V DC
3	Fan Sense Signal

(N) KBLOCK Front Panel Power LED & Key-Lock connector

Pin # Assignment
Pullup (+5V DC for Power LED)
No Connection
Ground
Keyboard Lock
Ground

(O) SPK Speaker connector

1 Pin # Assignment

● 1 +5V DC

No Connection

• 3 No Connection

• 4 Speaker Data Signal

4

(P) RS Reset Button connector

Open: No action Short: System Reset

Pin # Assignment
Reset Control 2 Ground

(Q) HL IDE HDD LED connector

Pin # Assignment
1 Pullup (+5V DC)
Pin # Assignment
2 Signal Pin

(R) SS Suspend Switch connector

This switch will be used to change the system into suspend status to save power consumption. There are different sustend states can be programmed in the BIOS setup program, please refer to chapter 4 for details:

First click: Tell the PC system to change into suspend mode.

Second click: Tell the PC system to wake up from suspend state.

<u>Pin #</u> <u>Assignment</u>

- 1 Suspend Control
- 2 Ground
- **(S) TL** Turbo LED connector

<u>Pin # Assignment</u>

- 1 Pullup (+5V DC)
- 2 Ground

3.2.2 JUMPER SETTINGS

A jumper is a set of two, three or more jumper pins which allows you to make different system configuration by putting the plastic connector plug (mini-jumper) on it. The jumper setting is necessary when installing different components onto the mainboard. *Please make sure all jumper settings are correct before you can start the installation.*

(A) JP1~ JP6, JP9, JP10 & JP14~JP18: CPU type selection

These jumpers are designed to select voltage and frequency for different CPUs, please refer to the following tables for details

CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	60MHz x 1.5	$V_{\text{CORE}} = 3.5V$		66MHz x 1.5	$V_{\text{CORE}} = 3.5V$
AMD	1 2	1 2	AMD	1 2	1 2
K5-PR90	JP1	JP14	K5-PR100	JP1	JP14
K5-PR120	JP2	JP15	K5-PR133	JP2	JP15
	JP3	JP16		JP3	JP16
	JP4	JP17		JP4	JP17
	JP5	JP18		JP5	JP18
	JP6			JP6	
	JP9			JP9	
	JP10			JP10	

CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	60MHz x 2.5	$V_{\text{CORE}} = 3.5V$		66MHz x 2.5	$V_{\text{CORE}} = 3.5V$
AMD	1 2	1 2	AMD	1 2	1 2
K5-PR150	JP1	JP14	K5-PR166	JP1	JP14
	JP2	JP15		JP2	JP15
	JP3	JP16		JP3	JP16
	JP4	JP17		JP4	JP17
	JP5	JP18		JP5	JP18
	JP6			JP6	
	JP9			JP9	
	JP10			JP10	

CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	66MHz x 2.5	$V_{\text{CORE}} = 2.9V$		66MHz x 3	$V_{\text{CORE}} = 2.9V$
AMD	1 2	1 2	AMD	1 2	1 2
K6 / PR2	JP1	JP14	K6 / PR2	JP1	JP14
-166	JP2	JP15	-200	JP2	JP15
	JP3	JP16		JP3	JP16
	JP4	JP17		JP4	JP17
	JP5	JP18		JP5	JP18
	JP6			JP6	
	JP9			JP9	
	JP10			JP10	

CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	66MHz x 3.5	$V_{\text{CORE}} = 3.2V$		66MHz x 4	$V_{\text{CORE}} = 2.2V$
AMD K6-233	1 2	1 2 JP14 JP15 JP16 JP17 JP18	AMD K6 / 266 K6-2/266	1 2 JP1 JP2 JP3 JP4 JP5 JP6 JP9 JP10	1 2 JP14 JP15 JP16 JP17 JP18

CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	66MHz x 4.5	$V_{\text{CORE}} = 2.2V$		100MHz x 3	$V_{\text{CORE}} = 2.2V$
AMD	1 2	1 2	AMD	1 2	1 2
K6/300	JP1	JP14	K6-2/300	JP1	JP14
	JP2	JP15		JP2	JP15
	JP3	JP16		JP3	JP16
	JP4	JP17		JP4	JP17
	JP5	JP18		JP5	JP18
	JP6			JP6	
	JP9			JP9	
	JP10			JP10	

CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	95MHz x 3.5	$V_{\text{CORE}} = 2.2V$		100MHz x 3.5	$V_{\text{CORE}} = 2.2V$
AMD	1 2	1 2	AMD	1 2	1 2
K6-2/333	JP1	JP14	K6-2/350	JP1	JP14
	JP2	JP15		JP2	JP15
	JP3	JP16		JP3	JP16
	JP4	JP17		JP4	JP17
	JP5	JP18		JP5	JP18
	JP6			JP6	
	JP9			JP9	
	JP10			JP10	
	0110			0110	
CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	66MHz x 5.5	$V_{\text{CORE}} = 2.2V$		95MHz x 4	$V_{\text{CORE}} = 2.2V$
AMD	1 2	1 2	AMD	1 2	1 2
K6-2/366	JP1	JP14	K6-2/380	JP1	JP14
	JP2	JP15		JP2	JP15
	JP3	JP16		JP3	JP16
	JP4	JP17		JP4	JP17
	JP5	JP18		JP5	JP18
	JP6			JP6	
	JP9			JP9	
	JP10			JP10	
	0110			0110	
CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	100MHz x 4	$V_{CORE} = 2.2V$		100MHz x 4.5	$V_{CORE} = 2.2V$
AMD	1 2	1 2	AMD	1 2	1 2
K6-2/400	JP1	JP14	K6-2/450	JP1	JP14
	JP2	JP15		JP2	JP15
	JP3	JP16		JP3	JP16
	JP4	JP17		JP4	JP17
	JP5	JP18		JP5	JP18
	JP6	1 1 1 1 1		JP6	
	јР9			JP9	
	JP10			JP10	
	31 10			31 10	

CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	60MHz x 2	$V_{\text{CORE}} = 3.5V$		60MHz x 2	$V_{\text{CORE}} = 2.8V$
Cyrix / IBM 6x86	1 2 JP1 JP2	1 2 JP14 JP15	Cyrix / IBM 6x86L	1 2 JP1 JP2	1 2 JP14 JP15
-P150+	JP3 JP4 JP5 JP6 JP9 JP10	JP16 JP17 JP18	-P150+	JP3 JP4 JP5 JP6 JP9 JP10	JP16 JP17 JP18
	ID1 (ID0 10	ID14 ID10		TD1 (ID0 10	ID14 ID10

CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	66MHz x 2	$V_{\text{CORE}} = 3.5V$		66MHz x 2	$V_{\text{CORE}} = 2.8V$
Cyrix / IBM 6x86 -P166+	1 2 JP1 JP2 JP3 JP4 JP5 JP6 JP9 JP10	1 2 JP14 JP15 JP16 JP17 JP18	Cyrix / IBM 6x86L -P166+	1 2 JP1 JP2 JP3 JP4 JP5 JP6 JP9 JP10	1 2

CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	75MHz x 2	$V_{\text{CORE}} = 3.5V$		75MHz x 2	$V_{\text{CORE}} = 2.8V$
Cyrix	1 2	1 2	Cyrix	1 2	1 2
/ IBM	JP1	JP14	/ IBM	JP1	JP14
6x86	JP2	JP15	6x86L	JP2	JP15
-P200+	JP3	JP16	-P200+	JP3	JP16
	JP4	JP17		JP4	JP17
	JP5	JP18		JP5	JP18
	JP6			JP6	
	JP9			JP9	
	JP10			JP10	
CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18

	66MHz x 2	$V_{\text{CORE}} = 2.9V$		66MHz x 2.5	$V_{\text{CORE}} = 2.9V$
Cyrix	1 2	1 2	Cyrix	1 2	1 2
/ IBM	JP1	JP14	/ IBM	JP1	JP14
6x86MX	JP2	JP15	6x86MX	JP2	JP15
-PR166	JP3	JP16	-PR200	JP3	JP16
	JP4	JP17	(66MHz	JP4	JP17
	JP5	JP18	Bus)	JP5	JP18
	JP6			JP6	
	JP9			JP9	
	JP10			JP10	

	T	1			T
CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	75MHz x 2	$V_{\text{CORE}} = 2.9V$		66MHz x 3	$V_{\text{CORE}} = 2.9V$
Cyrix	1 2	1 2	Cyrix	1 2	1 2
/ IBM	JP1	JP14	/ IBM	JP1	JP14
6x86MX	JP2	JP15	6x86MX	JP2	JP15
-PR200	JP3	JP16	-PR233	JP3	JP16
(75MHz	JP4	JP17	(66MHz	JP4	JP17
Bus)	JP5	JP18	Bus)	JP5	JP18
	JP6			JP6	
	JP9			JP9	
	JP10			JP10	

CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	75MHz x 2.5	$V_{\text{CORE}} = 2.9V$		83MHz x 2.5	$V_{\text{CORE}} = 2.9 \text{V}$
Cyrix	1 2	1 2	Cyrix	1 2	1 2
/ IBM	JP1	JP14	6x86 MII	JP1	JP14
6x86MX	JP2	JP15	-266	JP2	JP15
-PR233	JP3	JP16	/ IBM	JP3	JP16
(75MHz	JP4	JP17	6x86MX	JP4	JP17
Bus)	JP5	JP18	-PR266	JP5	JP18
	JP6			JP6	
	JP9			JP9	
	JP10			JP10	
CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	66MHz x 3.5	$V_{\text{CORE}} = 2.9V$		75MHz x 3	$V_{\text{CORE}} = 2.9V$

Cyrix	1 2	1 2	Cyrix	1 2	1 2
6x86MII	JP1	JP14	6x86MII	JP1	JP14
-300	JP2	JP15	-300	JP2	JP15
/ IBM	JP3	JP16	/ IBM	JP3	JP16
6x86MX	JP4	JP17	6x86MX	JP4	JP17
-PR300	JP5	JP18	-PR300	JP5	JP18
(66MHz	JP6		(75MHz	JP6	
Bus)	JP9		Bus)	JP9	
	JP10			JP10	

CPU TYPE	JP1~6, JP9~10	JP14~JP18	
	83MHz x 3	$V_{\text{CORE}} = 2.9V$	
Cyrix	1 2	1 2	
6x86 MII	JP1	JP14	
-333	JP2	JP15	
/ IBM	JP3	JP16	
6x86MX	JP4	JP17	
-PR333	JP5	JP18	
	JP6		
	JP9		
	JP10		

CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	60MHz x 3	$V_{\text{CORE}} = 3.5V$		66MHz x 3	$V_{\text{CORE}} = 3.5V$
IDT	1 2	1 2	IDT	1 2	1 2
C6-180	JP1	JP14	C6-200	JP1	JP14
	JP2	JP15		JP2	JP15
	JP3	JP16		JP3	JP16
	JP4	JP17		JP4	JP17
	JP5	JP18		JP5	JP18
	JP6			JP6	
	JP9			JP9	
	JP10			JP10	

CPU TYPE	JP1~6, JP9~10	JP14~JP18	CPU TYPE	JP1~6, JP9~10	JP14~JP18
	75MHz x 3	$V_{CORE} = 3.5V$		60MHz x 4	$V_{\text{CORE}} = 3.5V$

MVP3 SYSTEM BOARD HARDWARE SETUP **IDT** IDT 1 2 1 2 1 2 1 2 C6-225 JP14 C6-240 JP1 JP1 JP14 JP15 JP2 JP2 **JP15** JP3 JP16 JP3 JP16 JP4 JP17 JP4 JP17 JP5 JP18 JP5 JP18 JP6 JP6 JP9 JP9 JP10 JP10 CPU TYPE JP1~6, JP9~10 CPU TYPE JP1~6, JP9~10 JP14~JP18 JP14~JP18 $V_{\text{CORE}} = 3.3V$ $V_{\text{CORE}} = 3.3V$ 66MHz x 1.5 60MHz x 1.5 1 2 Intel 1 2 1 2 Intel 1 2 80502 JP1 JP14 80502 JP1 JP14 -90 JP2 JP15 -100 JP2 JP15 JP3 JP3 JP16 JP16 JP4 JP17 JP4 JP17 JP5 JP18 JP5 JP18 JP6 JP6 JP9 JP9 JP10 JP10 CPU TYPE JP1~6, JP9~10 CPU TYPE JP1~6, JP9~10 JP14~JP18 JP14~JP18 60MHz x 2 $V_{CORE} = 3.3V$ 66MHz x 2 $V_{CORE} = 3.3V$ Intel 1 2 1 2 Intel 1 2 2 1 80502 JP1 JP14 80502 JP1 JP14 JP2 JP15 -133 JP15 -120 JP2 JP3 JP16 JP3 JP16 JP4 JP17 JP4 JP17 JP5 JP18 JP5 JP18 JP6 JP6 JP9 JP9 JP10 JP10 CPU TYPE JP1~6, JP9~10 CPU TYPE JP1~6, JP9~10 JP14~JP18 JP14~JP18

66MHz x 2.5

 $V_{CORE} = 3.3V$

 $V_{CORE} = 3.3V$

60MHz x 2.5

MVP3 SYSTEM BOARD HARDWARE SETUP Intel 1 2 Intel 1 2 1 1 2 JP14 80502 JP1 80502 JP1 JP14 JP15 -150 JP2 -166 JP2 **JP15** JP3 JP16 JP3 JP16 JP17 JP4 JP17 JP4 JP5 JP18 JP5 JP18 JP6 JP6 JP9 JP9 JP10 JP10 CPU TYPE JP1~6, JP9~10 CPU TYPE JP1~6, JP9~10 JP14~JP18 JP14~JP18 $V_{\text{CORE}} = 3.3V$ 66MHz x 3 66MHz x 2.5 $V_{CORE} = 2.8V$ Intel 1 2 Intel 2 1 1 2 1 JP14 80502 JP1 JP14 80503 JP1 -200 JP2 JP15 -166 JP2 JP15 JP3 JP16 JP3 JP16 JP4 JP17 JP4 JP17 JP5 JP18 JP5 JP18 JP6 JP6 JP9 JP9 JP10 JP10 CPU TYPE JP1~6, JP9~10 CPU TYPE JP1~6, JP9~10 JP14~JP18 JP14~JP18 66MHz x 3 $V_{CORE} = 2.8V$ 66MHz x 3.5 $V_{\text{CORE}} = 2.8V$ Intel 2 2 1 Intel 1 2 1 1 JP1 **JP14 JP14** 80503 80503 JP1 -233 -200 JP2 JP15 JP2 JP15 JP3 JP16 JP3 JP16 JP4 JP17 JP17 JP4 JP5 JP18 JP5 JP18 JP6 JP6 JP9 JP9 JP10 JP10

(B) OTHER CPU CLOCK SETTING RESERVED ON THE BOARD :

66MHz x 5	66MHz x 5.5	75MHz x 3.5	75MHz x 4	75MHz x 4.5
1 2	1 2	1 2	1 2	1 2
JP1	JP1	JP1	JP1	JP1
JP2	JP2	JP2	JP2	JP2
JP3	JP3	JP3	JP3	JP3
JP4	JP4	JP4	JP4	JP4
JP5	JP5	JP5	JP5	JP5
JP6	JP6	JP6	JP6	JP6
JP9	JP9	JP9	JP9	JP9
JP10	JP10	JP10	JP10	JP10

75MHz x 5	83MHz x 3.5	83MHz x 4	83MHz x 4.5	83MHz x 5
1 2	1 2	1 2	1 2	1 2
JP1	JP1	JP1	JP1	JP1
JP2	JP2	JP2	JP2	JP2
JP3	JP3	JP3	JP3	JP3
JP4	JP4	JP4	JP4	JP4
JP5	JP5	JP5	JP5	JP5
JP6	JP6	JP6	JP6	JP6
JP9	JP9	JP9	JP9	JP9
JP10	JP10	JP10	JP10	JP10

83MHz x 5.5	95MHz x 3	95MHz x 3.5	95MHz x 4	95MHz x 4.5	
1 2	1 2	1 2	1 2	1 2	
JP1	JP1	JP1	JP1	JP1	
JP2	JP2	JP2	JP2	JP2	
JP3	JP3	JP3	JP3	JP3	
JP4	JP4	JP4	JP4	JP4	
JP5	JP5	JP5	JP5	JP5	
JP6	JP6	JP6	JP6	JP6	
JP9	JP9	JP9	JP9	JP9	
JP10	JP10	JP10	JP10	JP10	

95MHz x 5	95MHz x 5.5	100MHz x 3.5	100MHz x 4	100MHz x 4.5	
1 2	1 2	1 2	1 2	1 2	
JP1	JP1	JP1	JP1	JP1	
JP2	JP2	JP2	JP2	JP2	
JP3	JP3	JP3	JP3	JP3	
JP4	JP4	JP4	JP4	JP4	
JP5	JP5	JP5	JP5	JP5	
JP6	JP6	JP6	JP6	JP6	
JP9	JP9	JP9	JP9	JP9	
JP10	JP10	JP10	JP10	JP10	

100MHz x 5	100MHz x 5.5
1 2	1 2
JP1	JP1
JP2	JP2
JP3	JP3
JP4	JP4
JP5	JP5
JP6	JP6
JP9	JP9
JP10	JP10

(C) OTHER CPU VOLTAGE SETTING RESERVED ON THE BOARD:

$V_{\text{CORE}} = 3.4 \text{V}$	$V_{\text{CORE}} = 3.1V$	$V_{\text{CORE}} = 3.0V$	$V_{\text{CORE}} = 2.7V$	$V_{\text{CORE}} = 2.6V$	
1 2	1 2	1 2	1 2	1 2	
JP14	JP14	JP14	JP14	JP14	
JP15	JP15	JP15	JP15	JP15	
JP16	JP16	JP16	JP16	JP16	
JP17	JP17	JP17	JP17	JP17	
JP18	JP18	JP18	JP18	JP18	

$V_{\text{CORE}} = 2.5 V$	$V_{\text{CORE}} = 2.4V$	$V_{\text{CORE}} = 2.3V$	$V_{\text{CORE}} = 2.1V$	$V_{\text{CORE}} = 2.0 V$	
1 2	1 2	1 2	1 2	1 2	
JP14	JP14	JP14	JP14	JP14	
JP15	JP15	JP15	JP15	JP15	
JP16	JP16	JP16	JP16	JP16	
JP17	JP17	JP17	JP17	JP17	
JP18	JP18	JP18	JP18	JP18	

$V_{\text{CORE}} = 1.9V$	$V_{\text{CORE}} = 1.8V$	$V_{\text{CORE}} = 1.7V$	$V_{\text{CORE}} = 1.6V$	
1 2	1 2	1 2	1 2	
JP14	JP14	JP14	JP14	
JP15	JP15	JP15	JP15	
JP16	JP16	JP16	JP16	
JP17	JP17	JP17	JP17	
JP18	JP18	JP18	JP18	

(D) JP12Clear CMOS button

<u>Pin #</u>	<u>Function</u>
1 - 2	Normal Operation
2 - 3	Clear CMOS

Note: Improper BIOS setting may cause hang-up to the PC system, Should it be happened, you can use JP12 to clear the information which is stored in the CMOS memory and get the PC system back to normal status. Improper connection may cause permanent damage to the mainboard. Please refer to the following steps to clear the CMOS

- 1. Unplug the AC power cable from the PC system.
- 2. Put the mini jumper on pin 2-3 of JP12 around 3 to 5 seconds will clear the CMOS data, and then return it to the original position (pin 1-2).
- 3. Re-connect the AC power cable.

(E) JP7, JP8 DRAM Clock selection

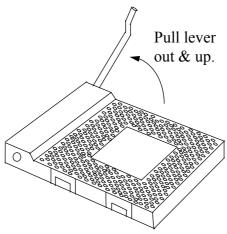
JP7, JP8	SDRAM CLOCK SELECT
1 2 JP7 JP8	SDRAM CLOCK = CPU CLOCK
1 2 JP7 JP8	SDRAM CLOCK = AGP CLOCK

3.3 INSTALLING A CPU ONTO THE ZIF SOCKET

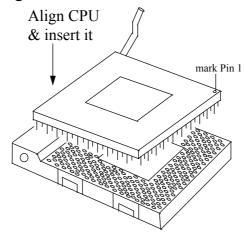
The ZIP type Socket for CPU is the so called Socket 7. It is designed for the Pentium or other equivalent processors. When inserting the Pentium processor onto the Socket 7, certain precautionary steps must be followed. The following diagrams will show you how to install the CPU step by step.

1. Make sure the ZIF socket level is up.

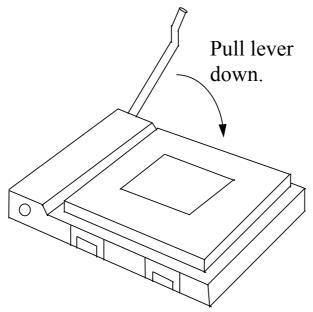
To raise the lever, pull it out to the side a little and raise it as far as it will go. Pin 1 is at the arm corner.



2.Align the CPU and socket pin 1 corners. Match the processor corner containing the blunt edge and the white dot to the socket corner with the distinctive pin arrangement. The pins on the bottom should have aligned with the inner 3 rings of holes in the socket, Place the CPU into the socket and it will goes into the socket easily. If it won't, pull the level up a little more and try again.



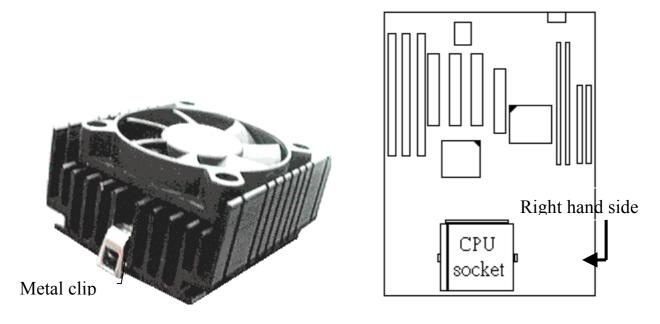
3.Press the lever down. The plate will slide forward. You will feel some resistance as the pressure starts to secure the CPU in the socket. When the CPU is installed, the lever will snap into place at the side of the socket.



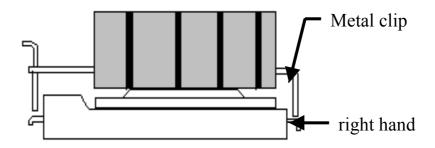
3.4 INSTALLATION OF CPU COOLING FAN

Improper installation of CPU cooling fan may cause serious damage to the motherboard. Please follow the procedures carefully:

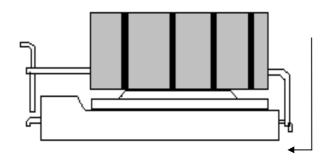
1. There is a metal clip attached to the CPU cooler as shown below.



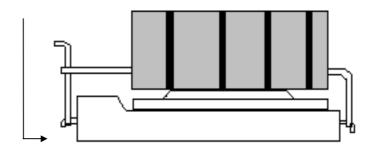
2.Place the CPU cooler squarely on the top of CPU.



3. Hook the right hand side clip to the CPU socket first.



4. Push down the opposite side of the metal clip firmly and carefully to lock the cooler in place.

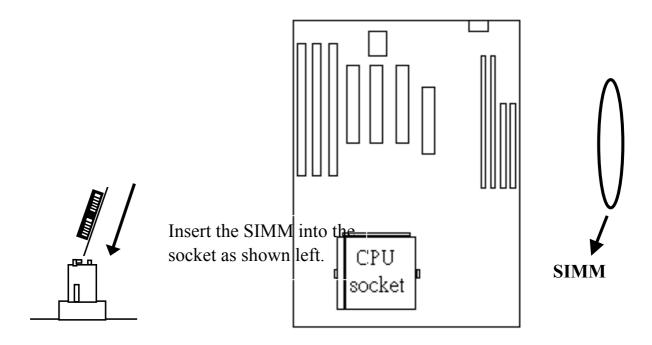


3.5 UPGRADE THE SYSTEM MEMORY

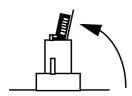
There are two 72-pin SIMM sockets (SIMM1, SIMM2) and two 168-pin DIMM sockets (DIMM1, DIMM2) on the mainboard where we can install maximum 1GB memory on the mainboard. Please refer to the following sections to see the details. Upgradable from 8MB to 1GB.

3.5.1 Installing a SIMM module

1.

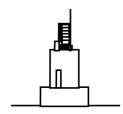


2.



Push the SIMM module forward onto the positioning pins.

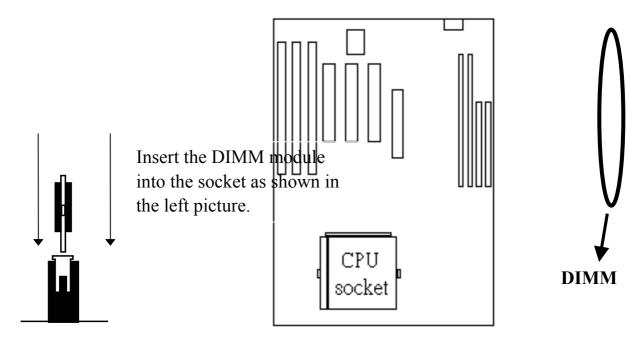
3.



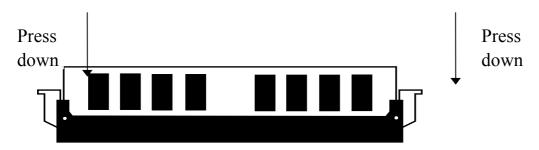
The retaining clips should fit over the edge and hold the SIMM in place.

3.5.2 Install the DIMM Module

1.



2 Extract the DIMM module from the DIMM socket.



3.5.3 **Suggested Memory Modules**

This mainboard has three banks of main memory (bank0 - 2) on board, (using two 72-pin SIMM sockets - SIMM 1-2, or two 168-pin DIMM sockets - DIMM 1-2) each bank can be single-sided or double-sided, 8MB up to 1GB of local memory can be populated on the board. Standard fast page mode (FPM), Extended Data Out (EDO) and synchronous DRAM (SDRAM) memory are all supported by this mainboard.

The suggested DRAM modules to use on this mainboard is shown as following. :

(1) FPM and EDO memory	:	512Kbx32	(2MB),	1Mbx32	(4MB),
		2Mbx32	(8MB),	4Mbx32	(16MB),
		8Mbx32	(32MB),	16Mbx32	(64MB).
(2) SDRAM memory	:	1Mbx64	(8MB),	2Mbx64	, ,,
		4Mbx64	(32MB),	8Mbx64	(64MB),

16Mbx64 (128MB).

The DC voltage are different on SIMM and DIMM subsystem. Please refer to the followings for the details. Please make sure to check it with your memory module before you can install it on to the mainboard.

(1) SIMM1- SIMM2: +5V DC (2) DIMM1- DIMM2: +3.3V DC

HARDWARE SETUP

MVP3 SYSTEM BOARD

In order to make the mainboard working, at least one bank of memory have to be installed on the board. The "BANK" is the definition of the memory subsystem addressing. Please refer to the following for the definition of "BANK"

BANK0: DIMM 1 BANK1: DIMM 2

BANK2: SIMM 1 and SIMM 2

This mainboard supports EDO, FPM and SDRAM types of memory module. When installing memory modules, you don't have to start from Bank0 first. Basically, the memory can be populated on the board in any order and the system board will detect the memory installed on the board automatically.

So you can install a DIMM module onto either Bank0 or Bank 1 first and afterward you may upgrade your system memory by plugging in another DIMM module in the DIMM socket and need not to worry about the memory type which is installed on the board.

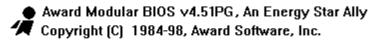
However, when you are installing the memory modules in the SIMM sockets, you have to make sure that the module must be the same type. The reason is because SIMM1 and SIMM2 are defined as Bank 2 and the memory installed in the same bank must be the same type. So you will have to install two SIMM modules in Bank2 to make the mainboard working.

4. AWARD BIOS SETUP

4.1 GETTING STARTED

When the system is powered on or reset, the BIOS will execute the Power-On Self Test routines (POST) and checks the functionality of every component in the PC system. During the POST, you will see a copyright message on the screen followed by a diagnostics and initialization procedure. (If an EGA or VGA card is installed, the copyright message of the video card maybe displayed on the screen first.) When the system detects any error, it will gives a series of beeping sounds or display the error message on your screen.

Normally, the following screen will be displayed when the system is powered on:



xx/xx/xx xxxxxxxxxxxx [YEAR 2000 READY]

xxxxxxxxxx CPU Found Memory Test: xxxxxXK OK

Award Plug and Play BIOS Extension v1.0A Copyright (C) 1998, Award Software, Inc.

Press DEL to enter SETUP xx/xx/xx-VP3-586B-xxxx-2A5LEXXX-00

Fig. 4-1 Initial Power-On screen.

AWARD BIOS SETUP

MVP3 SYSTEM BOARD

After the POST routines are completed, you will find the following message appears on the lower-left screen:

"Press **DEL** to enter SETUP"

To execute the Award BIOS Setup program, press the **DEL** key and the "MAIN MENU" of the BIOS setup utility as shown in Fig 4-2 will be triggered.

4.2 MAIN MENU

ROM PCI / ISA BIOS (2A5LEXXX) CMOS SETUP UTILITY AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	SUPERVISOR PASSWORD				
BIOS FEATURES SETUP	USER PASSWORD				
CHIPSET FEATURES SETUP	IDE HDD AUTO DETECTION				
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP				
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING				
INTEGRATED PERIPHERALS					
LOAD SETUP DEFAULTS					
ESC: Quit	$\uparrow \downarrow \leftarrow \rightarrow$: Select Item				
F10 : Save & Exit Setup	(Shift)F2 : Change Color				
Time, Date, Hard Disk Type					

Fig. 4-2 CMOS SETUP MAIN MENU screen.

4.3 CONTROL KEYS

Listed below is an explanation of the keys displayed at the bottom of the screens which will be used in the BIOS SETUP program :

Arrow Keys: Use the arrow keys to move the cursor to the desired item.

Enter : To select the desired item.

F1 : Display the help screen for the selected feature.

(Shift)F2 : To change the screen color, total 16 colors.

ESC : Exit to the previous screen.

PgUp(-)/PgDn(+) : To modify or change the default value of the highlighted item.
F7 : Loads the SETUP default values from BIOS default table, (only

for the current page will be recovered)

F10 : Save all changes made to CMOS RAM in the MAIN MENU.

The following sections shows all the screens which you will find in the CMOS SETUP routine, each figure contains the setup items and its default settings. At the bottom of some screen display, you may find the description of all function key which you can use it to change the settings. If you are not quite sure of the definition for some specific items, please consult your mainboard supplier for details.

4.4 STANDARD CMOS SETUP

ROM PCI / ISA BIOS (2A5LEXXX) STANDARD CMOS SETUP AWARD SOFTWARE, INC.

Date (mm : dd : yy)	Sat	Jul	4	1998				
Time (hh: mm: ss)	08	: 35	: 45					
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	Auto	0	0	0	0	0	0	Auto
Primary Slave	None	0	0	0	0	0	0	
Secondary Master	Auto	0	0	0	0	0	0	Auto
Secondary Slave	None	0	0	0	0	0	0	
Drive A : 1.44M,	Drive A : 1.44M, 3.5 in.							
Drive B : None					Base	Memory	: 640	K
					Extended	Memory	: xxxxxx	K
					Other	Memory	: xxxxxx	K
Video : EC	GA/VGA	1			Total	Memory	: xxxxxx	K
Halt On : All	l Errors							
ESC : Quit		Λ Ψ·	←→ :	Select It	em PU	J/PD/+/- :	Modify	
F1 : Help		(Shif	t)F2 :	Change	Color			

Fig. 4-3 STANDARD CMOS SETUP screen.

MODE:

The BIOS on the mainboard is the updated one and which provides three different modes to support both normal size IDE hard disk drive and the hard disk drive which is above 528MB:

- NORMAL: For IDE hard disk drives which is smaller than 528MB.
- LBA : For IDE hard disk drive which is above 528MB (ideally, it can be as big as 8.4GB) that use Logic Block Addressing (LBA) mode.
- Large : For IDE hard disks size larger then 528MB but it does not support the LBA mode.

MVP3 SYSTEM BOARD

Note: Large mode is a new technology and it is not fully supported by most operation systems so far. So only MS-DOS is recommended on such hard disk drive. Fortunately, such hard disk drive is not very common nowadays.

Note: Some certain operation system (like SCO-UNIX) will have to choose the "NORMAL" mode when installation.

4.5 BIOS FEATURES SETUP

ROM PCI / ISA BIOS (2A5LEXXX) BIOS FEATURES SETUP AWARD SOFTWARE, INC.

	_		<i>,</i>
Virus Warning	:	Disabled	Video BIOS Shadow : Enabled
CPU Internal Cache	:	Enabled	C8000-CBFFF Shadow : Disabled
External Cache	:	Enabled	CC000-CFFFF Shadow : Disabled
Quick Power On Self Test	:	Enabled	D0000-D3FFF Shadow : Disabled
Boot Sequence	:	A,C,SCSI	D4000-D7FFF Shadow : Disabled
Swap Floppy Drive	:	Disabled	D8000-DBFFF Shadow : Disabled
Boot Up Floppy Seek	:	Enabled	DC000-DFFFF Shadow : Disabled
Boot Up NumLock Status	:	On	
Gate A20 Option	:	Fast	
Memory Parity/ECC Check	:	Enabled	
Typematic Rate Setting	:	Disabled	
Typematic Rate (Chars/Sec)	:	6	
Typematic Rate (Msec)	:	250	
Security Option	:	Setup	
IDE Second Channel Control	:	Enabled	
PS/2 mouse function control	:	Enabled	ESC : Quit $\uparrow \downarrow \leftarrow \rightarrow$: Select Item
PCI/VGA Palette Snoop	:	Disabled	F1 : Help PU/PD/+/- : Modify
OS Select For DRAM > 64MB	3 :	Non-OS2	F5 : Old Values (Shift)F2 : Color
Report No FDD For WIN95	:	No	F7 : Load Setup Defaults
			_

Fig. 4-4 BIOS FEATURES SETUP screen.

MVP3 SYSTEM BOARD

Virus Warning: (Default values is "Disabled")

In order to avoid virus infection happens on your PC system, this mainboard provides the virus warning features in the BIOS. During and after the operation system is loaded, any attempt to write to the boot sector or partition table on the IDE hard disk drive will trigger this feature and give you some warning messages on the screen and then halt the system. When you find the message on your screen, please run an anti-virus program to see whether your system is infected by a virus or not.

Enabled: Activate automatically when the system boots up causing a warning message to appear on the screen when anything attempts to access the boot sector of the hard disk partition table.

Disabled: No warning message to appear when anything attempts to access the boot sector or hard disk partition table.

CPU Internal Cache:

This option enables CPU's internal (L1) cache memory. If you want to use the internal (L1) cache memory and external (L2) cache memory, you may use this option to enable or disable the setting.

External Cache:

This option enables L2 (secondary) external cache memory. If there is no external cache memory on board you have to select "disabled",

4.6 CHIPSET FEATURES SETUP

ROM PCI / ISA BIOS (2A5LEXXX) CMOS SETUP UTILITY CHIPSET FEATURES SETUP

Bank 0/1 DRAM Timing : SDRAM 10ns OnChip USB : Enabled
Bank 2/3 DRAM Timing : FP/EDO 70ns USB Keyboard Support : Disabled

Bank 4/5 DRAM Timing : FP/EDO 70ns

SDRAM Cycle Length : 3

DRAM Read Pipeline : Enabled

Cache Rd+CPU Wt Pipeline : Enabled Cache Timing : Fast

Video BIOS Cacheable : Enabled
System BIOS Cacheable : Enabled
Memory Hole At 15Mb Addr. : Disabled
AGP Aperture Size : 64M

Auto Detect DIMM/PCI CLK : Enabled

Spread Spectrum : Disabled

ESC : Quit $\uparrow \downarrow \leftarrow \rightarrow$: Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Values (Shift)F2 : Color

F7 : Load Setup Defaults

Fig. 4-5 CHIPSET FEATURES SETUP screen.

WARNING: The selection fields on this screen are provided for the professional technician who can modify the Chipset features to meet some specific requirement. If you do not have the related technical background, do not attempt to make any change except the following items.

Bank 0/1 (2/3, 4/5)DRAM Timing:

BANK 0/1: DIMM1 BANK 2/3: DIMM2

BANK 4/5: SIMM1 & SIMM2

The memory modules inserted onto the memory subsystem will be detected by the system BIOS automatically. For example, when you insert a SDRAM module onto DIMM1 or DIMM2, "SDRAM 10ns" will be displayed on the screen shown above. (It will be "FP/EDO 70ns" when SDRAM module is absent on the DIMM subsystem.) There are two optimum values suggested for the chipset and CPU registers. You may select either "60 ns" or "70 ns" for EDO and FPM modules (SIMM1 & SIMM2). Basically, "60 ns" will let you have better performance. However, "70ns" is recommended in most case causes it works with most DRAM modules, As for SDRAM modules, "10ns" is suggested for most modules. "8ns" will let you have begtter performance, but it may cause system unstable when SDRAM modules are not fast enough.

4.7 POWER MANAGEMENT SETUP

ROM PCI / ISA BIOS (2A5LEXXX) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.

Power Management	:	User Define	Primary INTR	: ON
PM Control by APM	:	Yes	IRQ3 (COM2)	: Primary
Video Off Option	:	Suspend->Off	IRQ4 (COM1)	: Primary
Video Off Method	:	Blank Screen	IRQ5 (LPT2)	: Primary
MODEM Use IRQ	:	3	IRQ6 (Floppy Disk)	: Primary
			IRQ7 (LPT1)	: Primary
** PM Timers **			IRQ8 (RTC Alarm)	: Disabled
HDD Power Down	:	Disabled	IRQ9 (IRQ2 Redir)	: Secondary
Doze Mode	:	Disabled	IRQ10 (Reserved)	: Secondary
Suspend Mode	:	Disabled	IRQ11 (Reserved)	: Secondary
** PM Events **			IRQ12 (PS/2 Mouse)	: Primary
VGA	:	OFF	IRQ13 (Coprocessor)	: Primary
LPT & COM	:	LPT/COM	IRQ14 (Hard Disk)	: Primary
HDD & FDD	:	ON	IRQ15 (Reserved)	: Disabled
DMA/master	:	OFF		
			ESC : Quit $\uparrow \downarrow \leftarrow \rightarrow$: Select Item
			F1 : Help PU/PD/+/	-: Modify
			F5 : Old Values (Shi	ft)F2 : Color
			F7 : Load Setup Defau	ults

Fig. 4-6 POWER MANAGEMENT SETUP screen.

WARNING: The selection fields on this screen are provided for the professional technician who can modify the Chipset features to meet some specific requirement. If you do not have the related technical background, do not attempt to make any change except the following items.

Power management:

This setting controls the Power Management functions. "User Define" will allow user to define his own parameters. "Min Saving" and "Max Saving" is a quick selection option which will fix the values of four parameters, including "Doze Mode", "Suspend Mode" and "HDD Power Down". When "Disable" is selected, it will disable all Power Management functions.

4.8 PNP/PCI CONFIGURATION

ROM PCI / ISA BIOS (2A5LEXXX) INTEGRATED PERIPHERALS AWARD SOFTWARE, INC.

PNP OS Installed : No	CPU to PCI Write Buffer : Enabled
Resources Controlled By: Manual	PCI Dynamic Bursting : Enabled
Reset Configuration Data: Disabled	PCI Master 0 WS Write : Enabled
	PCI Delay Transaction : Enabled
IRQ-3 assigned to: PCI/ISA PnP	PCI Master Read Prefetch: Enabled
IRQ-4 assigned to: PCI/ISA PnP	PCI #2 Access #1 Retry : Disabled
IRQ-5 assigned to: PCI/ISA PnP	AGP Master 1 WS Write : Enabled
IRQ-7 assigned to : PCI/ISA PnP	AGP Master 1 WS Read : Disabled
IRQ-9 assigned to: PCI/ISA PnP	
IRQ-10 assigned to : PCI/ISA PnP	PCI IRQ Actived By : Level
IRQ-11 assigned to : PCI/ISA PnP	Assign IRQ For USB : Enabled
IRQ-12 assigned to : PCI/ISA PnP	Assign IRQ For VGA : Enabled
IRQ-14 assigned to : PCI/ISA PnP	
IRQ-15 assigned to : PCI/ISA PnP	
DMA-0 assigned to : PCI/ISA PnP	
DMA-1 assigned to : PCI/ISA PnP	ESC : Quit
DMA-3 assigned to : PCI/ISA PnP	F1 : Help PU/PD/+/- : Modify
DMA-5 assigned to : PCI/ISA PnP	F5 : Old Values (Shift)F2 : Color
DMA-6 assigned to : PCI/ISA PnP	F7: Load Setup Defaults
DMA-7 assigned to : PCI/ISA PnP	

Fig. 4-7 PNP/PCI CONFIGURATION setup screen.

WARNING: The selection fields on this screen are provided for the professional technician who can modify the Chipset features to meet some specific requirement. If you do not have the related technical background, do not attempt to make any change except the following items.

MVP3 SYSTEM BOARD

Resources Controlled by:

Manual: The system BIOS will not refer to the ESCD data to assign IRQ & DMA.

Instead, it will refer to the information recorded in this field when assigning the IRQ & DMA resource. (Anyhow, the system BIOS will always refer to

the ESCD data to assign the I/O and memory space resources).

Auto: The system BIOS will refer to the ESCD segment for all legacy information.

Reset Configuration Data:

Disabled: The system BIOS will do nothing.

Enabled: The system BIOS will clear/reset the ESCD during "POST". After clearing

the ESCD, the system BIOS will then change this item's value back to

"Disable", otherwise, the ESCD will become useless.

There are only 15 IRQs and 8 DMAs available on the mainboard and most of them are assigned for some specific purposes. Sometimes, user may feel like to have some more IRQ and DMA in order to install the new add on cards. In this case, you may use this field to assign some certain IRQ and DMA to "PCI/ISA PnP" so that the new add on card will find the free IRQ or DMA available for it.

Legacy: The system BIOS will skip and never assign the specified IRQ/DMA

ISA resource to PCI or ISA PnP devices and the IRQ and DMA can only be sued

by their specified Legacy ISA cards.

PCI/ISA: When the "PCI/ISA PnP" is been selected, the related IRQ and DMA

PnP will be released and they can be used by other PCI or ISA devices.

Whenever there is the new PCI or ISA devices plugged onto the

mainboard, the system BIOS will detect it and assign a free IRQ or DMA

for the new devices.

Note: Most IRQ and DMA have its own purpose and they can not be assigned to "PCI/ISA PnP". For example, IRQ14 and IRQ15 are used by the onboard IDE device. If you change the setting on IRQ14 and IRQ15, you will be unable to connect the hard disk drive or CD-ROM drive to the IDE interface on the mainboard. So please make sure to check the IRQ and DMA assignment in your system before you proceed to do the setting. For instance, if you do not have the printer (IRQ7) or PS/2TM mouse (IRQ12) connected to your PC system, you may assign IRQ7 and IRQ12 to "PCI/ISA PnP" so that you can have more IRQs available for new add on cards.

Explanation for technical issue:

PnP device:

- Device that has Plug & Play compatibility. That means it will request for DMA, IRQ, I/O and Memory from the PnP BIOS and all these requests can be relocatable. In other words, these devices do not utilize any fixed resources.
- All PCI devices and all ISA PnP devices are PnP devices.

Legacy device:

- A legacy device is a device that all its resources are fixed by hardware (or selected by jumpers).
- All ISA Non-PnP devices are legacy device.

Extended System Configuration Data (ESCD):

• A media between the user and the system BIOS for passing the legacy devices information's. This information is stored in the onboard NVRAM (flash ROM).

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4.9 INTEGRATED PERIPHERALS

ROM PCI / ISA BIOS (2A5LEXXX) INTEGRATED PERIPHERALS AWARD SOFTWARE, INC.

On-Chip IDE First Channel	:	Enabled	Onboard Parallel Port : 378 / IRQ 7
On-Chip IDE Second Channel	:	Enabled	Onboard Parallel Mode : SPP
IDE Prefetch Mode	:	Enabled	
IDE HDD Block Mode	:	Enabled	
IDE Primary Master PIO	:	Auto	
IDE Primary Slave PIO	:	Auto	
IDE Secondary Master PIO	:	Auto	
IDE Secondary Slave PIO	:	Auto	
IDE Primary Master UDMA	:	Auto	
IDE Primary Slave UDMA	:	Auto	
IDE Secondary Master UDMA	:	Auto	
IDE Secondary Slave UDMA	:	Auto	
Init AGP Display First	:	PCI Slot	
Onboard FDC Controller	:	Enabled	
Onboard Serial Port 1	:	3F8 / IRQ 4	ESC : Quit $\uparrow \downarrow \leftarrow \rightarrow$: Select Item
Onboard Serial Port 2	:	2F8 / IRQ 3	F1 : Help PU/PD/+/- : Modify
UART 2 Mode	:	Standard	F5 : Old Values (Shift)F2 : Color
			F7: Load Setup Defaults

Fig. 4-8 INTEGRATED PERIPHERALS setup screen.

WARNING: The selection fields on this screen are provided for the professional technician who can modify the Chipset features to meet some specific requirement. If you do not have the related technical background, do not attempt to make any change except the following items.

UART 2 Mode:

This setting determines the IR port (CN10) function mode. Supports both HPSIR and ASKIR.

Onboard Parallel Mode:

This setting determines the onboard parallel port (CN7) transmission mode. Supports either SPP, EPP, ECP, or ECP+EPP.

4.10 LOAD SETUP DEFAULTS

If you lost the CMOS data or you don't know how to complete the setup procedure, you may use this option to load the SETUP default values from the BIOS default table. It is easy to load the default value, simply highlight the "LOAD SETUP DEFAULTS" field and then press the "Enter" key, when you see the "LOAD SETUP DEFAULTS (Y/N)" displayed on the screen, response to it with "Y" and then press the "Enter" key. The SETUP default values will be loaded. Basically, the SETUP default settings are the best-case values that will optimize system performance and increase system stability.

In case that the CMOS data is corrupted, the SETUP DEFAULTS settings will be loaded automatically when you press the "Del" key and enter the main setup screen. So you may select "SAVE & EXIT SETUP" to leave setup program and the system is loaded with the default settings.

4.11 SUPERVISOR PASSWORD / USER PASSWORD

The "SUPERVISOR PASSWORD" and "USER PASSWORD" will be used to check the authority when power-on. Whenever there is the password stored in either of these fields, the correct password will be requested so that the PC system will continue to load the operation system.

You can enter up to eight alphanumeric characters here. When you have typed in the password and pressed the "Enter" key, you will be asked to reconfirm your password again to complete password setup. If you press the "Enter" key twice without any alphanumeric character entered, the PASSWORD will be disabled.

If the "User Password" and the "Supervisor Password" are both enabled and they have different password setup, "Supervisor Password" is always has the higher priority, Basically, an "User" is only authorized to change the content of "User Password", while a "Supervisor" has the authorization to dominate all settings.

4.12 IDE HDD AUTO DETECTION

In order to make the IDE hard disk known to the system, you need to tell the system what kind of hard disk is connected to the mainboard by giving a set of hard disk parameters. Sometimes it is not easy for users to find the proper parameters for their IDE hard disk drive. In order to help users to find the parameters, the system BIOS provides a convent way – the auto detection of IDE hard disk drive.

To run the auto detection program is extremely easy. Move the selection bar to "IDE HDD AUTO DETECTION" and then press "Enter", the system BIOS take over the job and try to detect the type of IDE hard disk. If it succeeds, you will see a list of hard disk with its related parameters. You may press on the "Y" key (or select one of the hard disk type listed on the screen). The system BIOS will transfer the parameters to the corresponding fields in the STANDARD CMOS SETUP menu and you have completed the IDE hard disk setup.

4.13 SAVE &EXIT SETUP

This option will save all setup values to CMOS RAM & EXIT SETUP routine, by moving the selection bar to "SAVE & EXIT SETUP" and pressing "Enter" key, then types "Y" and "Enter" key, the values will be saved and all the information will be stored in the CMOS memory, and then the setup program will be terminated and the system will start to reboot.

4.14 EXIT WITHOUT SAVING

This item exit the setup routine without saving any changed values to CMOS RAM, When you do not want to save your change to the CMOS memory, you may choose to run this option and the setting what you made in the BIOS setup routine will be given away.

Move the selection bar to "EXIT WITHOUT SAVING" and click on the "Enter" key, then you will be asked to confirm the action to exit, press the "Y" and "Enter" key, the setup program will be terminated and the system will start to reboot.

Printed in Taiwan Edition: 07 / 07 / 98