SOLTEK

The Soul Of Computer Technology

SL-65JVB/JVB-X USER MANUAL

USER NOTICE

Product Model	: SL-65JVB / 65JVB-X
Manual Revision	: V1.0
Release Date	: April 2000

This User's Guide & Technical Reference is for assisting system manufacturers and end-users in setting up and installing the mainboard.

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INTRODUCTION

1-1 ITEM LIST CHECKUP
- Motherboard
- Support CD
- User's Manual
- 2-in-1 Bonus Pack CD
- 2-in-1 Bonus Pack Manual

1-2 CPU
- Supports Intel® Celeron™ CPUs at 300A ~ 600MHz or higher.
- Supports Intel® FC-PGA Pentium !!! Coppermine CPUs at 233 ~ 750 MHz or higher.
- Supports VIA Cyrix III (Joshua) CPUs at 433/ 466/ 500/ 533MHz(PR rating).
- Supports CPU voltage Auto-Detect circuit.

1-3 CHIPSET
- VIA APOLLO PRO133A(VT82C694X system controller and VT82C596B PCI to ISA bridge).

- VIA VT82C694X system controller:
  - --- Supports seperately powered 3.3V(5V tolerant) interface to memory, AGP and PCI bus.
  - --- Single chip implementation for 64-bit Slot/Socket-370 CPU, 64-bit system memory, 32-bit PCI and 32-bit AGP interface.

--- Supports Socket-370 processors.
--- 66/100/133 MHz CPU Front Side Bus(FSB).
--- AGP v2.0 compliant.
--- Synchronous and pseudo-synchronous with the host CPU bus with optimal skew control

PCI	AGP	CPU	Mode
33MHz	66MHz	133MHz	4x synchronous
33MHz	66MHz	100MHz	3x synchronous
33MHz	66MHz	66MHz	2x synchronous

--- Windows95 OSR-2 VxD and integrated Windows98/NT5 miniport driver support.
--- 33MHz operation on the primary PCI bus.
--- 66MHz PCI operation on the AGP bus.
--- PCI-to-PCI bridge configuration on the 66MHz PCI bus.
--- PCI to system memory data streaming up to 132MHz.
--- PCI-2.1 compliant, 32bit 3.3V PCI interface with 5V tolerant inputs.

• VT82C596B PCI Integrated Peripheral Controller
--- Integrated ISA Bus Controller with integrated DMA, timer, and interrupt controller.
--- Integrated Keyboard Controller with PS2 mouse support.
--- Integrated UltraDMA33/66 master mode EIDE controller with enhanced PCI bus commands.
--- PCI-2.1 and PC98 compliant.
--- USB v1.1 and Intel Universal HCI v1.1 compatible.
--- Supports ATAPI compliant devices including DVD devices.
--- Supports PCI native and ATA compatibility modes.
--- ACPI v1.0 and APM v1.2 compliant.
--- Supports both ACPI(Advanced Configuration Power Interface) and legacy(APM) power management.

1-4 MAIN MEMORY
• Supports total memory from 8MB to 768MB (SDRAM).
• Provides 3pcs 168pin DIMM slots (3.3V unbuffered and 4 clock type).
• Supports SDRAM with 12ns/ 10ns /8ns speed.

1-5 BIOS
• Award BIOS.
• Supports Plug & Play (PnP).
• FLASH MEMORY for easy upgrade.

- Supports Advanced Power Management (APM) Rev 1.2 function.
- Supports Advanced Configuration Power Management Interface (ACPI) Rev 1.0 function.
- Year 2000 compliant.

1-6 MULTI-I/O FUNCTION

- One floppy port supports up to 2.88MB.
- 2x Built-in USB connectors.
- Ultra ATA33/66 bus master IDE supports up to 4 IDE devices. (Including ZIP / LS-120 floppy devices)
- 2x 16550A Built-in fast UART compatible serial port connectors.
- Built-in SPP / EPP / ECP parallel port connectors.
- Built-in standard IrDA TX / RX header.
- Peripherals boot function with ATX power.

1-7 FORM FACTOR

- ATX, 4 layers PCB, size: 19cm x 30.5cm.

1-8 OTHER FEATURES

- 65JVB-X provides Voice Diagnostic Function. (Please refer to the Chapter2, 2-4 section for the setting of *JP7*, *JP8* and *JP9*)

1-9.1 MOTHERBOARD LAYOUT: 65JVB

• Motherboard Default Setting: Celeron 300A/66 MHz or Pentium III 450/ 100MHz.
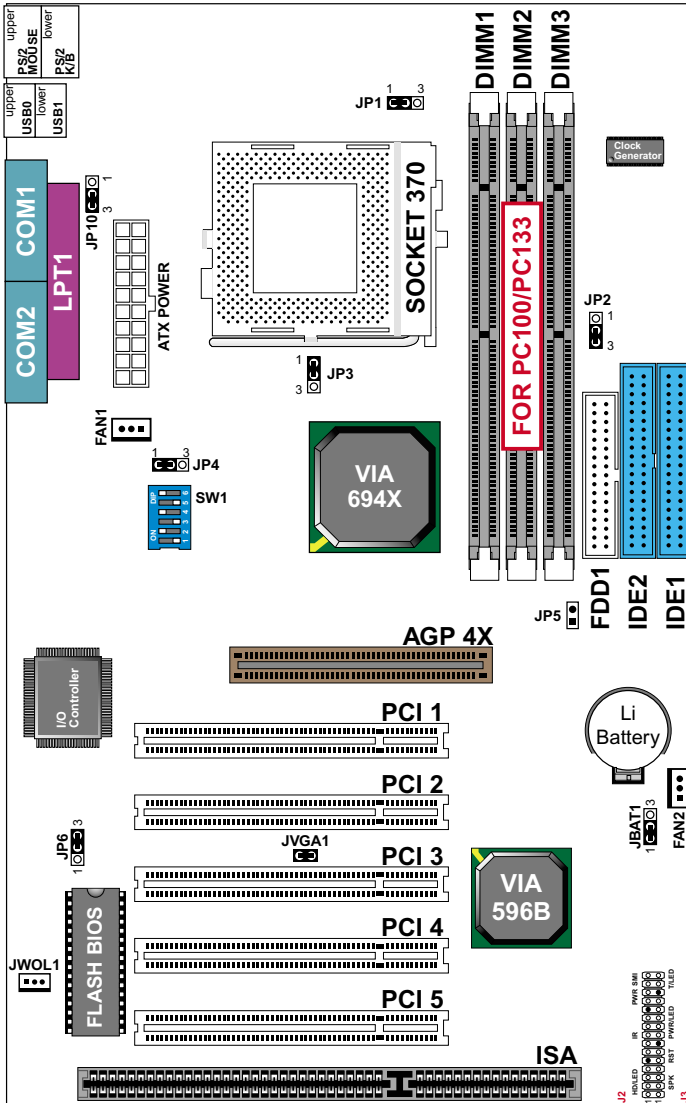
Using non-compliant memory with higher bus clock(over clocking)may severely compromise the integrity of system.

1-9.2 MOTHERBOARD LAYOUT: 65JVB-X

• Motherboard Default Setting: Celeron 300A/66 MHz or Pentium III 450/ 100MHz.

Using non-compliant memory with higher bus clock(over clocking)may severely compromise the integrity of system.

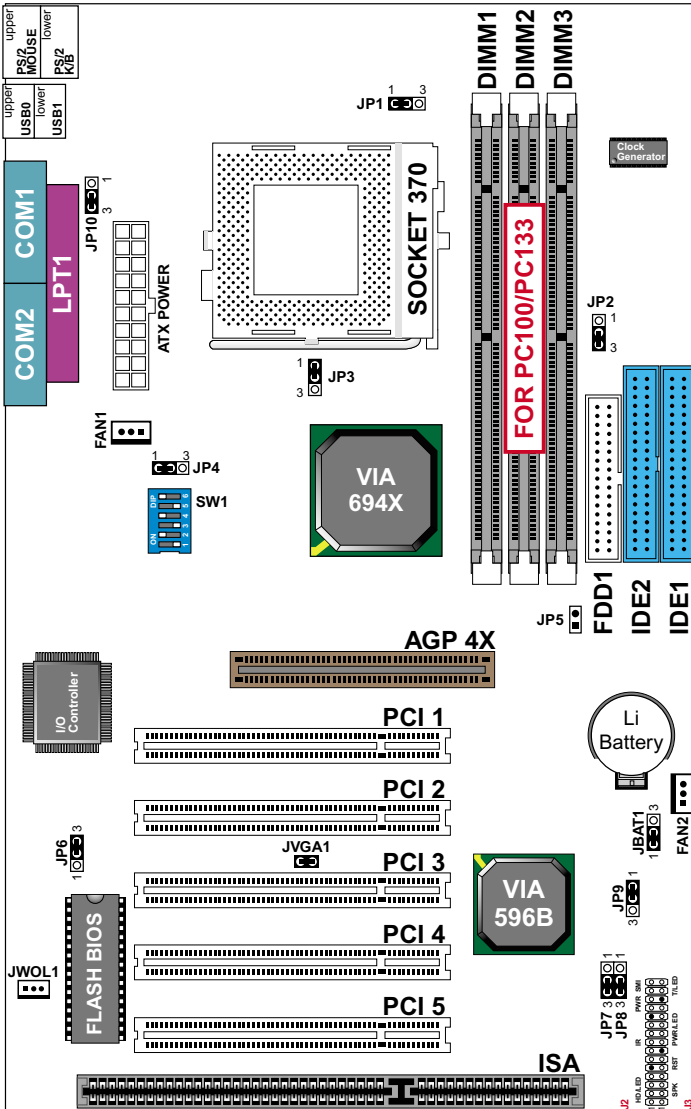# 1-10 CHIPSET SYSTEM BLOCK DIAGRAM

- The Apollo Pro133A chipset consists of the VT82C694X system controller and the VT82C596B PCI to ISA bridge. The system controller provides superior performance between the CPU, DRAM, AGP bus, and PCI bus with pipelined, burst and concurrent operation.
- The Apollo Pro133A is a high performance, cost-effective and energy efficient chipset for the implementation of AGP / PCI / ISA desktop personal computer systems from 66MHz, 100MHz and 133MHz based on 64-bit Socket-370 processors.
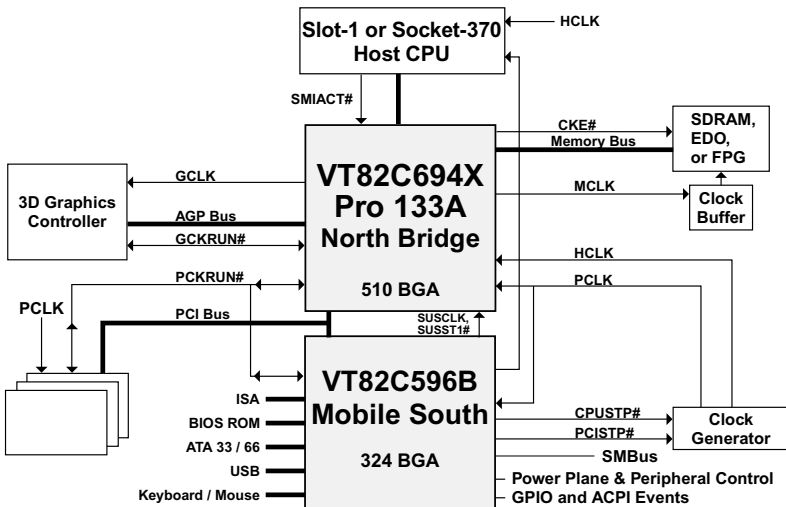
Apollo Pro133A System Block Diagram Using the VT82C596B Mobile South Bridge

CHAPTER 2
HARDWARE SETUP

2-1 VOLTAGE ADJUSTMENT

• **SW1 DIP1 ~ DIP4: Bus Ratio Select**

SW1 DIP1 ~ DIP4 SETTING			
3.0x		3.5x	
4.0x		4.5x	
5.0x		5.5x	
6.0x		6.5x	
7.0x		7.5x	
8.0x			

• SW1 DIP5 ~ DIP6: Bus Clock Select

SW1 DIP5 ~ DIP6 SETTING		
ON [1 2 3 4 5 6] OFF	100MHz	**JP2** [1 3]
ON [1 2 3 4 5 6]	66/100/133MHz Auto Select (default)	**JP2** [1 3]
ON [1 2 3 4 5 6]	133MHz	**JP2** [1 3]

• CPU Type Configuration

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

NOTE: "#" - Pentium III Processor for the PGA370 socket.
　　　"B" - 133MHz System Bus Frequency;
　　　"E" - processor with "Advanced Transfer Cache".

2-2 JUMPERS SETTING

FAN1/FAN2: ONBOARD FAN (12V)	
CPU FAN	**FAN1**
SYSTEM FAN	**FAN2**

JP1/JP3/JP4: CPU SELECT			
Intel CPU (default)	**JP1**	**JP3**	**JP4**
VIA Cyrix III (Joshua) CPU	**JP1**	**JP3**	**JP4**

JP5: FACTORY TEST	
Only for factory test.	**JP5**

JP6: POWER LOST RESUME	
Enabled	**JP6**
Normal (default)	**JP6**

JP7/JP8: VOICE DIAGNOSTIC LANGUAGE SELECT		
Chinese Language	**JP7**	**JP8**
English Language (default)	**JP7**	**JP8**
Japanese Language	**JP7**	**JP8**
Spanish Language	**JP7**	**JP8**

• The Voice Diagnostic Function (JP7, JP8, JP9) is only supported by 65JVB-X motherboard.

JP9: VOICE CONTROLLER CHIP

Enabled (default)	**JP9**	1 3
Disabled	**JP9**	1 3

JP10: KEYBOARD POWER ON

Disabled (default)	**JP10**	1 3
Enabled	**JP10**	1 3

- **If motherboard does not support keyboard power on function, the JP10 will be fixed by jumperwire.**
- **When the keyboard power on function shows any compatible problem, choose Disabled and report the keyboard model to your vender/manufacturer.**
- **Keyboard power on function must be set from the BIOS. Refer to the "Integrated Peripherals" section.**

JBAT1: CLEAR CMOS DATA

Clear CMOS Data	**JBAT1**	3 1
Retain Data (default)	**JBAT1**	3 1

JVGA1: VGA Card

Normal (default)	**JVGA1**
For PCI VGA card	**JVGA1**

- **When using AGP card, user should set this jumper to Normal mode (default). Open this jumper only when the system is not able to boot up.**

JWOL1 : WAKE ON LAN (WOL) FUNCTION

Connect the Wake On LAN signal from LAN card to JWOL1	**JWOL1**

- **The feature requires that Wake-On-LAN features are enabled and that your system has an ATX power supply with at least 720mA / +5V standby power.**

2-3 CONNECTORS

• In this sector we list all external connectors that user will use them.

2-3.1 J2 / J3

J2 | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

J3

HDD LED CONNECTOR	
PIN 1	+5V
PIN 2	HDD LED SIGNAL
PIN 3	HDD LED SIGNAL
PIN 4	+5V
DESCRIPTION	This connector supplies power to the cabinet's IDE activity LED. Read and write activity by devices connected to the Primary or SecondaryIDE connector will cause the LED to light up.

J2 | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

J3

INFRARED CONNECTOR	
PIN 6	INFRARED TRANSMIT SIGNAL
PIN 7	GND
PIN 8	INFRARED RECEIVE SIGNAL (Low Speed)
PIN 9	NONE
PIN 10	+5V
DESCRIPTION	This connector supports an optional wireless transmitting and receiving infrared module. This module mounts to a small opening on system cases that support this feature. User must also configure the setting through BIOS program "Peripheral Setup" to select whether UART2 is directed for use with COM2 or IrDA. Use the five pins and connect a ribbon cable from the module to the motherboard's IR connector according to the pin definitions.

J2 1 2 3 4 5 6 7 8 9 10 11 **12 13** 14 15

J3

ATX POWER SWITCH

PIN 12	ATX POWER SWITCH
PIN 13	GND
DESCRIPTION	The system power is controlled by a momentary switch connected to this lead. Pressing the button once will switch the system between ON and SOFT OFF. Pushing the switch while in the ON mode for more 4 seconds will turn the system off. The system power LED shows the status of the system's power.

J2 1 2 3 4 5 6 7 8 9 10 11 12 13 **14 15**

J3

SMI CONNECTOR

PIN 14	SMI(System Managment Interrupt) SIGNAL
PIN 15	GND
DESCRIPTION	This allows user to manually place the system into a suspend mode or "Green" mode, where system activity is decreased to save electricity and prolong the life of certain components when the system is not in use. This 2-oin connector connects to the case-mounted suspend switch. If you do not have a switch for the connector, you may use the "Turbo Switch". SMI is activated when it detects a short to open moment and therefore leaving it shorted will not cause any problems. This may require one or two presses depending on the position of the switch. Wake-Up can be controlled by settings in the BIOS but the keyboard will always allow wake-up(the SMI lead cannot wake up the system).

J2
J3 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

SPEAKER CONNECTOR

PIN 1	SPEAKER SIGNAL
PIN 2	NONE
PIN 3	GND
PIN 4	+5V
DESCRIPTION	This SPEAKER connector connects to the case-mounted speaker. Two sources (LINE OUT and SPEAKER) allow you to hear system beeps and warnings. Only SPEAKER allows you to hear system beeps before the integrated audio has been properly initialized.

J2
J3 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

RESET SWITCH CONNECTOR

PIN 5	RESET SIGNAL
PIN 6	GND
DESCRIPTION	RESET SWITCH connector connects to the case-mounted reset switch for rebooting your system without having to turn off your power switch. This is a preferred method of reboot to prolong the life of the system's power supply.

J2
J3 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

POWER LED CONNECTOR

PIN 8	+5V
PIN 9	NONE
PIN 10	GND
DESCRIPTION	This Power LED connector connects the system power LED, which lights when the system is powered on and blinks when it is in sleep mode.

J2

J3   1 2 3 4 5 6 7 8 9 10 **11 12** 13 14 15

KEYLOCK SWITCH	
PIN 11	KEYLOCK SIGNAL
PIN 12	GND
DESCRIPTION	This KEYLOCK function is provided to lock the keyboard for security purposes.

2-3.2 CHASSIS PANEL CONNECTOR

A. **B.** **C.**

D. **E.** **F.** **G.**
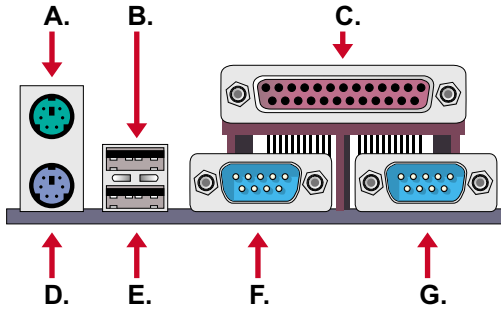
A : PS/2 MOUSE CONNECTOR
B : USB 0 CONNECTOR
C : LPT 1 CONNECTOR
D : PS/2 KEYBOARD CONNECTOR
E : USB 1 CONNECTOR
F : COM 1
G : COM 2

2-3.3 ATX POWER SUPPLY CONNECTOR

- This connector connects to an ATX power supply. The plug from the power supply only inserts in an orientation because of the different hole sizes. Find the proper orientation and push down firmly making sure that all pins are aligned.
- Remindering that your power supply should support at least 10mA on the 5V standby voltage. It may cause an difficulty to power on the system if the power supply can't support the load.
- **For Wake On LAN function, the power supply should support at least 720mA current.**

```
     +3.3 V ——          —— +3.3 V
    -12.0 V ——          —— +3.3 V
       GND ——           —— GND
Power Supply On ——      —— +5.0 V
       GND ——           —— GND
       GND ——           —— +5.0 V
       GND ——           —— GND
     -5.0 V ——          —— Power Good
     +5.0 V ——          —— +5.0 V Standby
     +5.0 V ——          —— +12.0 V
```
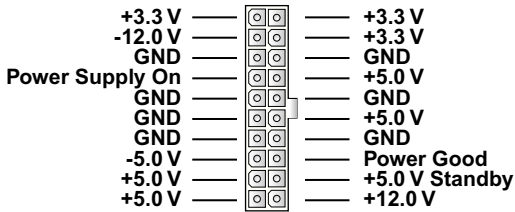
2-3.4 2nd USB CONNECTOR

• This motherboard provides 4 sets of USB connector. Besides 2 sets of them can be connected directly by USB device, the others are built onboard for user to extend the use.
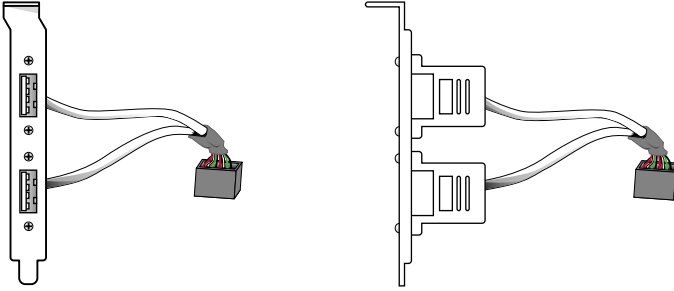
2nd USB Connector (Optional)
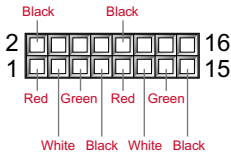
USB 2
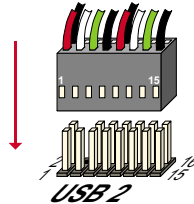
• When plugs the 2nd USB connector to USB2 port, user can see every color of wires to determine which is the first pin.

PIN	SIGNAL	PIN	SIGNAL
PIN 1	Vcc (Red)	PIN 2	GND (Black)
PIN 3	DO- (White)	PIN 4	N/A
PIN 5	DO+ (Green)	PIN 6	N/A
PIN 7	GND (Black)	PIN 8	N/A
PIN 9	Vcc (Red)	PIN 10	GND (Black)
PIN 11	D1- (White)	PIN 12	N/A
PIN 13	D1+ (Green)	PIN 14	N/A
PIN 15	GND (Black)	PIN 16	N/A

2-3.5 PS/2 Mouse and PS/2 Keyboard

PIN 6 : None
PIN 5 : Mouse Clock
PIN 4 : Vcc
PIN 3 : GND
PIN 2 : None
PIN 1 : Mouse Data

PS/2 MOUSE

PIN 6 : None
PIN 5 : Keyboard Clock
PIN 4 : Vcc
PIN 3 : GND
PIN 2 : None
PIN 1 : Keyboard Data
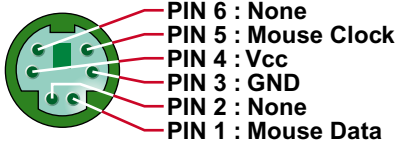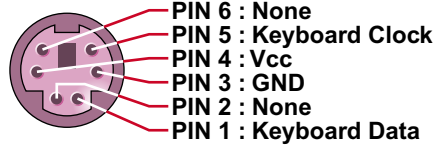
PS/2 KEYBOARD

2-3.6 IRQ DESCRIPTION

• The following table lists the default assignments for standard PC devices. Use this table when configuring your system and resolving IRQ conflicts.

IRQ	Function Description	Priority
IRQ 0	System Timer	1
IRQ 1	Keyboard Controller	2
IRQ 2	Programmable Interrupt	N/A
IRQ 3	Serial Port (COM 2)	11
IRQ 4	Serial Port (COM 1)	12
IRQ 5		13
IRQ 6	Floppy Disk Controller	14
IRQ 7	Parallel Port (LPT1)	15
IRQ 8	Real Time Clock (RTC)	3
IRQ 9		4
IRQ 10		5
IRQ 11		6
IRQ 12	PS/2 Mouse Port	7
IRQ 13	Coprocessor	8
IRQ 14	Primary IDE Channel	9
IRQ 15	Secondary IDE Channel	10

- Both ISA and PCI expansion cards may require IRQs. System IRQs are available to cards installed in the ISA expansion bus first, then any remaining IRQs are available to PCI cards. Currently, there are two types of ISA cards.
- The original ISA expansion card design, now referred to as "Legacy" ISA cards, requires that you configurate the card's jumpers manually and then install it in any available slot on the ISA bus. To see a map of your used and free IRQs in Windows98, the **Control Panel** icon in **My Computer**, contains a **System** icon, which gives you a **Device Manager** tab. Double-clicking on a specific hardware device gives you the **Resources** tab which shows the Interrupt number and address. Double-clicking Computer to see all the interrupts and addresses for your system. Make sure that no two devices use the same IRQ or your computer will experience problems when those two devices are in use at the same time.

2-4 VOICE DIAGNOSTIC FUNCTION - FOR 65JVB-X

• The Voice Diagnostic Function provides user with indispensable assist on troubleshooting while assembling your computer components. If there is any conflict or other potential problem triggers a boot-up failure, this voice controller chip will voice you realistically where the conflict/problem is, then user can remove the malfunction quickly.

• This function mainly provides 4 languages and their contents as following table:

English Voice Content

1. No memory module

2. Please check memory module

3. Please clear CMOS setting

4. Please check the Video adapter

5. Please check hard disk cable or setting

國語語音內容

1. 未安裝記憶體

2. 請檢查記憶體

3. 請清除 CMOS 設定

4. 請檢查顯示卡

5. 請檢查硬碟接線及設定

El Contenido Español de la Voz

1. No hay modulo de memoria

2. Por favor, chequea el modulo de memoria

3. Por favor, borra CMOS setting

4. Por favor, chequea la tarjeta de video

5. Por favor, chequea el cable o la instalacion del disco duro

日本語音內容

1. メモリーないじゃん（メモリーがありません）

2. メモリーだめだめ（メモリーをチェックして下さい）

3. CMOS だめっす（CMOS の内容をクリアして下さい）

4. VGA どう？（ビデオカードをチェックして下さい）

5. ハードディスクつながってる？
（HDD ケーブル又は設定をチェックして下さい）

CHAPTER 3
SOFTWARE SETUP

3-1 About Soltek Support CD

• In Soltek support CD, it contains most informations for user's requirement, such as Acrobat Reader, BIOS, User's Manual, Driver, Hardware Monitor, Patch and Utility etc,. User can browse the CD and get further details in regard of your motherboard. Of course, if you want to receive the newest message about your motherboard, you can browse our web site to get it.

3-2 HARDWARE MONITOR INSTALLATION

- Please put the CD attached to motherboard into the CD-ROM.
- There appears a welcome window as left screen.
- Click on " INSTALL DRIVER " item.

- Click on the " INSTALL VIA CHIPSET DRIVER ".

■ Click on the " INSTALL Hardware Monitor Utility ".

■ Press Next to continue.

■ The default setup destination is C:\VIAhm, press Next to continue.

■ Press Next to finish the VIA Hardware Monitor setup process.

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3-3 VIA CHIPSET DRIVER INSTALLATION (4-in1 Driver)

- Please put the CD attached to motherboard into the CD-ROM.
- There appears a welcome window as left screen.
- Click on " INSTALL DRIVER " item.

- Click on the " INSTALL VIA CHIPSET DRIVER ".
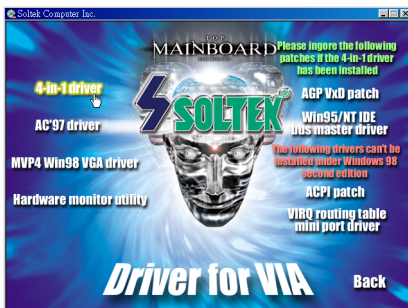
- Click on the " INSTALL 4-in-1 Driver ".

- Click on " Install 4in1 Driver" to continue.

- Press " Next " to continue.

- Press " Yes " to continue.

- Please select the checkbox as
  below.
  ☑Bus Master PCI IDE Driver
  ☑AGP VxD Driver
  ☐VIA Chipset Function's Registry
  ☐IRQ Routing Miniport Driver

Note: In Windows 95/98 environment, user doesn't need to add "*VIA Chipset Functions' Registry*" and "*IRQ Routing Miniport Driver*" items.
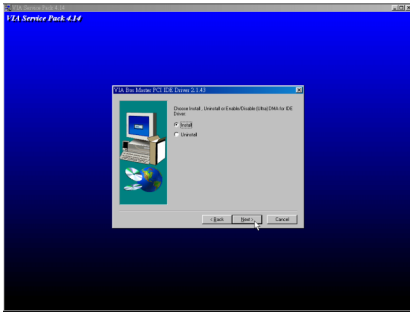
- Press Install to continue.
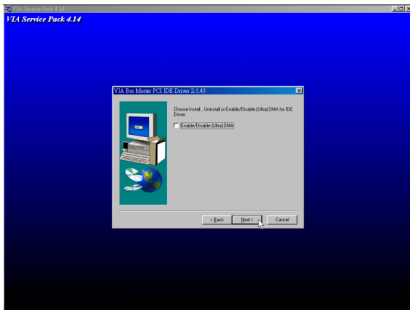
- We do not recommend user to select " Enable/Disable [Ultra] DMA ".

Note: Whether select this item or not, user has to enable the Hard Disk DMA function in Control Panel manually.
(For further details, please refer to next page)
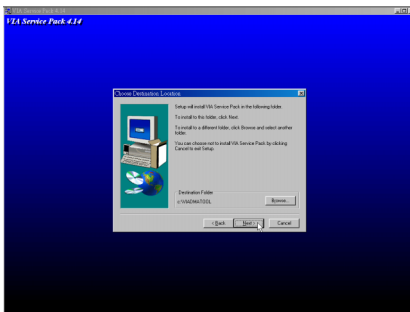
- The default setup destination is C:\VIADMATOOL, press Next to continue.
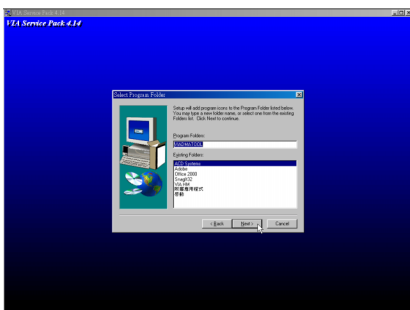
- Press Next to continue.
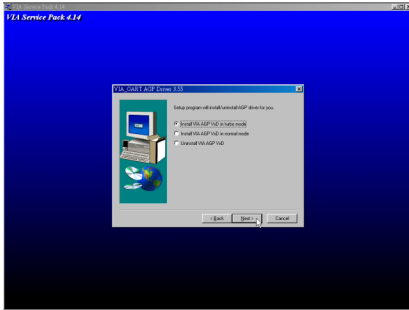
■ Select " Install VIA AGP VxD in turbo mode".
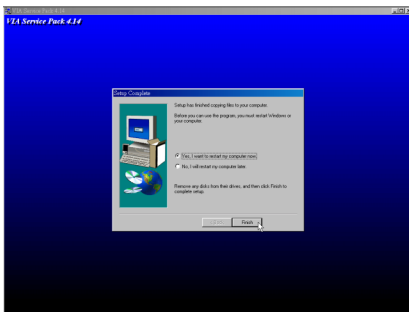
■ After all the setup process is finished, please restart your computer by clicking on Finish.

About Hard Disk DMA Function

Last but not least, user has to enable the Hard Disk DMA function. The process is below:

1. [Start] ⇨ [Setting] ⇨ [Control Panel] ⇨ [System] ⇨ [Device Manager]

2. In Device Manager, select [Disk Drivers] ⇨ [GENERIC IDE TYPEXX]

3. Select [Properties] for GENERIC IDE TYPEXX

4. In Properties, select [Settings]

5. In Options item, select the DMA checkbox

6. Restart your computer

CHAPTER 4
BIOS SETUP

4-1 INTRODUCE THE BIOS

- BIOS stands for Basic Input Output System. It is sometimes call ROM BIOS because it is stored in a Read-Only Memory (ROM) chip on the motherboard. BISO is the first program to run when you turn on your computer.
- BIOS performs the followin functions:
    1. Initializing and testing hardware in your computer (a process called "POST", for Power On Self Test)
    2. Loading and running your operating system.
    3. Managing SETUP for making changes in your computer.
    4. Helping your operating system and application programs to manage your PC hardware by means of a set of routiness called BIOS Run-Time Services.

4-2 WHAT IS BIOS SETUP

- Setup is an interactive BIOS program that you need to run when:
    1. Changing the hardware on your system. (for example: installing a new Hard Disk, etc.)
    2. Modifying the behavior of your computer. (for example: changing the system time or date, or turning special features on or off, etc.)
    3. Enhancing your computer's behavior. (for example: speeding up performance by turning on shadowing or caching.)

4-3 HOW TO RUN BIOS SETUP

- One way of running SETUP is to press a special function key or key combination during POST, before the operating system is loaded During POST, the BIOS usually displays a prompt such as:

        Press DEL to enter SETUP

4-4 WHAT IS CMOS

• CMOS is a special kind of memory maintained by a battery after you turn your computer off. The BIOS uses CMOS to store the settings you selected in SETUP. The CMOS also maintains the internal clock. Every time you turn on your computer, the BIOS looks in CMOS for the settings you selected and configures your computer accordingly. If the battery charge runs too low, the CMOS content will be lost and POST will issue a "CMOS invalid" or "CMOS checksum invalid" message. If this happens, you may have to replace the battery. After the battery is replaced, the proper settings will need to be stored in SETUP.

4-5 WHAT IS POST

• POST is an acronym for Power On Self Test. It is a traditional name for the routines that the BIOS uses to test and initializes the devices on your system when the PC is powered on. Its meanings has grown to include anything the BIOS does before the operating system is started.
Each of POST routines is assigned a POST code, an unique number which is sent to I/O port 080h before the routine is executed.

4-6 UPDATE THE BIOS

• **AWDFLASH.EXE** is a Flash EPROM Programming utility that updates the BIOS by uploading a new BIOS file to the programmable flash ROM on the motherboard. This file only works in DOS mode. To determine the BIOS version, check the release date displayed on the top of your screen during bootup. Newer dates represents a newer BIOS file.

4-6.1 BEFORE UPDATE THE BIOS

• It is recommended that you save a copy of the original motherboard BIOS along with a Flash EPROM Programming Utility (AWDFLASH. EXE) to a bootable floppy disk in case you need to reinstall the BIOS later.

4-6.2 UPDATE YOUR BIOS

1. Specify **FLOPPY** as the first device in the bootup sequence from the BIOS setup.
2. Put a empty 1.44" floppy disk into the floppy drive A:\.
3. Type *FORMAT A:\ /S* at the DOS prompt to create a bootable system floppy disk.
4. Put the Supplier CD into the CD-ROM drive, assuming that D:\ is

your CD-ROM drive.

5. Type *COPY D:\UTILITY\AWDFLASH.EXE A:* to copy the file *AWDFLASH.EXE* from CD-ROM to floppy disk,

6. Reboot your system from the floppy disk.

7. In the DOS mode, type *awdflash xxx.bin /sn/py/cc/r* and then press <Enter> to run flash program. (xxx.bin is depended on your motherboard model)

The parameters of AWDFLASH.EXE

```
/sn : No original BIOS backup
/py : Program flash memory
/cc : Clear CMOS data after programming
/r  : Reset system after programming
```

NOTE: User can type AWDFLASH /? to get further details about parameters. Wrong usage of parameter will damage the BIOS information, so that we strongly recommend user to leave parameters away unless you realize them.

---

8. Then appears a program window as below:

```
          FLASH  MEMORY  WRITER V7.07
   (C)Award Software 1999 All Rights Reserved

   For 694X-686A-2A6LJSN9C-O    DATE: 11/18/1999
      Flash Type -

File Name to Program : 




 Error Message:
```
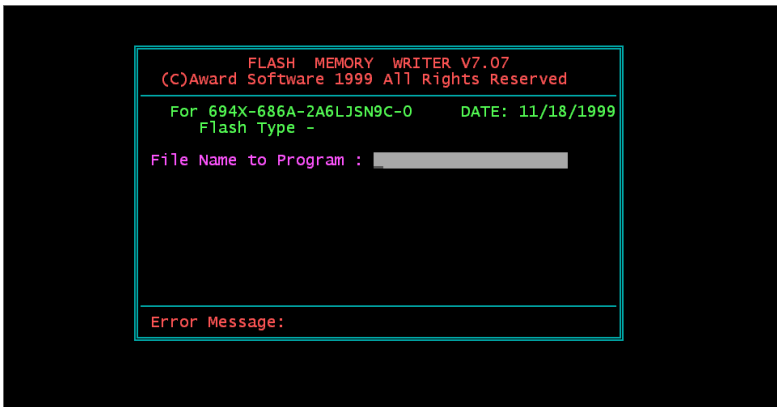
9. After updated, the system will reboot automatically.

10. Attention! You will see a message **" CMOS checksum error - Defaults loaded "** during booting. Please press **<Del>** to run BIOS program, then reload **"LOAD SETUP DEFAULTS"** and save it.

4-6.3 COMMON ERRORS

• Insufficient memory:

It means that there may be one or more memory managers have been loaded from floppy disk during booting. For solving this error, please

prefer the former page step 2. to format a pure bootable floppy disk.

• BIOS part number doesn't match:

When the BIOS chip is damaged, it will trigger this error. The only way to solve it is to change a new BIOS chip.

4-7 CMOS SETUP UTILITY

- This VIA 82C694X 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.

4-8 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

Date (mm:dd:yy)	Thu, Dec 30 1999	Item Help
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.

4-9 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

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 >

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.

4-10 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.

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Advanced Chipset Features

Bank 0/1 DRAM Timing	SDRAM 10ns	Item Help
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	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.

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.

4-11 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	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	The onboard IDE drive interfaces support IDE prefetching for faster drive accesses. If you install a primary and/or secondary add-in IDE interface, set this field to Disabled if the interface does not support prefetching. The choice: Enabled(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	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.

UART Mode Select   This item allows you to select UART mode.
The choice: Enabled, Disabled.

UART2 Duplex Mode   This item allows you to select the IR half/full duplex function.
The choice: Half (default) or Full.

RxD, TxD Active   This item allows you to determine the active of RxD, TxD.
The choice: 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   This item allows you to determine onboard parallel port controller I/O address setting.
The choice: 378H/IRQ7 (default), 3BCH/IRQ7, 278H/IRQ5 or Disabled.

Parallel Port Mode   Select an operating mode for the onboard parallel(printer) port. Select Normal, Compatible, or SPP unless yuou are certain your hardware and software both support one of the other available modes.
The choice: SPP, EPP, ECP, ECP+EPP.

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.

4-12 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.

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Power Management Setup

ACPI function	Enabled	Item Help
Power Management	Press Enter	Menu Level
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	This item allows you to enable/disable the Advanced Configuration and Power Management(ACPI). Enabled: Turn on ACPI function. Disabled (default): Turn off ACPI function.
Power Management	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	When enabled, an Advanced Power Management device will be activated to enhance the Max. Power Saving mode and stop the CPU internal clock. If Advanced Power Management(APM) is installed on your system, selecting Yes gives better power savings. If the Max. Power Saving is not enabled, this will be preset to No.

Video Off Option	When enabled, this feature allows the VGA adapter to operate in a power saving mode.

Always On	Monitor will remain on during power saving modes.
Suspend --> Off	Monitor blanked when the systems enters the Suspend mode.
Susp,Stby --> Off	Monitor blanked when the systems enters either Suspend or Standby modes.
All Modes --> Off	Monitor blanked when the systems enters any power saving mode.

Video Off Method	This determines the manner in which the monitor is blanked.

V/H SYNC+Blank	This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.
Blank Screen	This option only writes blanks to the video buffer.
DPMS	Select this option if your monitor supports the Display Power Management Signaling(DPMS) standard of the Video Electronics Standards to select video power management values.

Modem Use IRQ	This determines the IRQ in which the MODEM can use. The choice: 3, 4, 5, 7, 9, 10, 11, NA.

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	Menu Level
HDD & FDD	ON	
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).

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	
IRQ3 (COM 2)	Primary	Menu Level
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.

4-13 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*
> *except the boot device card when you select Yes on*
> *Non-PnP O.S.*

Reset Configura-
tion Choose Enabled or Disabled (default). Disable retains
Enabled PnP configuration data in BIOS and resets the PnP
configuration data in the BIOS.

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

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IRQ Resources

IRQ-3 assigned to	PCI/ISA PnP	Item Help
IRQ-4 assigned to	PCI/ISA PnP	Menu Level
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

		Item Help
DMA-0 assigned to	PCI/ISA PnP	Menu Level
DMA-1 assigned to	PCI/ISA PnP	
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.

4-14 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.

4-15 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>.

4-16 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>.

4-17 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.*

4-18 SAVE & EXIT SETUP

• Save & Exit Setup allows you to save all modifications you have speci-
fied 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.

4-19 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

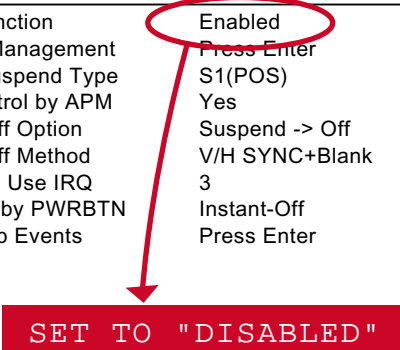## 1. INSTALLS SYSTEM ACPI MODE BY DEFAULT

- Microsoft has recently informed that the setup for Windows 98SE (Second Edition) will be auto-installed in ACPI mode for all ACPI-compliant BIOS code released on December 1, 1999 or later.

To install the system in APM mode:
- For those users who prefer not to use the ACPI mode, the system can also be installed successfully in the APM mode. APM installation can be specified in the Award CMOS Setup Men by doing the following:
1. Mover the cursor to the Power Management Setup screen.
2. Locate the ACPI function item.
3. Change the ACPI function value from "Enable" to "Disabled".

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Power Management Setup

ACPI function	Enabled	Item Help
Power Management	Press Enter	Menu Level
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	

SET TO "DISABLED"

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

4. Save the change and exit the screen.

To install the system in ACPI mode:
• To install the system in ACPI mode, simply leave the ACPI Function original value set to "Enabled".