V47

Socket-7 Mainboard

User's Manual

Model	**:V47**
Manual version	**: English, version 2.0**
Release Date	**: July 12, 1999**

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User's Notice

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FCC & DOC Compliance

Federal Communications Commission Statement

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

- ✧ This device may not cause harmful interference, and
- ✧ This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ✧ Re-orient or relocate the receiving antenna.
- ✧ Increase the separation between the equipment and the receiver.
- ✧ Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- ✧ Consult the dealer or an experienced radio/TV technician for help.

Warning! The use of shielded cables for the connection of the monitor to the graphics card is required to assure compliance with FCC regulations Changes or modifications to this authority to operate this equipment.

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SECTION 2: HARDWARE INSTALLATION

SECTION 3: CMOS SETUP UTILITY

SECTION 4.Audio & Video Driver/Utility

SECTION 5. Software Utility

SECTION 1.
PRODUCT INFORMATION

Thanks for purchasing V47 socket-7 mainboard.

This user's manual contains all the information and features that show you how to use the V47 mainboard. Please take a moment to familiarize yourself with the design and organization of this manual.

1-1 Manual Features

This manual is divided into the following four sections:

Section 1: Product Information

A brief overview of what comes in the mainboard package, the mainboard layout and the specification it appears.

Section 2: Hardware Installation

Tell you the usage of the mainboard jumpers and the connectors.

Section 3: CMOS Setup Utility

A summary of the mainboard CMOS (BIOS) Setting.

Section 4: Audio Driver/Utility

Install Audio Driver & Utility

1-2 Package Check List

This mainboard package contains the following items. Please inspect the package contents and confirm that everything is there. If anything is missing or damaged, call your vendor for instructions before operating.

The package includes:

- One V47 Mainboard

- One Floppy Interface Cable
- One IDE Interface Cable
- One Motherboard Resource CD
- One User's Manual

1-3 Mainboard Specifications

Form Factor	-MICRO-ATX form factor
Board Size	-244mm x 210mm
CPU	-Socket 7 for Intel Pentium™/ Pentium™ with MMX™, AMD K5™/K6™/K6™-2 with 3DNOW™, Cyrix/ IBM6x86MX™/MII and IDT/Centaur C6 CPUs -Supports 233/266/300/350/400MHz and faster -Supports CPU Clock Ratio: 1.5/2.0/2.5/3.0/3.5/4.0/4.5/5.0/5.5 -Supports CPU Clock Frequency: 66/70/75/80/83/95/100/105/110/115/120/124MHz
System Memory	-DIMM 168-pin x 3, SDRAM maximum 768MB -Support 66/100MHz SDRAM memory -Support ECC (1-bit error code correct) function
Chipset	-Via MVP4 support 66/100MHz host bus frequency
Display & Audio Functions	Integrates an AGP into the north bridge and the south bridge combines an AC-97 audio system.
System Bus/FSB	-66/100MHz -70/75/80/83/95/105/110/115/120/124MHz (Available for over-clocking)
Expansion Slots	-3 x PCI bus / 1 x ISA bus
Serial Port	-Two serial ports UART 16550 compatible

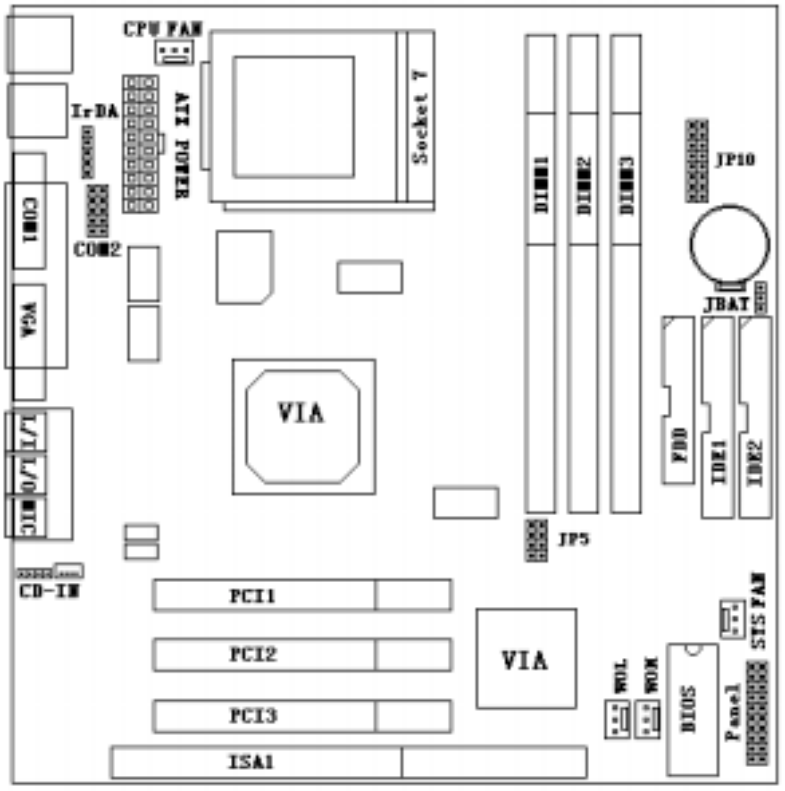
I. PRODUCT INFORMATION

Parallel Port	One parallel port supports: -SPP-standard parallel port -EPP-enhanced parallel port -ECP-extended capabilities port
Floppy Interface	Support drivers inches/format with: -3.5 inches-720KB/1.44MB/2.88MB -5.25 inches-360KB/1.2MB
IDE Interface	-An EIDE controller on the VIA VT82c686A provides IDE devices with PIO, bus master and UDMA33/66 operation mode -Dual IDE interface support up to four IDE devices
USB Interface	-Two USB ports supported -USB legacy keyboard function supported
PS/2 Mouse	-PS/2 mouse supported by connector onboard
Keyboard	-PS/2 keyboard supported by connector onboard
Sound	-Hardware assisted FM synthesis for legacy compatibility -Direct one game ports and one MIDI port interface
RTC and Battery	-RTC/CMOS setup build in chipset(south bridge) -Lithium (CR-2032) battery
Wake-Up-Function	-Modem ring wake up -LAN wake up -RTC wake up
Hardware Monitor	-Voltage monitor-Warning when system voltage (5V, 12V, 3.3V, VCORE) are abnormal -CPU and system thermal monitor-Warning when CPU and system temperature is higher than a predefined value
Power Connector	-Supports ATX (20-pin) power connector

I. PRODUCT INFORMATION

BIOS	-Award PnP BIOS -Year 2000 Compliance -Supports ACPI (Advanced Configuration Power Interface) -Supports DMI (Desktop Management Interface)
LED Indicator	-System power LED -HDD activity LED

1-4 Mainboard Layout



I. PRODUCT INFORMATION

Jumpers

1.	**JP5**	CPU External Frequency Selection
2.	**JP10(pin5-pin7)**	CPU Clock Ratio Selection
3.	**JP10(pin1-pin4)**	CPU Voltage Selection
4.	**JBAT**	Clear CMOS (Real Time Clock)

Expansion Sockets

1.	**DIMM 1**	Support 168-pin DIMM Memory
2.	**DIMM 2**	Support 168-pin DIMM Memory
3.	**DIMM 3**	Support 168-pin DIMM Memory

Expansion Slots

1.	**CPU**	Supporting Socket 7 CPU
2.	**ISA Slot 1**	16-bit ISA Bus Expansion Slot
3.	**PCI Slot 1 to Slot 3**	32-bit PCI Bus Expansion Slot

Connectors

1.	**PS/2 KB**	PS/2 Keyboard Connector
2.	**PS/2 Mouse**	PS/2 Mouse Connector
3.	**USB**	Universal Serial Bus Port 1 and Port 2
4.	**COM1/COM2**	Serial Port 1 / Serial Port 2
5.	**PRINTER**	Printer (Parallel) Port Connector
6.	**ATX POWER**	ATX Motherboard Power Connector
7.	**CPUFAN**	CPU Fan Connector
8.	**SYSFAN**	System Fan Connector
9.	**Floppy**	Floppy Drive Connector
10.	**Primary IDE**	Primary IDE Connector
11.	**Secondary IDE**	Secondary IDE Connector

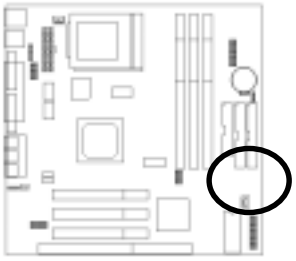
12. IR	Infrared Port Connector
13. Wake on Modem	Internal Modem Ring-On
14. Wake on LAN	LAN wake up connector
15. Panel:	
- **PWR LED**	ATX Power LED Connector
- **SPEAKER**	Chassis Speaker Connector
- **HDD LED**	HDD LED Connector
- **RESET**	Reset Switch Connector
- **PWR ON**	ATX Power Switch Connector

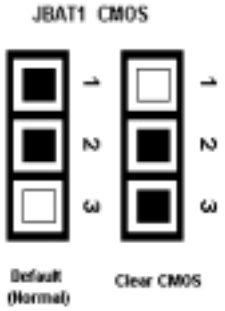
SECTION 2.
HARDWARE INSTALLATION

This section gives you a step-by-step procedure on how to install your system. Follow each section accordingly.

2-1 Jumper Settings

Please refer the following figures for the locations of the jumpers on the mainboard.





2-1.1 CMOS Clear Setting

To clear CMOS, please follow the steps below:

1. Power off the system and unplug the chassis AC power cord.
2. Short JBAT1 at pin 2-3 for few seconds.
3. Set JBAT1 back to its Normal position at pin 1-2.
4. Plug the AC power cord to the chassis.
5. Power on the system and load the BIOS setup default.

2-1.2 CPU Type Setting

This mainboard supports socket-7 Pentium series CPU. Install your CPU type with the following jumper settings.

- ***CPU Voltage:***

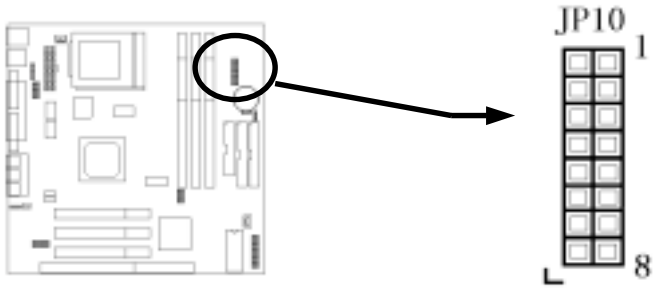
JP10-1, JP10-2, JP10-3, JP10-4 are used to select the CPU Voltage.

JP10-4	JP10-3	JP10-2	JP10-1	CPU Voltage
0	0	0	0	0
0	0	0	1	2.1
0	0	1	0	2.2
0	0	1	1	2.3
0	1	0	0	2.4
0	1	0	1	2.5
0	1	1	0	2.6
0	1	1	1	2.7
1	0	0	0	2.8
1	0	0	1	2.9
1	0	1	0	3.0
1	0	1	1	3.1
1	1	0	0	3.2
1	1	0	1	3.3
1	1	1	0	3.4
1	1	1	1	3.5

- ***CPU Clock Ratio:***

JP10-7, JP10-6, JP10-5, is used to select the CPU clock ratio.

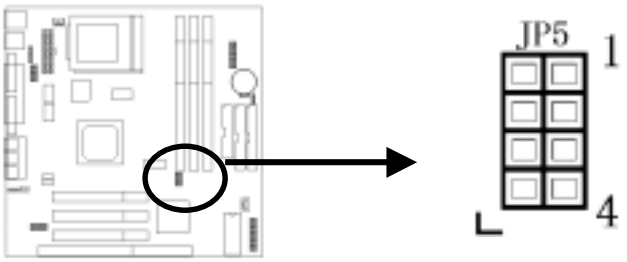
JP10-7	JP10-6	JP10-5	RATIO
0	1	1	2.5
0	1	0	3.0
0	0	1	2.0
0	0	0	1.5/3.5
1	1	1	4.5
1	1	0	5.0
1	0	1	4.0
1	0	0	5.0



- ***CPU Clock Frequency:***

JP5-4, JP5-3, JP5-2, JP5-1 are used to select the CPU clock frequency.

JP5-4	JP5-3	JP5-2	JP5-1	CPU Clock Frequency	RATIO	PCI Clock Frequency
0	0	0	0	60	2	30
0	0	0	1	66.8	2	33.4
0	0	1	0	70	2	35
0	0	1	1	75	3	25
0	1	0	0	80	3	26.67
0	1	0	1	83.3	3	27.76
0	1	1	0	95.25	3	31.75
0	1	1	1	100	3	33.33
1	0	0	0	75	2	37.5
1	0	0	1	80	2	40
1	0	1	0	83.3	2	41.65
1	0	1	1	105	3	35
1	1	0	0	110	3	36.67
1	1	0	1	115	3	38.33
1	1	1	0	120	3	40
1	1	1	1	124	3	41.33



II.HARDWARE INSTALLATION

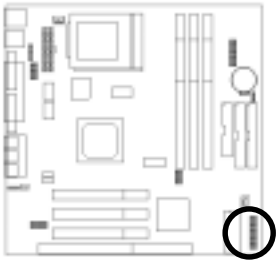
Below is a reference of different CPU currently supported by this mainboard.

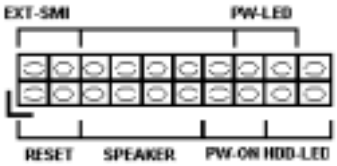
System Frequency (MHz)	CPU Clock Ratio	CPU Clock Frequency
100 (Intel P54C-100; AMD K5-100&133)	1.5x	66MHz
116 (AMD K5-166)	1.75x	66MHz
133 (Intel P54C-133;Cyrix P166+)	2x	66MHz
150 (Cyrix P200&M2-200;C6-150)	2x	66MHz
166 (Intel P54C&55C-166;Cyrix M2-200; AMD K6-166)	2.5x	66MHz
200 (Intel P54C&55C-200;AMD K6-200;Cyrix M2-233; IDT C6-200)	3x	66MHz
225 (IDT C6-225;Cyrix M2-300)	3x	75MHz
233 (Intel P55C-233; AMD K6-233;Cyrix M2-300)	3.5x	66MHz
263 (Cyrix M2-333)	3.5x	75MHz
266 (AMD K6-266;Cyrix M2-333)	4x	66MHz
300 (AMD K6-II 300)	4x	75MHz
333	5x	66MHz
350 (AMD K6-II 350)	3.5x	100MHz
400 (AMD K6-III 400)	4x	100MHz

2-2 Connectors

2-3 2-2.1 Panel Connector

The Panel Connector is a 20-pin onboard connector. Connect the Power LED, SMI Switch, Speaker, HDD LED, POWER on Switch and Reset Switch to the corresponding pins as shown in the below figure.



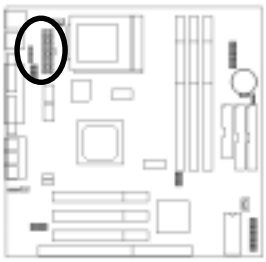


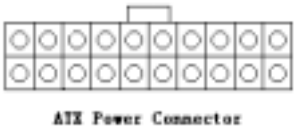
- **RESET** Reset Switch Connector (2 pins)
- **SPEAKER** Chassis Speaker Connector (4 pins)
- **EXT-SMI** EXT-SMI Switch Connector (2 pins)
- **Power on** Power on Switch Connector (2 pins)
- **PWR LED** Power LED Connector (2 pins)
- **HDD LED** HDD LED Connector (2 pins)

2-2.2 ATX Power Connector

Connect the 20-pin ATX power supply cable to this power connector. Make sure the right plug-in direction and the power supply is off before connecting or disconnecting the power cable.

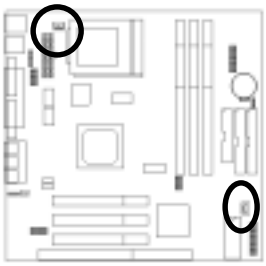
(**Note:** SFX power supply is not required for V47 power supply. Otherwise it will affect some system functions of V47.)

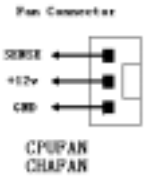




2-2.3 Fan Connectors

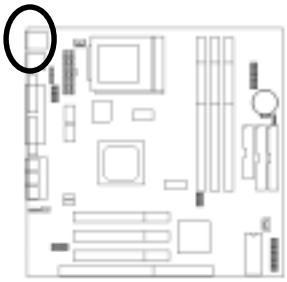
Connect the CPU, Chassis Fan cables to the 3-pin fan connectors shown below. The fan connectors are marked as JFAN1&JFAN2 on the mainboard.

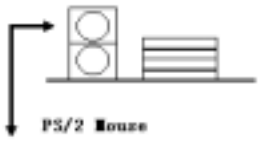




2-2.4 PS/2 Mouse Connector

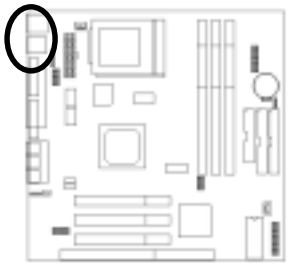
Connect the PS/2 mouse to the onboard 6-pin Mini-Din connector marked as PS/2 MS.

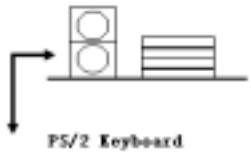




2-2.5 Keyboard Connector

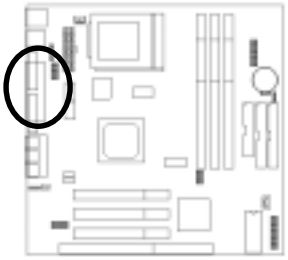
Connect the PS/2 keyboard to the onboard keyboard connector marked as PS/2 KB.

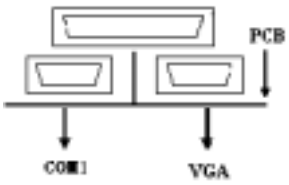




2-2.6 Serial Device(COM1/COM2) and VGA Connectors

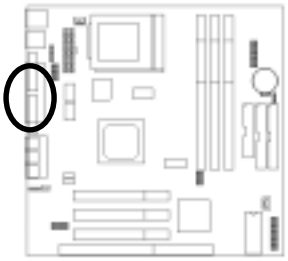
Connect your serial device(s) to the onboard serial connectors marked as COM1& COM2. Connect the 15 pins VGA Monitor Output marked as VGA to your system monitor or other VGA compatible devices.

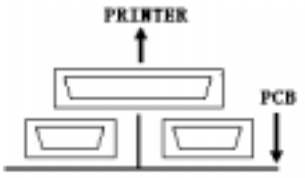




2-2.7 Printer Connctor

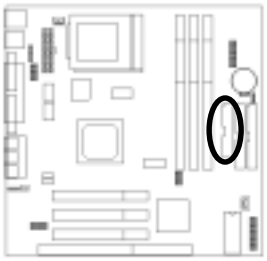
Connect your local printer to the onboard printer connector marked as LPT.

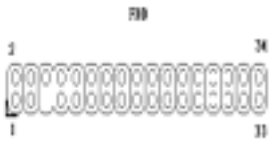




2-2.8 Floppy Drive Connector

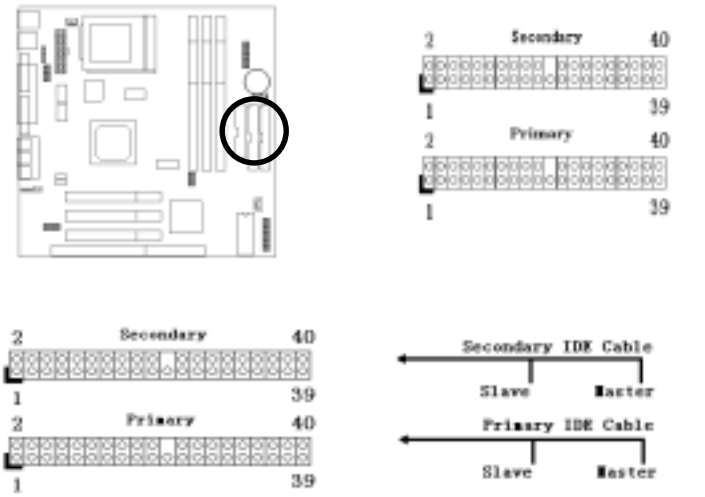
Connect the floppy drive cable to the onboard 34-pin floppy drive connector marked as FDD.





2-2.9 IDE Hard Disk and CD-ROM Connector

Connect your IDE devices to the onboard 40-pin IDE connectors marked as IDE1 and IDE2.

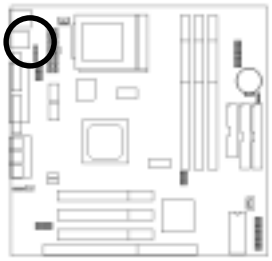


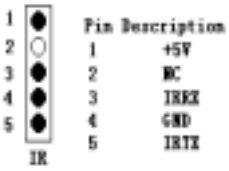
It is suggested that you connect the IDE devices to your IDE cables as the figure shown above. Each IDE channel, either Primary or Secondary, supports two IDE devices which must be set differently to master mode and slave mode.

(Refer to your hard disk and CD-ROM user's manual for detailed settings of IDE master and slave mode.)

2-2.10 IrDA Connector

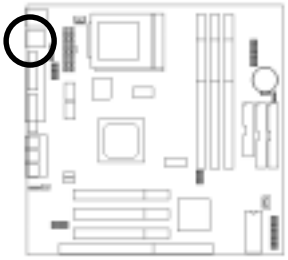
Connect your IR device to the onboard IrDA connector marked as IR.





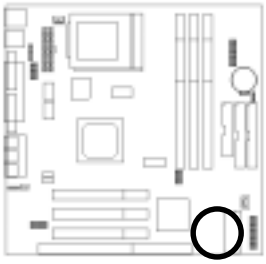
2-2.11 USB Device Connector

Connect your USB device(s) to the onboard USB connector marked as USB.



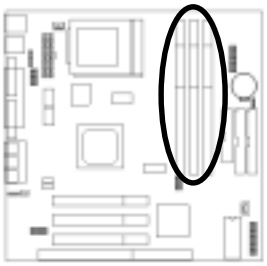
2-2.12 Wake on LAN Connector

This mainboard supports wake up on LAN function. To use this function, you need a Wake on LAN supported network card and software.



2-3 System Memory Installation

There are 3 pcs 168-pin **DIMM** (Dual Inline Memory Module) sockets on the mainboard which support SDRAM and EDO DRAM memory.



There are 3 168-pin DIMM sockets (DIMM1, DIMM2 & DIMM3) that allow you to install system memory maximum up to 768MB SDRAM.

2-3.1 Type

This mainboard supports SDRAM DIMM and EDO DIMM.

2-3.2 Speed

For SDRAM, the memory speed normally marked as: -15, -12, -10, -8, -7.

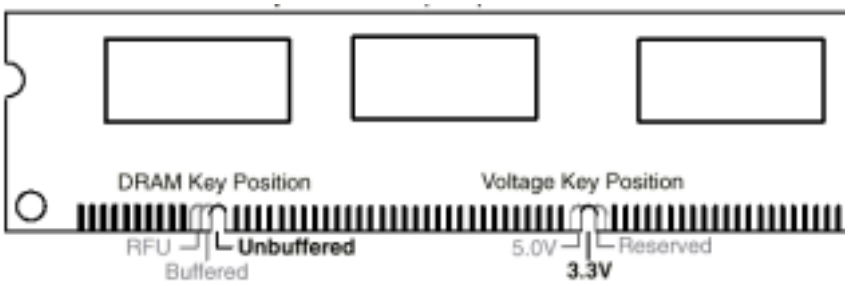
The meaning is,

-15 = 15ns, and the maximum clock is 66MHz
-12 = 12ns, and the maximum clock is 83MHz
-10 = 10ns, and the maximum clock is 100MHz
-8 = 8ns, and the maximum clock is 125MHz
-7 = 7ns, and the maximum clock is 142MHz

For EDO, the access time can be 50ns, 60ns & 70ns.

2-3.3 Buffered and Non-buffered

Only the non-buffered DIMM can be used in this mainboard. The difference between buffered and non-buffered DIMM can be identified by the notch position shown below.



2-3.4 2-clock and 4-clock signal

Both 2-clock and 4-clock SDRAM DIMM supported by this mainboard.

2-3.5 Parity and Non-parity

This mainboard supports 64 bit Non-parity and 72 bit Parity DIMM modules.

2-3.6 Memory Auto detection by BIOS

This mainboard BIOS can automatically detect the DIMM memory size and type, so you do not need to adjust any hardware or software settings.

2-3.7 Suggested Memory combination

This mainboard supports the following SDRAM / EDO combination.

DIMM Location	DIMM Size
DIMM1	8, 16, 32, 64, 128, 256MB
DIMM 2	8, 16, 32, 64, 128, 256MB
DIMM 3	8, 16, 32, 64, 128, 256MB

Select DIMM socket's plan

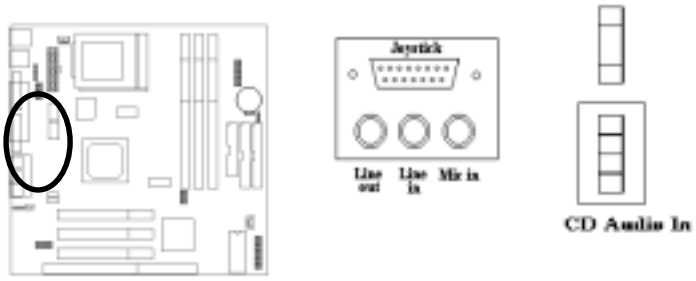
Memory	DIMM1	DIMM2	DIMM3
16 MB	√	X	X
32 MB	√	√	X
48 MB	√	√	√

Memory	DIMM1	DIMM2	DIMM3
16 MB	√	X	X
32 MB	√	X	√
48 MB	√	√	√

Total Memory Size = DIMM1 + DIMM2 + DIMM3

2-4 Game/Audio Connector

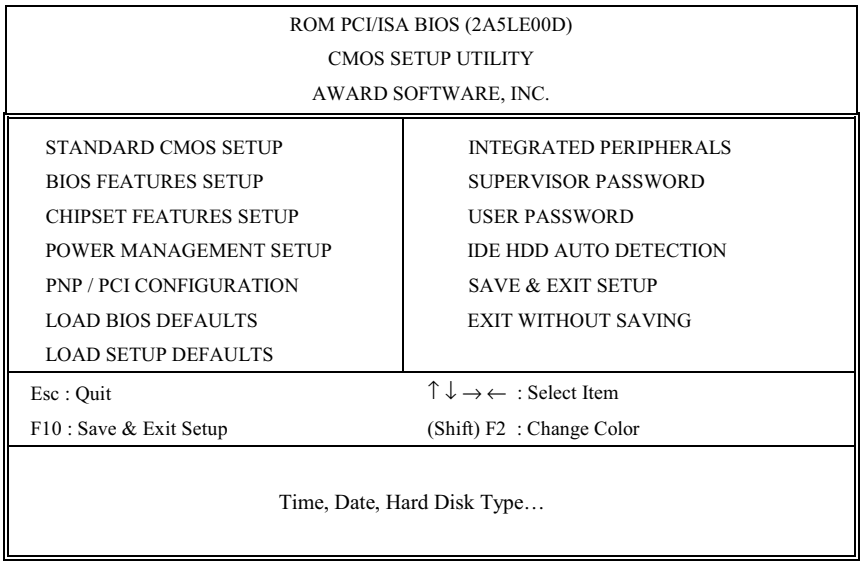
Connect the audio cable to the onboard Game/Audio connector marked as GAME PORT. The onboard CD-IN connector marked as CD is for CD-ROM audio.



SECTION 3.
CMOS SETUP UTILITY

3-1 BIOS Setup Main Menu

This section tells you how to configure the system by changing BIOS setup options. To enter the BIOS Setup Utility, press **DEL** key during POST (Power-On Self Test). The BIOS Setup Main Menu will appear as shown below.



The main menu displays a table of items, which defines basic information about your system. Below are the keyboard function keys you can use under the menu.

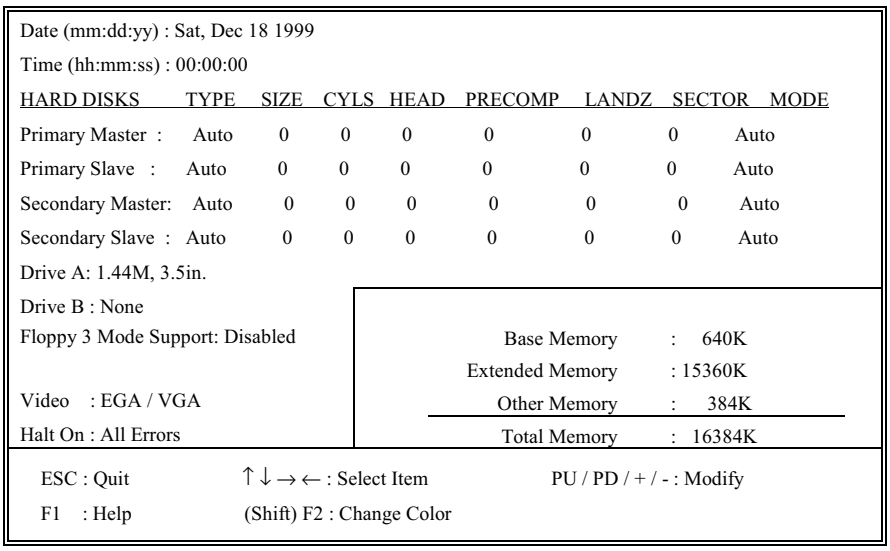
Menu function keys:

E S C	To close the BIOS Setup Utility.
↑ ↓ ← →	To move around the screen. An item is highlighted if it is selected.

F1	To displays information about the highlighted item you selected.
SHIFT + F2	To Change the color scheme.
F10	To save the changes before exit the BIOS Setup Utility.
ENTER	To select or enter a submenu.

3-2 Standard CMOS Setup

This "Standard CMOS Setup" sets the basic system settings such as the date, time, and the hard disk type, Video display type and error handling. Use the arrows keys ↑ ↓ ← → to highlight an item and use **Page Up** / **Page Down** or + - to set the value for each item.



- **Date**

To set the date, highlight the date area. Press **+** / **-** or **Page Up** / **Page Down** to set the current date. The date format is month: **Jan. ~ Dec**., date: **1 ~ 31**, and year: **1994 ~ 2079**.

- **Time**

To set the time, highlight the time area. Press **+** / **-** or **Page Up** / **Page Down** to set the current time. The time format is hour: **00 ~ 23**, minute: **00 ~ 59**, and second: **00 ~ 59**.

- **Hard Disks → Primary Master / Slave**
- **Hard Disks → Secondary Master / Slave**

TYPE:
- Auto
- User
- None

This item lets you set your system IDE hard disk type. Select Auto to let BIOS automatically detects the installed hard disk when system boot up. Select User if you prefer manually enters the hard disk type. The available parameters are SIZE (HDD Size), CYLS (No. Of Cylinder), HEAD (No. Of Head), PRECOMP (Pre-compensation), LANDZ (Landing Zone), SECTOR (No. Of Sector) and MODE (HDD Mode). Select None if there is no hard disk connected to the system.

Default: Auto

MODE:
- AUTO
- NORMAL
- LBA
- LARGE

Select NORMAL for IDE HDD smaller than 528MB. Select LBA for IDE HDD over than 528MB and support LBA (Logical Block Addressing) mode. Select LARGE for IDE HDD over than 528MB and do not support LBA mode.

Note: We recommend that you set both IDE HDD TYPE and MODE to AUTO to let BIOS automatically detect the hard disk drives for you. **Default: Auto**

- **Floppy → Drive A / B**

Drive A / B:
- None
- 360KB - 5.25"
- 1.2MB 5.25"
- 720KB 3.5"
- 1.44MB 3.5"
- 2.88MB 3.5"

Select the floppy drive type installed in your system. The available options for Drive A and Drive B are: 360KB 5.25", 1.2MB 5.25", 720KB 3.5", 1.44MB 3.5", 2.88MB 3.5" and None.

Default: Drive A => 1.44MB 3.5"

Drive B => None

- **Floppy 3 Mode Support**

Floppy 3 Mode Support:
- Disabled
- Driver A
- Driver B
- Both

Enable this option ONLY for floppy drive(s) that support the Japanese standard (1.2MB on 3.5" Diskette). The available options: Disabled, Both, Drive A / B.

Default: Disabled

- **Video**

Video:
- EGA/VGA
- CGA40
- CGA80
- Mono

Select the video display card type installed in your system. The available types are: EGA/VGA, CGA 40, CGA 80 and Mono.

Default: EGA/VGA

- **Halt On**

Halt On:
- All Errors
- No Errors
- All, But Keyboard
- All, But Diskette
- All, But Disk/Key

This item defines the operation of the system POST(Power On Self Test). You can use this item to select which kind of errors will cause the system to halt during POST.

Default: All Errors

3-3 BIOS Features Setup

This "BIOS Features Setup" option allows you to setup and improve your system features and performance.

Anti-Virus Protection	: Enabled	Video BIOS Shadow	: Enabled
CPU Internal Cache	: Enabled	C8000-CBFFF Shadow	: Disabled
External Cache	: Enabled	CC000-CFFFF Shadow	: Disabled
Quick Power On Self Test	: Disabled	D0000-D3FFF Shadow	: Disabled
Boot Sequence	: C, A	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	: Disabled		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250		
Security Option	: System		
PCI / VGA Palette Snoop	: Disabled		
OS Select For DRAM > 64MB	: Non-OS2	ESC : Quit	↑↓→←: Select Item
		F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values	(Shift) F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

➢ Anti-Virus Protection

Anti-Virus Protection:
- Enabled
- Disabled

When this item is enabled, BIOS will automatically load Anti-Virus program that will prevent your system being infected by Boot Viruses.

Default: Disabled

➢ CPU Internal/External Cache

CPU Internal External Cache:
- Enabled
- Disabled

This item controls Enable/Disable the CPU Internal /external L2 cache.

Default: Enabled

➢ Quick Power On Self Test

Quick Power On Self Test:
- Enable
- Disabled

This item can be used to start operating system quickly by skip some normal POST checking items.

Default: Disabled

➢ Boot Sequence

Boot Sequence:
- A,C,SCSI
- C,A,SCSI
- C,CDROM,A
- CDROM,C,A
- D,A,SCSI
- E,A,SCSI
- F,A,SCSI
- SCSI,A,C
- SCSI,C,A
- C only
- LS/ZIP,C B

This item defines where the system will look for an operating system, and the order of priority. The boot up search sequence shown as left.

Default: A, C, SCSI

➢ Swap Floppy Drive

Swap Floppy Drive:
- Enabled
- Disabled

If you have two floppy drives in your system, This item allows you to swap around the assigned drive letters so that drive A becomes drive B, and drive B becomes drive A. **Default: Disabled**

➢ Boot Up NumLock Status

Boot Up NumLock Status:
- On
- Off

This item defines if the keyboard **NumLock** key is active when your system is started.

Default: On

➢ Gate A20 Option

Gate A20 Option:
- Normal
- Fast

This entry allows you to select how the gate A20 is handled. The gate A20 is a device used to address memory above 1 Mbyte. Initially, the gate A20 was handled via a pin on the keyboard (Normal). Today, while keyboards still provide this support, it is more common, and much faster, for the system chipset (Fast; default) to provide support for gate A20.

Default : Fast

➢ Memory Parity/ECC Check

Memory Parity/ECC Check:
- Enabled
- Disabled

To Enable or Disable the BIOS memory parity/ECC check function.

Default: Disabled

➢ Typematic Rate Setting

Typematic Rate Setting:
- Enabled
- Disabled

To Enable or Disable the speed of keyboard to send repeat keystrokes.

Default: Disabled

➢ Typematic Rate (Chars/Sec)

Typematic Rate:
- 6
- 8
- 10
- 12
- 15
- 20
- 24
- 30

This item provides typematic rate setting, which allows you to control the repeated keystroke speed.

Default: 6

➢ Typematic Delay (Msec)

Typematic Delay:
- 250
- 500
- 750
- 1000

This item provides typematic delay setting, which allows you control the delay time between the first and the second keystroke.

Default: 250

➢ Security Option

Security Option:
- Setup
- System

The "Setup" option is for password request in entering BIOS setup.

The "System" option is for password request in entering setup and system boot up.

Default: Setup

➢ PCI/VGA Palette Snoop

PCI/VGA Palette Snoop:
- Enabled
- Disabled

Set this item to Enabled to reduce display problem when both PCI VGA and some graphic accelerator devices such as MPEG/Video capture cards are installed in your system.

Default: Disabled

- **OS Select for DRAM > 64MB**

OS Select for DRAM > 64MB: - OS/2 - Non-OS/2	This item is to patch that OS/2 can not report correct memory size for more than 64 MB. Set it to OS/2 if you have an OS/2 installed and have over 64MB system memory. **Default: Non-OS/2**

- **Video BIOS Shadow**

Video BIOS Shadow: - Enabled - Disabled	This item defines if you leave default setting, video BIOS memory will be copied from ROM into DRAM area to enhance system performance as DRAM access time is faster than ROM. **Default: Enabled**

- **C8000-CBFFF Shadow to DC000-DFFFF Shadow**

C8000-CBFFF to DC000-DFFFF Shadow: - Enabled - Disabled	Set Enabled if you know the address that your add-on card ROM used to shadow them. If the item is Enabled, BIOS will copy the selected area from ROM to RAM to increase system performance. **Default: Disabled**

3-4 Chipset Features Setup

This option displays a table of items, which define timing parameters of the mainboard components including the graphic system, memory, and the system logic. In general rule, you should leave the items on this page at the default values unless you are familiar with the technical specifications of your hardware. If you change the values, you may introduce fatal errors or recurring instability into your system.

Bank 0/1 DRAM Timing	: SDRAM 10ns	OnChip USB	: Disabled
Bank 2/3 DRAM Timing	: SDRAM 10ns		
Bank 4/5 DRAM Timing	: SDRAM 10ns	OnChip USB2	: Disabled
SDRAM Cycle Length	: 3	OnChip AC97	: Enabled
DRAM Read Pipeline	: Disabled	OnChip MC97	: Enabled
		Codec Variable Rate	: Enabled
Cache R/CPU W Pipeline	: Enabled		
Cache Timing	: Fast	Current CPU Temp.	: 32°C/89°F
Video BIOS Cacheable	: Enabled	Current System Temp.	: 24°C/75°F
System BIOS Cacheable	: Enabled	Current CPUFAN1 Speed	: 0 RPM
Memory Hole At 15Mb Addr	: Disabled	Current CPUFAN2 Speed	: 0 RPM
AGP Aperture Size	: 64M	Vcore : 2.97V	2.5V : 2.61V
Frame Buffer Size	: 8M	3.3V : 3.39V	5V : 5.10V
Aperture Write Combining	: Disabled	12V : 12.24V	
SDRAM Bank Interleaving	: Disabled		
		ESC : Quit	↑ ↓ → ←: Select Item
		F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values	(Shift) F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

- **Bank 0/1 DRAM Timing**
- **Bank 2/3 DRAM Timing**
- **Bank 4/5 DRAM Timing**

Bank 0/1 DRAM Timing:

- SDRAM 10ns
- SDRAM 8ns
- Normal
- Medium
- Fast
- Turbo

These items allow you set the DRAM timing type on the memory slot DIMM1, DIMM2 & DIMM3.

Default: SDRAM 10ns

➢ SDRAM Cycle Length

SDRAM Cycle Length:
- 2
- 3

This item defines SDRAM Cycle Length.

Default: 3

➢ DRAM Read Pipeline

DRAM Read Pipeline:
- Disabled
- Enabled

This item allows you enable or disable DRAM Read Pipeline.

Default: Enabled

➢ Cache Rd+CPU Wt Pipeline

Cache Rd+CPU Wt Pipeline:
- Enabled
- Disabled

This item enables or disables Cache Rd+CPU Wt Pipeline.

Default: Enabled

➢ Cache Timing

Cache Timing:
- Fast
- Fastest

This item allows you set the L2 Cache Timing.

Default: Fast

➢ Video BIOS Cacheable

Video BIOS Cacheable:
- Enabled
- Disabled

This item allows the video BIOS to be cached for faster video performance.

Default: Enabled

➢ System BIOS Cacheable

System BIOS Cacheable:
- Enabled
- Disabled

This item allows the system BIOS to be cached for faster system performance.

Default: Enabled

➢ Memory Hole At 15Mb Addr

Memory Hole At 15Mb Addr:
- 15M–16M
- Disabled

This item can be used to reserve memory space for some ISA cards that require it.

Default: Disabled

➢ AGP Aperture Size

AGP Aperture Size (MB):
- 4M
- 8M
- 16M
- 32M
- 64M
- 128M

This item defines the effective memory size of the AGP Aperture.

Default: 64M

➢ Frame Buffer Size

Frame Buffer Size:
- 2M
- 4M
- 8M

Determines the size of the frame buffer in the system memory. A frame buffer is used to hold a frame of data for screen display and is the size of the maximum image area on screen.

Default: 8M

➢ Aperture Write Combining

Aperture Write Combining:
- Enabled
- Disabled

This item allows you to enable or disable Aperture Write Combining function.

Default: Enabled

➢ SDRAM Bank Interleaving

SDRAM Bank Interleaving:
- Enabled
- Disabled

This item allows you to enable or disable SDRAM Bank Interleaving function.

Default: Enabled

➢ OnChip USB

OnChip USB:
- Enabled
- Disabled

This item allows you to enable or disable the mainboard USB function.

Default: Disabled

➢ USB Keyboard Support

USB Keyboard Support:
- Enabled
- Disabled

This item is displayed only when you enable the "OnChip USB" item.

When you set this item to Enabled, the BIOS simulates USB keyboard in legacy mode, which means during POST or under operating system, you can use a USB keyboard without loading USB driver.

Note you can not use both USB driver and USB legacy keyboard at the same time. Set disabled if you have USB driver in the operating system.

Default: Disabled

➢ OnChip USB2

OnChip USB2:
- Enabled
- Disabled

This item allows you to enable or disable the mainboard USB2 function.

Default: Disabled

- **OnChip AC97**

OnChip AC97:
- Enabled
- Disabled

This item allows you to enable or disable the mainboard AC97 function.

Default: Enabled

- **OnChip MC97**

OnChip MC97:
- Enabled
- Disabled

This item allows you to enable or disable the mainboard MC97 function.

Default: Enabled

- **Codec Variable Rate**

OnChip USB:
- Enabled
- Disabled

This item allows you to enable or disable adjust the codec variable rate function.

Default: Enabled

- **Current CPU Temp. / Current System Temp.**
- **Current CPUFAN1 Speed / Current CPUFAN2 Speed**
- **Vcore / 3.3V / 5V / 12V**

These items are the hardware monitor indicators for displaying the current CPU/System temperature, CPU Fan Speed, and System voltage status.

3-5 Power Management Setup

This option displays a table of items which lets you control the power management of the system. Modern operating system take care of much of the routine power management. This mainboard supports ACPI (Advanced Configuration and Power Interface).

ACPI function	: Enabled	Primary INTR	: ON
Power Management	: User Define	IRQ3 (COM 2)	: Primary
PM Control by APM	: Yes	IRQ4 (COM 1)	: Primary
Video Off Option	: Suspend→Off	IRQ5 (LPT 2)	: Primary
Video Off Method	: DPMS Support	IRQ6 (Floppy Disk)	: Primary
MODEM Use IRQ	: 3	IRQ7 (LPT 1)	: Primary
Soft-Off by PWRBTN	: Delay 4 Sec	IRQ8 (RTC Alarm)	: Disabled
PWRON After PW-Fail	: Off	IRQ9 (IRQ2 Redir)	: Secondary
** PM Time & Events **		IRQ10 (Reserved)	: Secondary
HDD Power Down	: Disabled	IRQ11 (Reserved)	: Secondary
Doze Mode	: Disabled	IRQ12 (PS/2 Mouse)	: Primary
Suspend Mode	: Disabled	IRQ13 (Copro)	: Primary
VGA	: OFF	IRQ14 (Hard Disk)	: Primary
LPT & COM	: LPT/COM	IRQ15 (Reserved)	: Disabled
HDD & FDD	: ON		
PCI/master	: OFF	ESC : Quit	↑↓→←: Select Item
Modem Ring Resume	: Disabled	F1 : Help	PU/PD/+/- : Modify
RTC Alarm Resume	: Disabled	F5 : Old Values	(Shift) F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

➢ ACPI Function

ACPI Function:
- Enabled
- Disabled

This option allows you to enable/disable the Advanced Configuration and Power Interface which offers improved power management.

Default: Enabled

➢ Power Management

Power Management:
- Max Saving
- Mix Saving
- User Define

This item allows you to set the default parameters of power-saving modes. Set to Disable to disable power management function. Set to User Define to define your own parameters.

Default: User Define

➢ PM Controlled by APM

PM Controlled by APM:
- Yes
- No

Set to Yes to transfer power management control to APM (Advanced Power Management) and enhance power saving function.

Default: Yes

➢ Video Off Option

Video Off Option:
- Always On
- Suspend→ Off
- All Modes→ Off

To select at which power saving mode, the video monitor will be turned off.

Default: Suspend→ Off

➢ Video Off Method

Video Off Method:
- V/H SYNC+Blank
- DPMS Support
- Blank Screen

To select the method to turn off the video monitor for power saving mode.

Default: V/H SYNC+Blank

➢ Modem Use IRQ

Modem Use IRQ:
- 3
- 4
- 5
- 7
- 9
- 10
- 11
- NA

To select the IRQ which will be used by system modem.

Default: 3

➢ Soft-Off by PWRBTN

Soft-Off by PWRBTN:
- Delay 4 Sec
- Instant-Off

With *Instant-Off* selected, the ATX switch functions like a normal system power off button. With *Delay 4 Sec.* Selected, you must hold down the ATX switch for more than 4 seconds to power off the system.

Default: Delay 4 Sec

➢ PWRON After PW-Fail

PWRON After PW-Fail:
- On
- Off

This feature can power on the PC when power returns after a power failure. The table below lists the options available and the corresponding "System State" when power returns after a power failure.

Default: On

➢ HDD Power Down

HDD Power Down:
- Disabled
- 1 Min
- .....
- 15 Min

This item allows you specify the IDE HDD idle time before the device enters the power saving mode.

Default: Disabled

➢ Doze Mode

Doze Mode:
- Disabled
- 10 Sec
- 20 Sec
- ….
- 1 Hour

This item lets you set the timer after which the system enters into Doze mode. The system event is detected by monitoring the IRQ signals or other I/O events.

Default: Disabled

➢ Suspend Mode

Suspend Mode:
- Disabled
- 10 Sec
- 20 Sec
- ….
- 1 Hour

This item lets you set the timer after which the system enters into Suspend mode. The system activity is detected by monitoring the IRQ signals or other I/O events.

Default: Disabled

➢ VGA

VGA:
- On
- Off

When set to On, any event occurring at a VGA port will awaken a system which has been powered down.

Default: Off

➢ LPT & COM

LPT & COM:
- NONE
- COM
- LPT
- LPT/COM

Any event occurring at the specified port(s) will awaken a system, which has been powered down.

Default: LPT/COM

➢ HDD & FDD

HDD & FDD:
- ON
- OFF

When set to On, any event occurring at a hard or floppy drive port will awaken a system, which has been powered down.

Default: ON

➢ PCI/master

PCI/master:
- Off
- On

When set to *On*, any event occurring to the PCI controller will awaken a system, which has been powered down.

Default: Off

➢ Modem Ring Resume

Modem Ring Resume:
- Enabled
- Disabled

To enable or disable the Modem Ring Resume function.

Default: Disabled

➢ RTC Alarm Resume

RTC Alarm Resume:
- Enabled
- Disabled

To enable or disable the RTC Wake Up function.

Default: Disabled

➢ Date (of Month)

Date (of Month):
- 0
- 1
- .....
- 31

This item displayed only when you enable the RTC Alarm Resume item.

You can use this item to specify the date you want to wake up the system. For Example, if you set to 18, the system will wake up on the 18th day of every month. If set to 0, the system will wake up on the specified time every day.

➢ Timer (hh:mm:ss)

Timer (hh:mm:ss):
- hh:mm:ss

This item is displayed only when you enable the RTC Alarm Resume item. You can use this item to specify the time you want to wake up the system.

➢ Primary INTR

Primary INTR:
- On
- Off

Use this item to enable or disable the detection of IRQ3 ~ IRQ15 events for power saving mode.

Default: On

➢ IRQ3 (COM2), IRQ4 (COM1), IRQ5 (LPT2), IRQ6 (Floppy), IRQ7 (LPT1), IRQ8 (Alarm), IRQ9 (IRQ2 Redir), IRQ10 (Reserved), IRQ11 (Reserved), IRQ12 (PS/2 Mouse), IRQ13 (Coprocessor), IRQ14 (Hard Disk), IRQ15 (Reserved)

IRQ3 ~ IRQ15:
- Primary
- Secondary
- Disabled

Select Primary or Disabled to enable or disable the detection of the specified IRQ for power saving mode. Select Secondary to wake up the system for 2ms after detecting the specified IRQ and then return to power saving mode.

Default: IRQ3 ~ IRQ7, IRQ12 ~ IRQ14 => Primary
IRQ9 ~IRQ11 => Secondary
IRQ8, IRQ15 => Disabled

3-6 PNP/PCI Configuration Setup

This option display a table of items that configures how PNP (Plug and Play) and PCI expansion cards operates in your system.

PNP OS Installed			: No	CPU to PCI Write Buffer	: Enabled
Resources Controlled by			: Manual	PCI Dynamic Bursting	: Enabled
Reset Configuration Data			: Enabled	PCI Master 0 WS Write	: Enabled
				PCI Delay Transaction	: Enabled
IRQ-3	assigned	to	: PCI/ISA PnP	PCI#2 Access #1 Retry	: Disabled
IRQ-4	assigned	to	: PCI/ISA PnP	AGP Master 1 WS Write	: Enabled
IRQ-5	assigned	to	: PCI/ISA PnP	AGP Master 1 WS Read	: Disabled
IRQ-7	assigned	to	: PCI/ISA PnP		
IRQ- 9	assigned	to	: PCI/ISA PnP	PCI IRQ Actived By	: Level
IRQ-10	assigned	to	: PCI/ISA PnP	Assign IRQ For USB	: Enabled
IRQ-11	assigned	to	: PCI/ISA PnP	Assign IRQ For VGA	: Enabled
IRQ-12	assigned	to	: PCI/ISA PnP	Assign IRQ For ACPI	: IRQ10
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	↑ ↓ → ←: Select Item
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	F6 : Load BIOS Defaults	
DMA-7	assigned	to	: PCI/ISA PnP	F7 : Load Setup Defaults	

➢ PnP OS Installed

PnP OS Installed:
- Yes
- No

Normally, BIOS will allocate the PnP resources during POST (Power-On Self Test). Set this item to Yes if you have a PnP operating system such as Windows 95, BIOS will bypass PnP device initial except of boot device (VGA/IDE or SCSI) and PnP operating system will do these PnP devices resource allocation. If this item is set to No, BIOS will handle all PnP devices.

Default: No

➢ Resources Controlled By

Resources Controlled by:
- Auto
- Manual

Basically, BIOS will allocate the IRQ/DMA resources automatically for these PNP/PCI and onboard devices. The exception might be encountered when legacy ISA devices are installed, which occupies resources that BIOS can not know. Therefore, this option is for BIOS to know in advance that IRQ/DMA is occupied by legacy ISA devices if Manual is selected.

Default: Auto

➢ Reset Configuration Data

Reset Configuration Data:
- Enabled
- Disabled

When this item is set to Enabled, BIOS will turn it Disabled again in the next boot up. This item is for clearing ESCD data. The only reason to clear is the data using the confidence. The engineering test is a good reason to change the default setting.

Default: Disabled

➢ IRQ3, IRQ4, IRQ5, IRQ7, IRQ9, IRQ10, IRQ11, IRQ12, IRQ14, IRQ15

IRQ 3-5, 7, 9-12, 14-15:
- Legacy ISA
- PCI/ISA PnP

Set the selected IRQ to Legacy ISA if your ISA card is not PnP compatible card and requires a special IRQ to make it function.

These options provide IRQ resources allocation for Legacy ISA or PCI/ISA PnP card.

Default: IRQ 3-4,5, 7, 9-12, 14-15 => PCI/ISA PnP

➢ DMA 0, DMA 1, DMA 3, DMA 5, DMA 6, DMA 7

DMA 0,1,3,5-7:
- Legacy ISA
- PCI/ISA PnP

Set the selected DMA channel to Legacy ISA if your ISA card is not PnP compatible card and requires a special DMA channel to make it function.

Default: DMA 0, 1, 3, 5-7 => PCI/ISA PnP

➢ CPU to PCI Write Buffer

CPU to PCI Write Buffer:
- Enabled
-Disabled

To enable or disable CPU to PCI Write Buffer.

Default: Enabled

➢ PCI Dynamic Bursting

PCI Dynamic Bursting:
- Enabled
- Disabled

To enable or disable PCI Dynamic Bursting.

Default: Enabled

➢ PCI Master 0 WS Write

PCI Master 0 WS Write:
- Enabled
- Disabled

To enable or disable PCI Master 0 WS Write.

Default: Enabled

➢ PCI Delay Transaction

PCI Delay Transaction:
- Enabled
- Disabled

To enable or disable PCI Delay Transaction.

Default: Enabled

➢ PCI#2 Access #1 Retry

PCI#2 Access #1 Retry:
- Enabled
- Disabled

To enable or disable PCI#2 Access #1 Retry.

Default: Enabled

➢ AGP Master 1 WS Write

AGP Master 1 WS Write:
- Enabled
- Disabled

To enable or disable AGP Master 1 WS Write.

Default: Enabled

➢ AGP Master 1 WS Read

AGP Master 1 WS Read:
- Enabled
- Disabled

To enable or disable AGP Master 1 WS Read.

Default: Disabled

➢ PCI IRQ Activated by

PCI IRQ Activated by:
- Level
- Edge

This sets the method by which the PCI bus recognizes that an IRQ service is being requested by a device. Under all circumstances, you should retain the default configuration unless advised otherwise by your system's manufacturer.

Default: Level

➢ Assign IRQ For USB

Assign IRQ For USB: To enable or disable assign IRQ for USB.
- Enabled
- Disabled

Default: Disabled

➢ **Assign IRQ For AGP**

Assign IRQ For AGP: To enable or disable assign IRQ for AGP.
- Enabled
- Disabled

Default: Disabled

➢ **Assign IRQ For ACPI**

Assign IRQ For ACPI: To assign IRQ for ACPI.
- IRQ9
- IRQ10
- IRQ11

Default: IRQ10

3.7 Load Setup Defaults

This option allows you load BIOS optimized settings for maximum system performance. To load Setup Default, press Y key to confirm the operation when you see the above display.

3-8 Load BIOS Defaults

This option provides the minimum requirements for your system to operate. Load the BIOS default values if your system has unstable problem with the setup default value.

3-9 Integrated Peripherals

This option allows you to configure the I/O features.

OnChip IDE First Channel		: Enabled	Onboard Parallel Port	: 378/IRQ7
OnChip IDE Second Channel		: Enabled	Onboard Parallel Mode	: Normal
IDE Prefetch Mode		: Enabled		
IDE HDD Block Mode		: Enabled		
Primary Master	PIO	: Auto	Onboard Legacy Audio	: Enabled
Primary Slave	PIO	: Auto	Sound Blaster	: Disabled
Secondary Master	PIO	: Auto	SB I/O Base Address	: 220H
Secondary Slave	PIO	: Auto	SB IRQ Select	: IRQ 5
Primary Master	UDMA	: Auto	SB DMA Select	: DMA 1
Primary Slave	UDMA	: Auto	MPU-401	: Enabled
Secondary Master	UDMA	: Auto	MPU-401 I/O Address	: 330 -333H
Secondary Slave	UDMA	: Auto	Game Port (200-207H)	: Enabled
Init Display First		: PCI Slot		
Onboard FDD Controller		: Enabled		
Onboard Serial Port 1		: Auto	ESC: Quit	↑ ↓ → ←: Select Item
Onboard Serial Port 2		: Auto	F1 : Help	PU/PD/+/- : Modify
IR/COM2 Mode Select		: Standard	F5 : Old Values	(Shift) F2: Color
			F6 : Load BIOS Defaults	
			F7 : Load Setup Defaults	

➢ OnChip IDE Channel First/Second

OnChip IDE Channel First/Secondary:
- Enabled
- Disabled

To enable or disable the IDE device connected to the First/Second IDE connector.

Default: Enabled

➢ IDE Prefetch Mode

IDE Prefetch Mode:
- Enabled
- Disabled

This item allows you to enable or disable IDE Prefetch Mode.

Default: Enabled

➢ IDE HDD Block Mode

IDE HDD Block Mode:
- Enabled
- Disabled

This BIOS supports the enhanced IDE specification and allow multiple sectors access in a time when read/write. If set this item to disabled, IDE runs in single sector access.

Default: Enabled

➢ Primary Master/Slave PIO
➢ Secondary Master/Slave PIO

Primary/Secondary Master/Slave PIO:
- Auto
- Mode 1
- Mode 2
- Mode 3
- Mode 4

Set these items to Auto to auto-detect the HDD speed. The PIO mode specifies the data transfer rate of HDD.

IDE HDD Mode	Transfer Rate
Mode 0	3.3MB/s
Mode 1	5.2MB/s
Mode 2	8.3MB/s
Mode 3	11.1MB/s
Mode 4	16.6MB/s.

Set to slower mode if your hard disk performance becomes unstable. **Default: Auto**

- **Primary Master/Slave UDMA**
- **Secondary Master/Slave UDMA**

Primary/Secondary Master/Slave UDMA:
- Auto
- Disabled

These items allows you to set the Ultra DMA/33 mode supported by the IDE hard disk drive installed in your system.

Default: Auto

- **Init Display First**

Init Display First:
- PCI Slot
- AGP

This item allows you select whether PCI Slot or AGP device will be initialed first for display.

Default: PCI Slot

- **Onboard FDC Controller**

Onboard FDC Controller:
- Enabled
- Disabled

To enable or disable the onboard floppy disk controller. Set to disabled if you want to use a separate floppy disk controller card.

Default: Enabled

- **Onboard Serial Port 1 / Port 2**

Onboard Serial Port 1 & 2:
- Auto
- 3F8/IRQ4
- 2F8/IRQ3
- 3E8/IRQ4
- 2E8/IRQ3
- Disabled

This item allows you to select the I/O port and IRQ used by the onboard serial ports.

Default: Onboard Serial Port 1=> Auto

Onboard Serial Port 2=> Auto

➢ UART 2 Mode

UART 2 Mode:
- Standard
- HPSIR
- ASKIR

This item is selectable only when the onboard serial port 2 is enabled. The available mode selections for the serial port 2 are Standard, HPSIR, and ASKIR.

Standard: Configures serial port as normal mode.

HPSIR: Set to this setting if there is an infrared device connected on the onboard IrDA connector. The maximum baud rate of this setting is: 115K baud.

ASKIR: Set to this setting if there is an infrared device connected on the onboard IrDA connector. The maximum baud rate of this setting is: 19.2K baud.

Default: Standard

➢ Onboard Parallel Port

Onboard Parallel Port:
- 3BC/IRQ7
- 378/IRQ7
- 278/IRQ7
- Disabled

This item controls the onboard parallel port address and interrupt.

Default: 378/IRQ7

➢ Parallel Port Mode

Parallel Port Mode:
- Normal
- EPP
- ECP
- ECP/ EPP

This item allows you to set the parallel port mode.

1. **Normal => SPP (Standard Parallel Port):** IBM AT and PS/2 compatible mode
2. **EPP (Enhanced Parallel Port):** To enhance the parallel port by directly write/read data to/from parallel port without latch.
3. **ECP (Extended Parallel Port):** ECP supports DMA and RLE (Run Length Encoded) compression and decompression.

Default: Normal

➢ ECP Mode Use DMA

ECP Mode Use DMA:
- 3
- 1

This item displayed when select the ECP mode above for the parallel port. You can set the DMA channel of ECP mode. **Default: 3**

➢ Onboard Legacy Audio

Onboard Legacy Audio:
- Enabled
- Disabled

Enabling this option allows the system to use the on-chip legacy SoundBlaster-compatible audio support. If you want to use the on-chip AC97 audio support or an add-on audio card instead set this option to *Disabled* to avoid possible conflict.

Default: Disabled

Note: The following fields are available only when the Onboard Legacy

Audio is enabled.

➢ Sound Blaster

Sound Blaster:
- Enabled
- Disabled

Enables/Disables the Sound Blaster compatible mode.
Default: Disabled

➢ SB I/O Base Address

SB I/O Base Address:
- 220H
- 240H
- 260H
- 280H

This option allows the user to select the audio I/O base address in Sound Blaster compatible mode.

Default: 220H

➢ SB IRQ Select

SB IRQ Select:
- IRQ5
- IRQ7
- IRQ9
- IRQ10

This option allows the user to select the IRQ for audio in Sound Blaster compatible mode.

Default: IRQ5

➢ SB DMA Select

SB DMA Select:
- DMA0
- DMA1
- DMA2
- DMA3

This option allows the user to select the DMA for audio in Sound Blaster compatible mode.

Default: DMA1

➢ MPU-401

MPU-401:
- Enabled
- Disabled

Enables/Disables the MPU-401 MIDI interface standard.

Default: Enabled

- **MPU-401 I/O Address**

MPU-401 I/O Address:
- 300-303H
- 310-313H
- 320-323H
-330-333H
-

This option allows the user to select the I/O base address for the use of MPU-401 MIDI device.

Default: 330-333H

- **Game Port (200-207H)**

Game Port (200-207H):
- Enabled
- Disabled

Enable this option to use the game port, which occupies 200-207H address.

Default: Enabled

3-10 Password Setting

Password prevents unauthorized use of your computer. If you set a password, the system prompts for the correct password before boot or access to Setup, the steps as follows,

1.Highlight the item Password Setting on the main menu and press ENTER.
2.The password dialog box will appear.
3.If you are installing a new password, carefully type in the password. Press ENTER after you have typed in the password. If you are deleting a password that is already installed just press ENTER when the password dialog box appears.
4.The system will ask you to confirm the new password by asking you to type it in a second time. Carefully type the password again and press ENTER, or just press ENTER if you are deleting a password that is already installed.
5.If you typed the password correctly, the password will be installed.

[Note]

If you forget your password, or you want to cancel your password, you can do

the steps as the following,

(1) Password forgotten:

i> Turn off the system

ii> Short JBAT1 at Pin 2-3 for a few seconds to clear CMOS.

iii> Set the JBAT1 back to Pin 1-2.

iv> Power on the system.

(2) Clear Password:

Clear your password by key-in the password you installed before, then go to PASSWORD SETTING to press ENTER twice.

3-11 IDE HDD Auto Detection

This item automatically detects and installs any hard disk drives installed on the primary and secondary IDE channel. Most modern drives can be detected. If you are using a very old drive that can't be detected, you can install it manually using the Standard CMOS Setup option. Setup will check for two devices on the primary IDE channel and then two devices on the secondary IDE channel. At each device, the system will flash an N in the dialog box. Press Enter to skip the device and proceed to the next device. Press Y, then Enter to tell the system to accept the BIOS auto-detected device type.

3-12 **Save & Exit Setup**

Highlight this item and presses ENTER to save the changes that you have made in the setup utility and exit the setup program. When the ***Save and Exit*** dialog box appears, press Y to save and exit, or press N to return to the setup main menu.

3-13 **Exit without Saving**

Use this option to exit Setup Utility without saving the CMOS value changes.

SECTION 4.
Audio & VGA Driver/Utility

This mainboard has three sets of audio drivers for different operation system. All drivers can be found under the directory \ AUDIO \ via1611 in the bundle CD title.

Drivers Overview:

- Microsoft Windows 95/98
- Microsoft Windows NT
- Microsoft Windows 3.1/ DOS
- PCI Audio Drivers 1.04

4-1 Windows 95/98 Audio Driver Installation

4-1.1 Driver files location:

Windows 95/98 audio driver : \ Audio \ via1611 \ Windows 9X

4-1.2 Procedure:

1.Update Device Driver Wizard

When windows 95/98 boot up, the "Update Device Driver Wizard" will appear. Please select "Next" to complete the Audio driver installation.

2.Select Location

If Windows can not find the proper driver location, please select "Other Locations.." for the right driver location.

Type in the driver location: D: \ Audio \ via1611 \ win9x (assuming your CD-ROM disc drive is in drive D), then select OK.

3.Copy Files From:

Windows 95 will then ask you confirm the driver location, please type in D: \ Audio \ via1611 \ win9x (assuming your CD-ROM disc drive is in drive D).

After Windows 95 has finished copying all necessary files, please select Yes to restart your computer.

After finishing the driver installation, the sound devices will be added under Win95 Device Manager.

4-2 Windows NT Audio Driver Installation

4-2.1 Divers Files Location

Windows NT audio driver: \ Audio \ via1611 \ winnt40

4-2.2 Procedure:

1. Click Start→ Setting→Control Panel
2. Double Click Multimedia Icon
3. Click Device→Add
4. Select Unlisted or Updated Driver then clicks ok.
5. Input Driver Path <CD-ROM Drive>: \Audio \ via1611 \winnt40, then click ok.
6. Restart your System, Driver Installation Finished.

4-3 DOS/Win 3.1 Audio Driver Installation

4-3.1 Divers Files Location

Windows 3.1 audio driver: \ Audio \ via1611 \ DOS

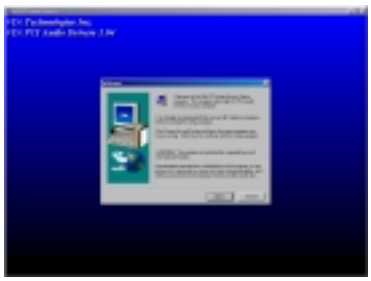
4-3.2 Procedure:

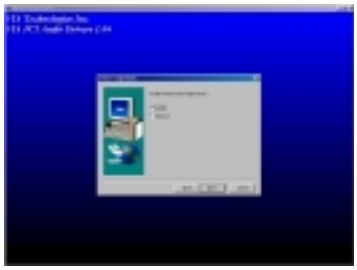
Run<CD-ROM Drive>: \ Audio \ via1611 \ DOS \ install.exe

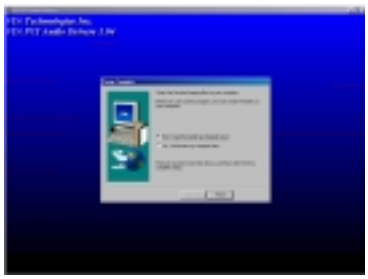
4-4 PCI Audio Drivers 1.04

4-4.1Procedure:

1. Type PCI Audio Drivers 1.04 path, which you want to install：\Audio\via1611\setup.exe
2. Click “Next” to continue program
3. Click “Cancel” to quit set up, then close program.
4. Press “install”, then click “next”
5. Program will install automatically , click “ finish”.







V. AUDIO DRIVER & UTILITY

VGA Driver/Utility

The onboard AGP VGA adapter has two sets of drivers for different operation system. All drivers can be found under below directory in the bundle CD title:

D:\Video\MVP4 (assuming your CD-ROM disc drive is in drive D)

Drivers Overview:

- Microsoft Windows 95\98
- Microsoft Windows NT

4-5 Windows 95/98 VGA Driver Installation

4-5.1 Divers Files Location

Windows 9x Video driver: \ Video \ MVP4\ win 9X

4-5.2 Procedure:

You can run above program \ Video \ MVP4\ win 9X directly, then setup.

Or choose the following installation:

1.Update Device Driver Wizard

When windows 95/98 boot up, the "Update Device Driver Wizard" will appear. Please select "Next" to complete the Audio driver installation.

2.Select Location

If Windows can not find the proper driver location, please select "Other Locations.." for the right driver location.

3.Copy Files From:

Windows 95 will then ask you confirm the driver location, please type in D: \ Video \ MVP4\ win9x (assuming your CD-ROM disc drive is in drive D).

After Windows 95 has finished copying all necessary files, please select Trident CyberBlade i7 AGP (v6.50.5482-10) to restart your computer.

4-6 Windows NT VGA Driver Installation:

4-6.1 Divers Files Location:

Windows NT VGA driver: \ Video \ MVP4 \ winnt

4-6.2 Procedure:

We recommend that you install Windows NT 4.0 Service Pack version 3.0 before you install Windows NT4.0VGA, (looking up web address is http://www.microsoft.com/isapi/support/bldqpage.idc?ProductPage=q_serapk). Otherwise, system doesn't work any way.

1. Start Windows NT, change to VGA mode（16 colors, distinguish rate is 640X480）, then restart the system.
2. After restart system, please click mouse right key directly, select (property).
3. Please select (setting), click (change display type) key.
4. Please choose (Adapter Type) , click (Change) key.
5. Select (Select Device) item and press(Have Disk).
6. Insert D driver installation CD disc.
7. Please select correct drive path:\ Video \ MVP4 \ winnt, press (OK) 。
8. After showing drive list, press (OK)
9. Return to (Display Properties),press (Apply) and (OK) key。
10. After appearing (System Settings Change) item, press (Yes), then restart system.

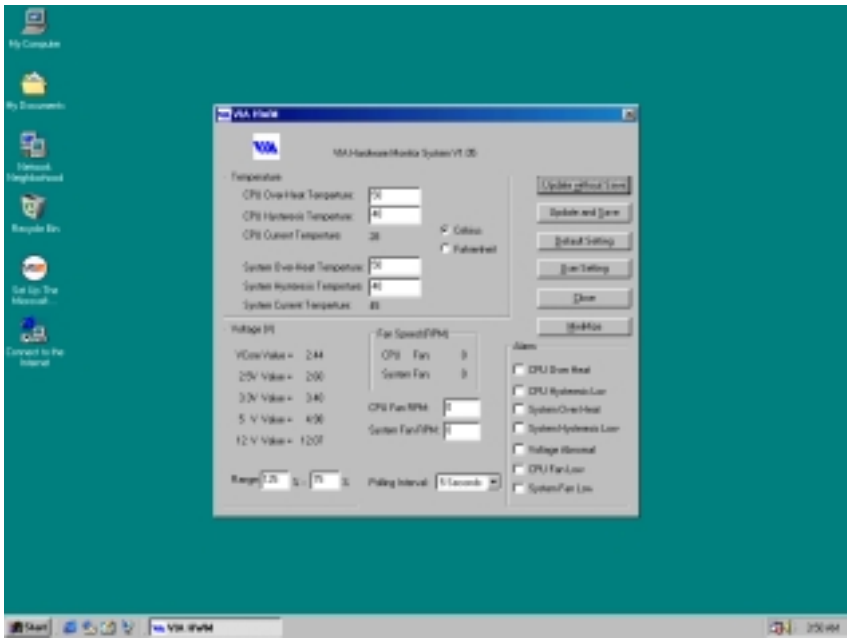
SECTION 5.
Software Utility

5-1 VIA Hardware Monitor System V 1.05

5-1.1 Driver files location: \sysmon\viahm105.

(Note: You should copy the file from CD to your hare disk, then run viahm.exe program.)

5-1.2 You will see the following interface on the monitor, it shows CPU temperature, voltage and system environment temperature etc.



5-2 VIA Chipset Driver Utility

1. This mainboard has VIA chipset drivers as below. Please follow the installation instruction in the bundled CD to install all these necessary drivers.
2. Bus Master PCI IDE Driver (path： ide\via\ide\setup.exe)
3. AGP V x D (path：ide\via\AGP\setup.exe)
4. VIA Chipset Function's Registry (path：ide\via\reg\setup.exe)
5. VIA USB Patch Driver - For Win 98(path：ide\via\viausb\setup.exe)