FCC Compliance Statement:

This equipment has been tested and found to comply with 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 residential installations. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television equipment 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:

-Reorient or relocate the receiving antenna

-Move the equipment away from the receiver

-Plug the equipment into an outlet on a circuit different from that to which the receiver is connected

-Consult the dealer or an experienced radio/television technician for additional suggestions

You are cautioned that any change or modifications to the equipment not expressly approve by the party responsible for compliance could void Your authority to operate such equipment.

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

Declaration of Conformity

We, Manufacturer/Importer

(full address)

G.B.T. Technology Träding GMbH
Ausschlager Weg 41, 1F, 20537 Hamburg, Germany

declare that the product

(description of the apparatus, system, installation to which it refers)

Mother Board
GA-7VM

is in conformity with

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

☐ EN 55011	Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM high frequency equipment	☐ EN 61000-3-2* ☒ EN60555-2	Disturbances in supply systems caused by household appliances and similar electrical equipment "Harmonics"
☐ EN55013	Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment	☐ EN61000-3-3* ☒ EN60555-3	Disturbances in supply systems caused by household appliances and similar electrical equipment "Voltage fluctuations"
☐ EN 55014	Limits and methods of measurement of radio disturbance characteristics of household electrical appliances, portable tools and similar electrical apparatus	☒ EN 50081-1	Generic emission standard Part 1: Residual, commercial and light industry
		☒ EN 50082-1	Generic immunity standard Part 1: Residual, commercial and light industry
☐ EN 55015	Limits and methods of measurement of radio disturbance characteristics of fluorescent lamps and luminaries	☐ EN 55081-2	Generic emission standard Part 2: Industrial environment
☐ EN 55020	Immunity from radio interference of broadcast receivers and associated equipment	☐ EN 55082-2	Generic immunity standard Part 2: Industrial environment
☒ EN 55022	Limits and methods of measurement of radio disturbance characteristics of information technology equipment	☐ ENV 55104	Immunity requirements for household appliances tools and similar apparatus
☐ DIN VDE 0855 ☐ part 10 ☐ part 12	Cabled distribution systems; Equipment for receiving and/or **distribution** from sound and television signals	☐ EN 50091- 2	EMC requirements for uninterruptible power systems (UPS)
☒ CE marking		CE	(EC conformity marking)

The manufacturer also declares the conformity of above mentioned product
with the actual required safety standards in accordance with LVD 73/23 EEC

☐ EN 60065	Safety requirements for mains operated electronic and related apparatus for household and similar general use	☐ EN 60950	Safety for information technology equipment including electrical business equipment
☐ EN 60335	Safety of household and similar electrical appliances	☐ EN 50091-1	General and Safety requirements for uninterruptible power systems (UPS)

Manufacturer/Importer

(Stamp)

Signature : *Rex Lin*

Date : Mar. 3, 2000

Name : Rex Lin

7VM
AMD™ Athlon AGP Motherboard

USER'S MANUAL

How this manual is organized

This manual is divided into the following sections:

1) Revision List	Manual revision information
2) Item Checklist	Product item list
3) Features	Product information & specification
4) Hardware Setup	Instructions on setting up the motherboard
5) Performance & Block Diagram	Product Performance & Block Diagram
6) Suspend to RAM	Instructions STR installation
7) BIOS Setup	Instructions on setting up the BIOS software
8) Appendix	General reference

Table Of Content

Revision History

Revision	Revision Note	Date
1.1	Initial release of the 7VM motherboard user's manual.	Mar. 2000
1.1	Second release of the 7VM motherboard user's manual.	Mar. 2000
1.1	Third release of the 7VM motherboard user's manual.	Mar. 2000
1.1	Fourth release of the 7VM motherboard user's manual.	Apr. 2000

The author assumes no responsibility for any errors or omissions that may appear in this document nor does the author make a commitment to update the information contained herein. Third-party brands and names are the property of their respective owners.

Apr. 25, 2000 Taipei, Taiwan, R.O.C

Item Checklist

☑The 7VM Motherboard

☑Cable for IDE / Floppy device

☑Diskettes or CD (TUCD) for motherboard utilities

☑7VM User's Manual

Summary Of Features

Form factor	• 24.7 cm x 21.1 cm Micro ATX SIZE form factor, 4 layers PCB.
CPU	• AMD Athlon(K7) Slot A Processor • 512 KB 2nd cache in CPU Module • Supports 500MHz ~ 1GHz and faster
Chipset	Apollo KX133 ,consisting of: • VIA8371 Memory/AGP/PCI Controller(PAC) • VT82C686A PCI Super-I/O Integrated Peripheral Controller (PSIPC)
Clock Generator	• Supports 100~143MHz
Memory	• 3 168-pin DIMM Sockets • Supports SDRAM up to 1.5GB • Supports only 3.3V SDRAM DIMM, PC-133 supported
I/O Control	• VT82C686A
Slots	• 1 AGP (Accelerated Graphics Port) slot - AGP 66 / 133 MHz, 3.3V/1.5V device support • 3 32-bit Master PCI Bus slots • 1 AMR Slot
On-Board IDE	• An IDE controller on the VT82C686A PCI chipset provides IDE HDD/ CD-ROM with PIO, Bus Master , Ultra DMA/33, and ATA 66 Operation modes • Can connect up to four IDE devices
On-Board Peripherals	• 1 Floppy port supports 2 FDD with 360K, 720K,1.2M, 1.44M and 2.88M bytes • 1 Parallel port supports SPP/EPP/ECP mode • 2 Serial Ports (COM 1 & COM 2) • 4 USB ports • 1 IrDA connector for Fast IrDA
Hardware Monitor (Optional)	• CPU/Power Supply/Panel Fan Revolution detect • System Voltage Detect • CPU Overheat Warning • Display Actual Current Voltage

PS/2 Connector	• PS/2® Keyboard interface and PS/2® Mouse interface
BIOS	• Licensed AMI BIOS, 2M bit FLASH RAM
Additional Features	• Internal/External Modem Wake up • STR (Suspend-To-RAM) • LAN Wake up • System after AC back

7VM Motherboard Layout

CPU Speed Setup

The system bus speed is selectable at 100 ~143MHz. The user can select the system bus speed by DIP switch **SW4** .

Set System Bus Speed

SW4:   **O : ON, X : OFF**

4	3	2	1	CPU	PCI	Spectrum
X	X	X	X	133.3	33.3	5%
O	X	X	X	100.2	33	5%
X	O	X	O	110	36.7	X
O	X	X	O	115	38.3	X
O	O	X	O	120	30	X
X	X	O	X	133.3	33.3	X
O	X	O	X	100.2	33.3	X
X	X	O	O	124	31	X
X	O	O	O	129	32.3	X
O	X	O	O	138	34.5	X
O	O	O	O	143	35.8	X

Connectors

GAME & Audio Port

GAME Port

Line Out   MIC

Line In
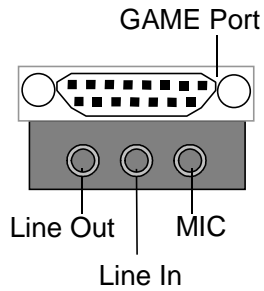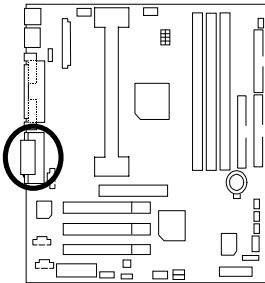
COM 1 / COM 2 / LPT Port

LPT PORT

COM 1   COM 2
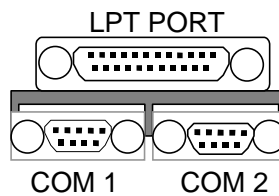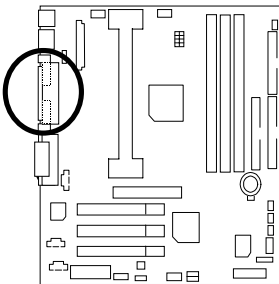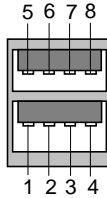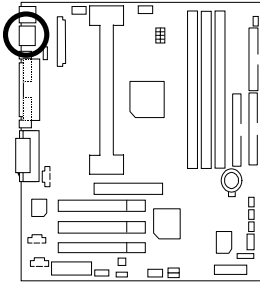
USB Connector

Pin No.	Definition
1	USB V0
2	USB D0-
3	USB D0+
4	GND
5	USB V1
6	USB D1-
7	USB D1+
8	GND

PS/2 Keyboard & PS/2 Mouse Connector

PS/2 Mouse
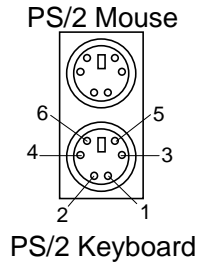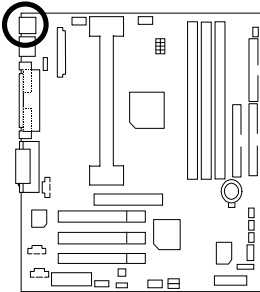
PS/2 Keyboard

PS/2 Mouse/ Keyboard	
Pin No.	Definition
1	Data
2	NC
3	GND
4	VCC(+5V)
5	Clock
6	NC

J10: Power FAN
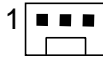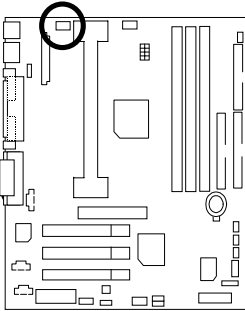
Pin No.	Definition
1	GND
2	+12V
3	SENSE

J5: CPU FAN
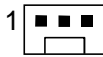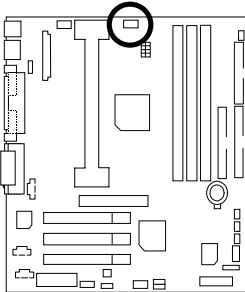
Pin No.	Definition
1	GND
2	+12V
3	SENSE

J6: System FAN
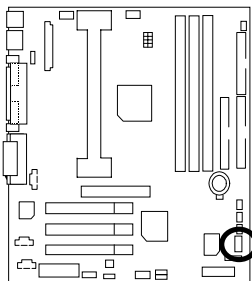
Pin No.	Definition
1	GND
2	+12V
3	SENSE

ATX Power
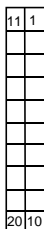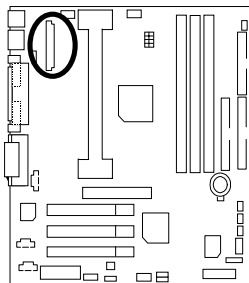
Pin No.	Definition
3,5,7,13,15-17	GND
1,2,11	3.3V
4,6,19,20	VCC
10	+12V
12	-12V
18	-5V
8	Power Good
9	5V SB stand by+5V
14	PS-ON(Soft On/Off)

Floppy Port

RED LINE
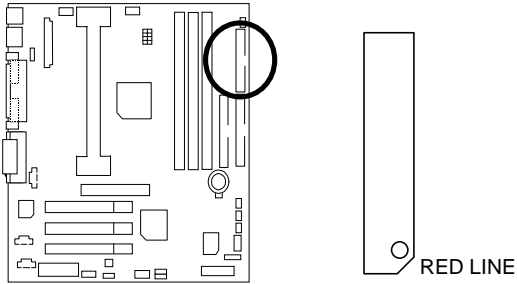
IDE1 (Primary) , IDE2 (Secondary) Port

RED LINE

IDE 1   IDE 2
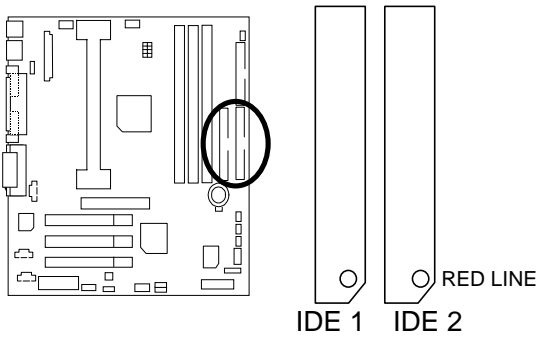
USB2 : USB Port
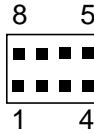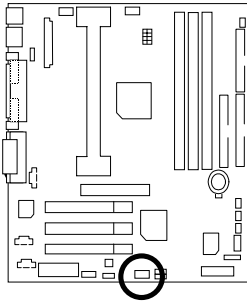
Pin No.	Definition
1	VCC
2	USB D0−
3	USB D0+
4	GND
5	VCC
6	USB D1−
7	USB D1+
8	GND

8   5

1   4

IR : Infrared Connector

1
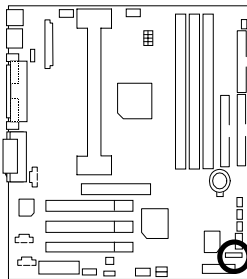
Pin No.	Definition
1	VCC (+5V)
2	NC
3	IR Data Input
4	GND
5	IR Data Output

JP3 : STR LED Connector & LED1 (DRAM LED)
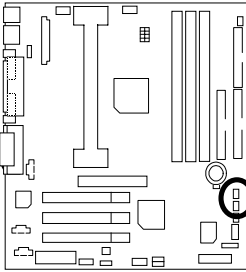
+ LED1
(DRAM LED)

1 JP3

STR LED Connector External.

J3 : Modem Wake Up (Internal Modem Card Wake Up)

1
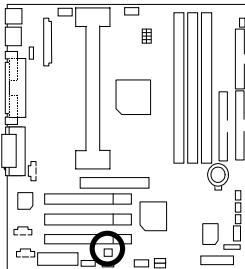
Pin No.	Definition
1	Signal
2	GND

J4 : LAN Wake Up
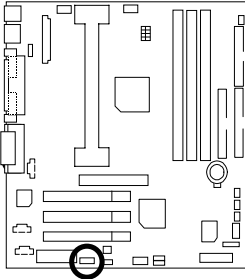
Pin No.	Definition
1	+5V SB
2	GND
3	Signal

J12 TEL: The connector is for Modem with internal voice connector
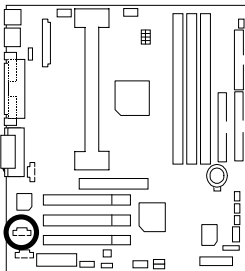
Pin No.	Definition
1	Signal-In
2	GND
3	GND
4	Signal-Out

J11:AUX_IN
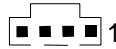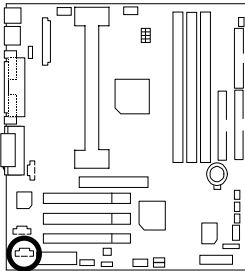
Pin No.	Definition
1	AUX-L
2	GND
3	GND
4	AUX-R

J8 : CD Audio Line In
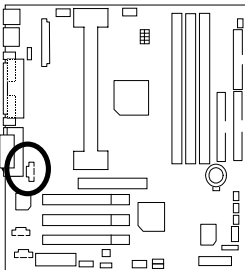
Pin No.	Definition
1	CD-L
2	GND
3	GND
4	CD-R

Panel and Jumper Definition

J2 : For 2X11 PINs Jumper
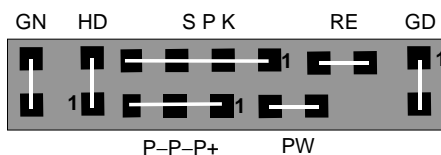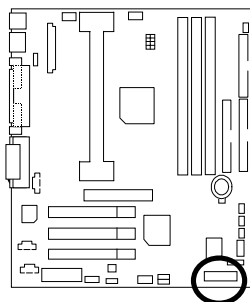
GN (Green Switch)	Open: Normal Operation Close: Entering Green Mode
GD (Green LED)	Pin 1: LED anode(+) Pin 2: LED cathode(−)
HD (IDE Hard Disk Active LED)	Pin 1: LED anode(+) Pin 2: LED cathode(−)
SPK (Speaker Connector)	Pin 1: VCC(+) Pin 2- Pin 3: NC Pin 4: Data(−)
RE (Reset Switch)	Open: Normal Operation Close: Reset Hardware System
P+P−P−(Power LED)	Pin 1: LED anode(+) Pin 2: LED cathode(−) Pin 3: LED cathode(−)
PW (Soft Power Connector)	Open: Normal Operation Close: Power On/Off

JP2 : BIOS Write Protection
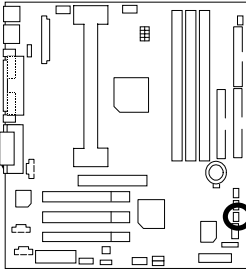
Pin No.	Definition
ON	Write Protect Enable
OFF	Write Protect Disable (Default)

JP6 : Front Panel USB Device Wake up Selection(Optional)
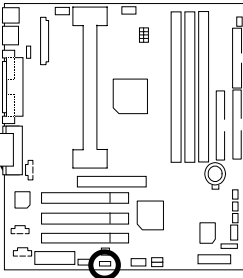
Pin No.	Definition
1-2 close	FP USB Wake Up
2-3 close	Normal (Default)

(If you want to use "USB KB/Mouse Wake from S3" function, you have to set the BIOS setting "USB KB/Mouse Wake from S3" enabled, and the jumper "JP6" enabled).
*(Power on the computer and as soon as memory counting starts, press <Del>. You will enter BIOS Setup. Select the item "POWER MANAGEMENT SETUP", then select "USB KB/Mouse Wake from S3: Enabled". Remember to save the setting by pressing "ESC" and choose the "SAVE & EXIT SETUP" option.)

JP5 : Rear Panel USB Device Wake up Selection(Optional)

1
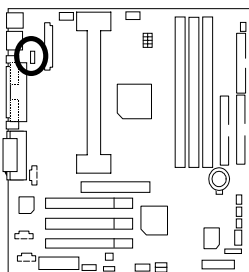
Pin No.	Definition
1-2 close	RP USB Wake Up
2-3 close	Normal (Default)

(If you want to use "USB KB/Mouse Wake from S3" function, you have to set the BIOS setting "USB KB/Mouse Wake from S3" enabled, and the jumper "JP5" enabled).
*(Power on the computer and as soon as memory counting starts, press <Del>. You will enter BIOS Setup. Select the item "POWER MANAGEMENT SETUP", then select "USB KB/Mouse Wake from S3: Enabled". Remember to save the setting by pressing "ESC" and choose the "SAVE & EXIT SETUP" option.)

JP4:STR Enable

1
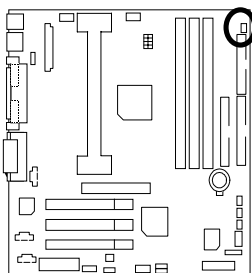
Pin No.	Definition
ON	STR Enabled
OFF	STR Disabled (Default)

JP7/JP8/JP9: Onboard AC97& AMR Select

(AMR→ Audio Modem Riser)
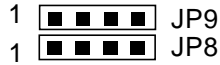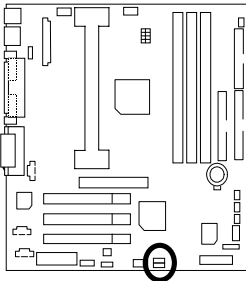
	Jumper	JP7	JP8	JP9
Function				
Onboard AC97		OFF	1-2	1-2
AMR (Primary)		OFF	3-4	3-4
Onboard AC97+AMR (Secondary)		ON	1-2, 3-4	1-2

JP7: AMR Primary / Secondary Select
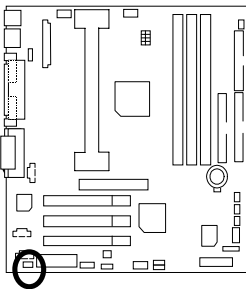
Pin No.	Definition
ON	AMR Secondary (Default)
OFF	AMR Primary

BAT1 : Battery
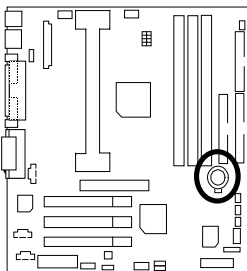
☞ Danger of explosion if battery is incorrectly replaced.
☞ Replace only with the same or equivalent type recommended by the manufacturer.
☞ Dispose of used batteries according to the manufacturer's instructions.

Performance List

The following performance data list is the testing results of some popular benchmark testing programs.

These data are just referred by users, and there is no responsibility for different testing data values gotten by users. (The different Hardware & Software configuration will result in different benchmark testing results.)

- CPU   AMD Athlon™ 800MHz processor
- DRAM   (128x1) MB SDRAM (MOSEL 9928PR V54C365804VCT7)
- CACHE SIZE   512 KB included in CPU
- DISPLAY   GA-660 PLUS 32 (32MB)
- STORAGE   Onboard IDE (Quantum KA13600AT)
- O.S.   Windows NT™ 4.0 SP6
- DRIVER   Display Driver at 1024 x 768 x 64k colors x 75Hz.
- BUS MASTER   4 IN 1 Driver (Ver. 4.20)

Processor	AMD Athlon
	800MHz (100x8)
Winbench99	
CPU mark 99	71.8
FPU Winmark 99	4400
Business Disk Winmark 99	5560
Hi-End Disk Winmark 99	12300
Business Graphics Winmark 99	393
Hi-End Graphics Winmark 99	793
Winstone99	
Business Winstone 99	43.8
Hi-End Winstone 99	44.2

Block Diagram

AMD-K7™

100 MHz

AGP
2X/4X

System Bus 100MHz

VT8371

3.3V SDRAM

66MHz

100 / 133MHz

100 / 133MHz

66MHz

100 / 133MHz

33MHz

ICW
W210H

3 PCI

33MHz

ATA66 IDE
Channels

33MHz

14.318MHz

48MHz

4 USB Ports

VT82C
686A

Game Port

COM Ports

LPT Ports

AC97
CODEC

PS/2

IR Floppy

AMR
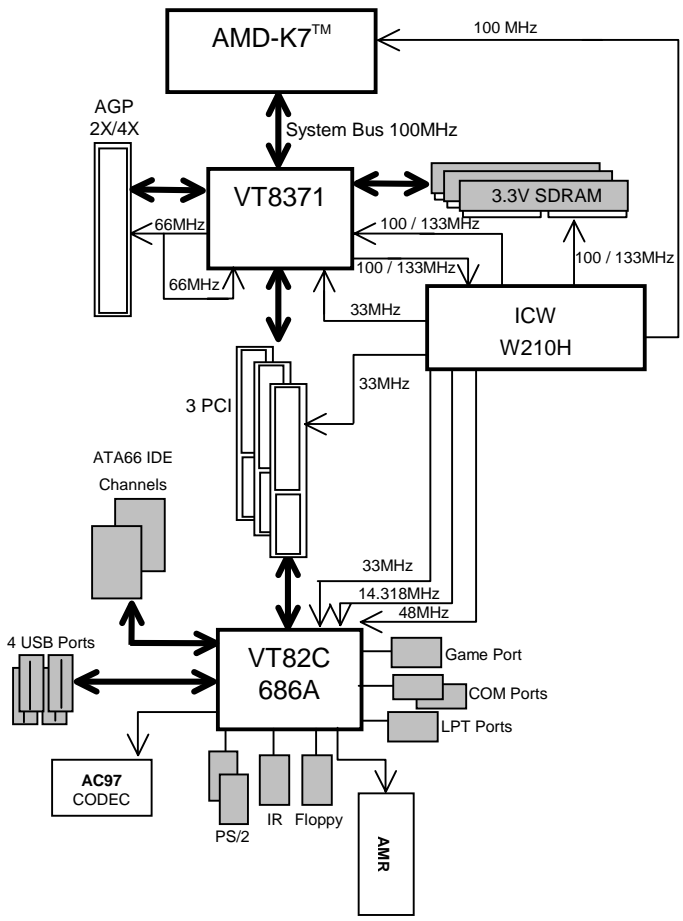
Suspend to RAM Installation

Suspend to RAM Installation

A.1 Introduce STR function:

Suspend-to-RAM (STR) is a Windows 98 ACPI sleep mode function. When recovering from STR (S3) sleep mode, the system is able, in just a few seconds, to retrieve the last "state" of the system before it went to sleep and recover to that state. The "state" is stored in memory (RAM) before the system goes to sleep. During STR sleep mode, your system uses only enough energy to maintain critical information and system functions, primarily the system state and the ability to recognize various "wake up" triggers or signals, respectively.

A.2 STR function Installation

Please use the following steps to complete the STR function installation.
Step-By-Step Setup
Step 1:
To utilize the STR function, the system must be in Windows 98 ACPI mode.

Putting Windows 98 into ACPI mode is fairly easy.

Setup with Windows 98 CD:

A.   Insert the Windows 98 CD into your CD-ROM drive, select Start, and then Run.

B.   Type (without quotes) **"D:\setup /p j"** in the window provided. Hit the enter key or click OK.

『 In Windows 98 second edition version, all the bios version dated 12/01/99 or later are ACPI compatible. Just type" D:\Setup", the operating system will be installed as ACPI mode. 』

C.   After setup completes, remove the CD, and reboot your system

(This manual assumes that your CD-ROM device drive letter is D:).

Step 2:

(If you want to use STR Function, please set jumper JP4 (Closed.)

1
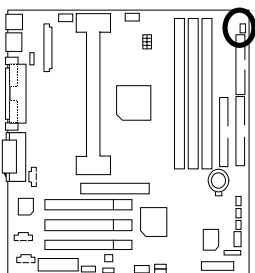
Pin No.	Definition
ON	STR Enabled
OFF	STR Disabled (Default)

Step 3:

Power on the computer and as soon as memory counting starts, press <Del>. You will enter BIOS Setup. Select the item **"POWER MANAGEMENT SETUP",** then select **"ACPI Standby State: S3 /STR"**. Remember to save the settings by pressing "ESC" and choose the **"SAVE & EXIT SETUP"** option.

Congratulation! You have completed the installation and now can use the STR function.

A.3 How to put your system into STR mode?

There are two ways to accomplish this:

1. Choose the "Stand by" item in the "Shut Down Windows" area.

A. Press the "Start" button and then select "Shut Down"

B. Choose the "Stand by" item and press "OK"
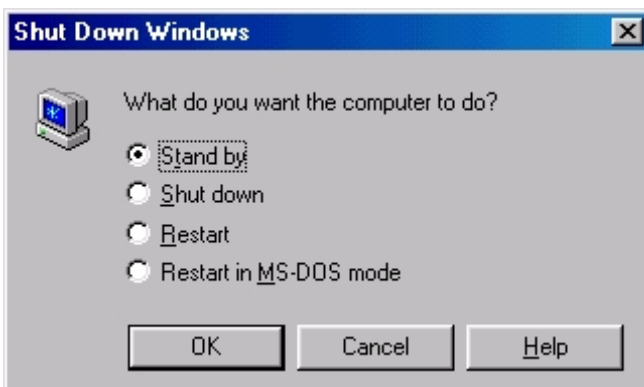
2.   Define the system "power on" button to initiate STR sleep mode:

    A.   Double click "My Computer" and then "Control Panel"
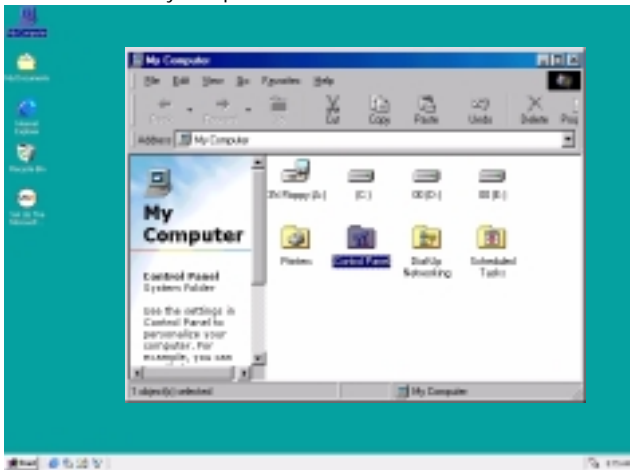
    B.   Double click the " Power Management" item.
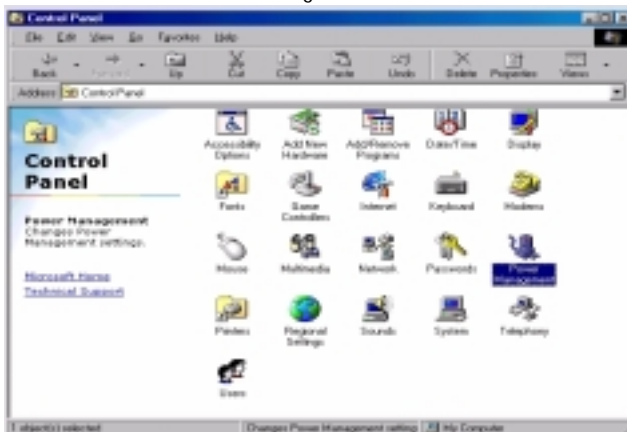
C. Select the "Advanced" tab and "Standby" mode in Power Buttons.
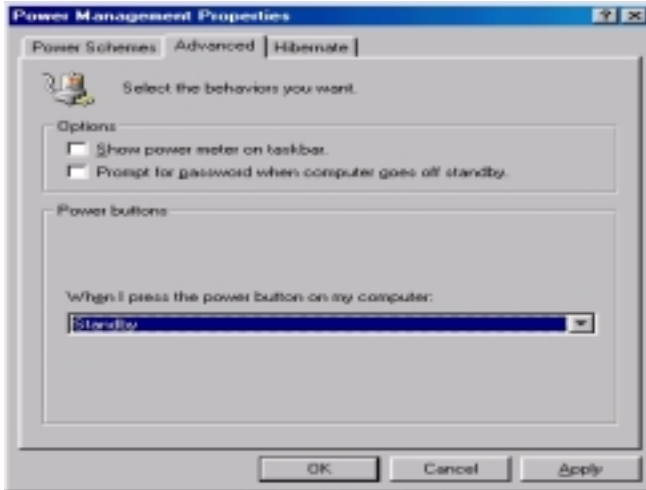
Step 4:

Restart your computer to complete setup.

Now when you want to enter STR sleep mode, just momentarily press the "Power on" button..

A.4 How to recover from the STR sleep mode?

There are seven ways to "wake up" the system:

1. Press the "Power On" button.
2. Use the "PS/2 Keyboard Power On" function.
3. Use the "PS/2 Mouse Power On" function.
4. Use the "Resume by Alarm" function.
5. Use the "Modem Ring On" function.
6. Use the "Wake On LAN" function.
7. Use the "USB Device Wake Up" function.

A.5 Notices :

1.   In order for STR to function properly, several hardware and software requirements must be satisfied:

   A.   Your ATX power supply must comply with the ATX 2.01 specification (provide more than 720 mA 5V Stand-By current).

   B.   Your SDRAM must be PC-100 compliant.

2.   Jumper JP3 is provided to connect to the STR LED in your system chassis. [Your chassis may not provide this feature.] The STR LED will be illuminated when your system is in STR sleep mode.

+ LED1
(DRAM LED)

1 JP3

STR LED Connector External.
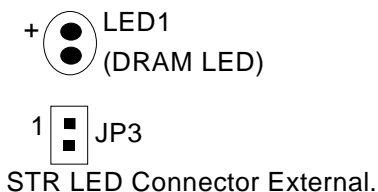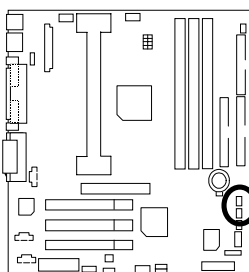
Memory Installation

The motherboard has 3 dual inline memory module (DIMM) sockets. The BIOS will automatically detects memory type and size. To install the memory module, just push it vertically into the DIMM Slot .The DIMM module can only fit in one direction due to the two notch. Memory size can vary between sockets.

Install memory in any combination table:

DIMM	168-pin SDRAM DIMM Modules	
Bank 0	Supports 8 / 16 / 32 / 64 / 128 / 256 / 512 MB	X 1 pcs
Bank 1	Supports 8 / 16 / 32 / 64 / 128 / 256 / 512 MB	X 1 pcs
Bank 2	Supports 8 / 16 / 32 / 64 / 128 / 256 / 512 MB	X 1 pcs

BIOS Setup

BIOS Setup is an overview of the BIOS Setup Program. The program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS SRAM so that it retains the Setup information when the power is turned off.

ENTERING SETUP

Power ON the computer and press <Del> immediately will allow you to enter Setup. If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" bottom on the system case. You may also restart by simultaneously press <Ctrl> – <Alt>– <Del> keys.

CONTROL KEYS

<↑>	Move to previous item
<↓>	Move to next item
<←>	Move to the item in the left hand
<→>	Move to the item in the right hand
<Esc>	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
<+/PgUp>	Increase the numeric value or make changes
<-/PgDn>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Reserved
<F3>	Reserved
<F4>	Reserved
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
<F7>	Load the SETUP Defaults.
<F8>	Reserved
<F9>	Reserved
<F10>	Save all the CMOS changes, only for Main Menu

GETTING HELP

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu / Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc>.

THE MAIN MENU

Once you enter AMI BIOS CMOS Setup Utility, the Main Menu (Figure 1) will appear on the screen. The Main Menu allows you to select from nine setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

```
╔════════════════════════════════════════════════════════════╗
     AMIBIOS SIMPLE SETUP UTILITY – VERSION 1.21
     (C) 1999 American Megatrends, Inc. All Rights Reserved
╔════════════════════════════════════════════════════════════╗

   STANDARD CMOS SETUP          INTEGRATED PERIPHERALS

   BIOS FEATURES SETUP          HARDWARE MONITOR SETUP

   CHIPSET FEATURES SETUP       SUPERVISOR PASSWORD

   POWER MANAGEMENT SETUP       USER PASSWORD

   PNP / PCI CONFIGURATION      IDE HDD AUTO DETECTION

   LOAD BIOS DEFAULTS           SAVE & EXIT SETUP

   LOAD SETUP DEFAULTS          EXIT WITHOUT SAVING

╠════════════════════════════════════════════════════════════╣
 ESC: Quit        ↑↓→ ← : Select Item   (Shift)F2 : Change Color    F5: Old Values
 F6: Load BIOS Defaults      F7: Load SETUP Defaults      F10: Save & Exit

                    Time, Date , Hard Disk Type…
╚════════════════════════════════════════════════════════════╝
```

Figure 1: Main Menu

● **Standard CMOS Features**

This setup page includes all the items in standard compatible BIOS.

● **BIOS Features Setup**

This setup page includes all the items of AMI special enhanced features.

● **Chipset Features Setup**

This setup page includes all the items of chipset special features.

● **Power Management Setup**

This setup page includes all the items of Green function features.

● **PnP/PCI Configurations**

This setup page includes all the configurations of PCI & PnP ISA resources.

● **Load BIOS Defaults**

BIOS Defaults indicates the value of the system parameters which the system would be in safe configuration.

● **Load Setup Defaults**

Setup Defaults indicates the value of the system parameters which the system would be in best performance configuration.

● **Integrated Peripherals**

This setup page includes all onboard peripherals.

● **Hardware Monitor Setup**

This setup page is the System auto detect Temperature, voltage , fan, speed.

● **Supervisor Password**

Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.

● **User Password**

Change, set, or disable password. It allows you to limit access to the system.

● **IDE HDD auto Detection**

Automatically configure hard disk parameters.

● **Save & Exit Setup**

Save CMOS value settings to CMOS and exit setup.

● **Exit Without Saving**

Abandon all CMOS value changes and exit setup.

Standard CMOS Features

The items in Standard CMOS Setup Menu (Figure 2) are divided into 9 categories. Each category includes no, one or more than one setup items. Use the arrows to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

```
.........................................................................................
            AMIBIOS SETUP – STANDARD CMOS SETUP
        ( C ) 1999 American Megatrends, Inc. All Rights Reserved
.........................................................................................
  Date (mm/dd/yyyy) : Mon, Mar. 06, 2000
  Time (hh/mm/ss)   : 04:05:37


         TYPE  SIZE  CYLS  HEAD  PRECOMP  LANDZ  SECTOR  MODE
  Pri  Master  Auto
  Pri  Slave    Auto
  Sec Master Auto
  Sec Slave   Auto



  Floppy Drive A : 1.44 MB 3½          Base Memory :  640 Kb
  Floppy Drive B : Not Installed       Other Memory :  384 Kb
                                    Extended  Memory :  63 Mb
  Boot Sector Virus Protection : Disabled   Total  Memory :  64 Mb
  Month : Jan – Dec                    ESC : Exit
  Day    : 01– 31                      ↑↓   : Select Item
  Year   : 1990 – 2099                 PU / PD / + / – :Modify
                                       (Shift) F2 : Color
```

Figure 2: Standard CMOS Features

● **Date**

The date format is <week>, <month> <date> <year>.

week	The day, from Sun to Sat, determined by the BIOS and is display-only.
month	The month, Jan. Through Dec.
date	The date, from 1 to 31 (or the maximum allowed in the month).
year	The year, from 1990 through 2099.

● **Time**

The times format in <hour> <minute> <second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

● **IDE Primary Master, Slave / Secondary Master, Slave**

The category identifies the types of hard disk from drive C to F that has been installed in the computer. There are two types: auto type, and manual type. Manual type is user-definable; Auto type which will automatically detect HDD type.

Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category.

If you select User Type, related information will be asked to enter to the following items. Enter the information directly from the keyboard and press <Enter>. Such information should be provided in the documentation form your hard disk vendor or the system manufacturer.

CYLS.	Number of cylinders.
HEADS	Number of heads.
PRECOMP	Write precomp.
LANDZONE	Landing zone.
SECTORS	Number of sectors.

If a hard disk has not been installed select NONE and press <Enter>.

● **Drive A type / Drive B type**

The category identifies the types of floppy disk drive A or drive B that has been installed in the computer.

None	No floppy drive installed.
360K, 5.25 in.	5.25 inch PC-type standard drive; 360K byte capacity.
1.2M, 5.25 in.	5.25 inch AT-type high-density drive; 1.2M byte capacity (3.5 inch when 3 Mode is Enabled).
720K, 3.5 in.	3.5 inch double-sided drive; 720K byte capacity.
1.44M, 3.5 in.	3.5 inch double-sided drive; 1.44M byte capacity.
2.88M, 3.5 in.	3.5 inch double-sided drive; 2.88M byte capacity.

- **Memory**

    The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

    Base Memory

    > The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.

    > The value of the base memory is typically 512 K for systems with 512 K memory installed on the motherboard, or 640 K for systems with 640 K or more memory installed on the motherboard.

    Other Memory

    > This refers to the memory located in the 640 K to 1024 K address space. This is memory that can be used for different applications.

    > DOS uses this area to load device drivers to keep as much base memory free for application programs. Most use for this area is Shadow RAM.

    Extended Memory

    > The BIOS determines how much extended memory is present during the POST.

    > This is the amount of memory located above 1 MB in the CPU's memory address map.

BIOS Features Setup

```
AMIBIOS SETUP – BIOS FEATURES SETUP
( C ) 1999 American Megatrends, Inc. All Rights Reserved

1st Boot Device            Floppy
2nd Boot Device            IDE-0
3rd Boot Device            CDROM
S.M.A.R.T. for Hard Disks  Disabled
BootUp Num-Lock            On
Floppy Drive Seek          Disabled
Password Check             Setup




                                         ESC : Quit           ↑↓→←: Select Item
                                         F1  : Help           PU/PD+/-/ : Modify
                                         F5  :Old Values        (Shift)F2:Color
                                         F6  : Load BIOS Defaults
                                         F7  : Load SETUP Defaults
```

Figure 3: BIOS Features Setup

- **1st / 2nd / 3rd Boot Device**

Floppy	Boot Device by Floppy.
ZIP A:/LS120	Boot Device by ZIP A:/LS120
CDROM	Boot Device by CDROM.
SCSI	Boot Device by SCSI.
NETWORK	Boot Device by NETWORK.
IDE-0~IDE-3	Boot Device by IDE-0~IDE-3.
Disabled	Boot Device by Disabled.
ATAPI ZIP C:	Boot Device by ATAPI ZIP C:.
USB FDD	Boot Device by USB FDD.

● **S.M.A.R.T. for Hard Disks**

Enabled	Enabled HDD S.M.A.R.T. Capability.
Disabled	Disabled HDD S.M.A.R.T. Capability. **(Default value)**

● **Boot Up Num-Lock**

On	Keypad is number keys. **(Default Value)**
Off	Keypad is arrow keys.

● **Floppy Drive Seek**

During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360 type is 40 tracks while 720 , 1.2 and 1.44 are all 80 tracks.

Enabled	BIOS searches for floppy disk drive to determine if it is 40 or 80 tracks. Note that BIOS can not tell from 720, 1.2 or 1.44 drive type as they are all 80 tracks.
Disabled	BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360. **(Default Value)**

● **Password Check**

This category allows you to limit access to the Always and Setup, or just to Setup.

Always	The system can not boot and can not access to Setup page will be denied if the correct password is not entered at the prompt.
Setup	The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt. **(Default Value)**

Chipset Features Setup

```
                  AMIBIOS SETUP – CHIPSET FEATURES SETUP
              ( C ) 1999 American Megatrends, Inc. All Rights Reserved
  *********DRAM Timing***            Memory Address Drive       16 mA
  Top Performance        Disabled    CAS# Drive                 8 mA
  DRAM Frequency         100MHz      RAS# Drive                 16 mA
  SDRAM CAS# Latency     3

  DRAM Integrity Mode    Non-ECC
  AGP Mode               4X
  AGP Comp. Driving      Auto
  Manual AGP Comp. Driving CB
  AGP Aperture Size      64MB
   PCI Delay Transaction  Enabled
  ClkGen Spread Spectrum Disabled
  USB Controller         Enabled
  USB Legacy Support     Disabled
  BIOS Flash Protection  Disabled
  DRAM Drive Strength    Auto      ESC : Quit          ↑↓→ ←: Select Item
   MD Bus Strength       High      F1  : Help          PU/PD+/-/ : Modify
   CAS Bus Strength      High      F5  :Old Values         (Shift)F2:Color
  Memory Data Drive      6 mA      F6  : Load BIOS Defaults
   SDRAM Command Drive   16 mA     F7  : Load SETUP Defaults
```

Figure 4: Chipset Features Setup

● **Top Performance**

Disabled	Top Performance Disabled. **(Default Value)**
Enabled	Top Performance Enabled.

● **DRAM Frequency**

100MHz	Set DRAM Frequency is 100MHz**(Default Value)**.
133MHz	Set DRAM Frequency is 133MHz

**If you want to set DRAM Frequency to 133MHz, you must set Top Performance as Enabled as first.

● **SDRAM CAS# Latency**

2	For Fastest SDRAM DIMM module.
3	For Slower SDRAM DIMM module. **(Default Value)**.
Auto	Detect SDRAM CAS# Latency by SPD.

● **DRAM Integrity Mode**

ECC	For 72 bit ECC type DIMM Model.
Non-ECC	Normal Setting. **(Default Value)**

● **AGP Mode**

4X	Set AGP Mode is 4X. **(Default Value)**
1X	Set AGP Mode is 1X.
2X	Set AGP Mode is 2X.

● **AGP Comp. Driving**

Auto	Set AGP Comp. Driving is Auto. **(Default Value)**
Manual	Set AGP Comp. Driving is Manual.

If AGP Comp. Driving is Manual.

Manual AGP Comp. Driving :	00~FF

● **AGP Aperture Size**

4MB	Set AGP Aperture Size to 4MB.
8MB	Set AGP Aperture Size to 8 MB.
16MB	Set AGP Aperture Size to 16 MB.
32MB	Set AGP Aperture Size to 32 MB.
64MB	Set AGP Aperture Size to 64 MB. **(Default Value)**
128MB	Set AGP Aperture Size to 128 MB.
256MB	Set AGP Aperture Size to 256 MB.

● **PCI Delay Transaction**

Enabled	Enabled Delay Transaction. **(Default Value)**
Disabled	Disabled Delay Transaction.

● **ClkGen Spread Spectrum**

Disabled	Disabled ClkGen Spread Spectrum. **(Default Value)**
Enabled	Enabled ClkGen Spread Spectrum.

● **USB Controller**

Enable	Enable USB Controller. **(Default Value)**
Disable	Disable USB Controller.

● **USB Legacy Support**

Keyboard/FDD	Set USB Legacy Support Keyboard / Floppy.
KB/Mouse/FDD	Set USB Legacy Support Keyboard / Mouse /Floppy.
Disabled	Disabled USB Legacy Support Function. **(Default Value)**

● **BIOS Flash Protection**

Enable	BIOS Flash Write Protection.
Disable	Normal. **(Default Value)**

● **DRAM Drive Strength**

Auto	Set DRAM Drive Strength Auto.
Manual	Set DRAM Drive Strength Manual.

● **MD Bus Strength**

High	Set MD Bus Strength High.
Low	Set MD Bus Strength Low.

● **CAS Bus Strength**

High	Set CAS Bus Strength High.
Low	Set CAS Bus Strength High.

● **Memory Data Drive**

6 mA	Set Memory Data Drive 6 mA
8 mA	Set Memory Data Drive 8 mA

● **SDRAM Command Drive**

16 mA	Set SDRAM Command Drive 16 mA
24 mA	Set SDRAM Command Drive 24 mA

● **Memory Address Drive**

16 mA	Set Memory Address Drive 16 mA
24 mA	Set Memory Address Drive 24 mA

● **CAS# Drive**

8 mA	Set CAS# Drive 8 mA
12 mA	Set CAS# Drive 12 mA

● **RAS# Drive**

16 mA	Set RAS# Drive 16 mA
24 mA	Set RAS# Drive 24 mA

Power Management Setup

```
┌─────────────────────────────────────────────────────────────────────────┐
│              AMIBIOS SETUP – POWER MANAGEMENT SETUP                       │
│          ( C ) 1999 American Megatrends, Inc. All Rights Reserved        │
├─────────────────────────────────────────────────────────────────────────┤
│ ACPI Standby State          S1/POS    RTC Alarm Date         Every Day    │
│ USB Dev Wakeup From S3      Disabled  RTC Alarm Hour         00           │
│ Suspend Time Out(Minute)    Disabled  RTC Alarm Minute       00           │
│ Display Activity            Ignore    RTC Alarm Second       00           │
│ IRQ3                        Monitor                                       │
│ IRQ4                        Monitor                                       │
│ IRQ5                        Ignore                                        │
│ IRQ7                        Monitor                                       │
│ IRQ9                        Ignore                                        │
│ IRQ10                       Ignore                                        │
│ IRQ11                       Ignore                                        │
│ IRQ13                       Ignore                                        │
│ IRQ14                       Monitor                                       │
│ IRQ15                       Ignore                                        │
│ Soft-Off by Power Button    Instant-Off                                   │
│ System after AC Back        Soft-Off   ESC : Quit        ↑↓→ ←: Select Item│
│ Modem Use IRQ               4          F1   : Help       PU/PD+/-/ : Modify│
│ Resume On Ring/LAN          Enabled    F5   :Old Values       (Shift)F2:Color│
│ PME Event Wake Up           Enabled    F6   : Load BIOS Defaults          │
│ Resume On RTC Alarm         Disabled   F7   : Load SETUP Defaults         │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 5: Power Management Setup

- **ACPI Standby State**

S1/POS	Set ACPI Standby State is S1 **(Default Value)**.
S3/STR	Set ACPI Standby State is S3.

- **USB Dev Wakeup From S3**

USB Dev Wakeup From S3 can be set when ACPI Sleep Type set to S3/STR.

Enabled	Enable USB Dev Wakeup From S3.
Disabled	Disable USB Dev Wakeup From S3 **(Default Value)**.

● **Suspend Time Out (Minute)**

Disabled	Disabled Suspend Time Out Function. **(Default Value)**
1	Enabled Suspend Time Out after 1min.
2	Enabled Suspend Time Out after 2min.
4	Enabled Suspend Time Out after 4min.
8	Enabled Suspend Time Out after 8min.
10	Enabled Suspend Time Out after 10min.
20	Enabled Suspend Time Out after 20min.
30	Enabled Suspend Time Out after 30min.
40	Enabled Suspend Time Out after 40min.
50	Enabled Suspend Time Out after 50min.
60	Enabled Suspend Time Out after 60min.

● **Display Activity**

Ignore	Ignore Display Activity. **(Default Value)**.
Monitor	Monitor Display Activity.

● **IRQ 3~IRQ15**

Ignore	Ignore IRQ3 ~IRQ15.
Monitor	Monitor IRQ3~IRQ15.

● **Soft-off by Power Button**

Instant-off	Soft switch ON/OFF for POWER ON/OFF. **(Default Value)**
Delay 4 sec	Soft switch on 4sec for power OFF.

● **System after AC Back Function**

Memory	This function depends on computer status.
Soft-Off	Set System Soft-Off Status. **(Default Value)**
Full-On	Set System Full-On Status.

● **Modem USE IRQ**

3, 4, **(Default Value)** 5, 7, N/A

● **Resume On Ring / LAN**

Disabled	Disabled Resume On Ring / Lan.
Enabled	Enabled Resume On Ring / Lan. **(Default Value)**

● **PME Event Wake Up**

Disabled	Disable PME Event Wake Up.
Enabled	Enabled PME Event Wake Up. **(Default Value)**

● **Resume On RTC Alarm**

You can set "Resume On RTC Alarm" item to Enabled and key in date/time to power on system.

Disabled	Disable this function. **(Default Value)**
Enabled	Enable alarm function to POWER ON system.

If the default value is Enabled.

Date (of Month) Alarm :	0~31
Hour Alarm	0~23
Minute Alarm	0~59
Second Alarm	0~59

PnP/PCI Configuration

```
                   AMIBIOS SETUP – PNP / PCI CONFIGURATION
              ( C ) 1999 American Megatrends, Inc. All Rights Reserved
   PnP OS Installed              No
   Reset Configuration Data      No
   VGA Boot from                 AGP
   PCI AGP Palette Snoop         Disabled
   DMA Channel 0                 PnP
   DMA Channel 1                 PnP
   DMA Channel 3                 PnP
   DMA Channel 5                 PnP
   DMA Channel 6                 PnP
   DMA Channel 7                 PnP




                                    ESC: Quit         ↑↓→ ←: Select Item
                                    F1   : Help       PU/PD+/-/ : Modify
                                    F5   :Old  Values  (Shift)F2:Color
                                    F6   : Load BIOS Defaults
                                    F7   : Load SETUP Defaults
```

Figure 6: PnP/PCI Configuration

- **PnP OS Installed**

Yes	Enable PNP OS Installed function.
No	Disable PNP OS Installed function. **(Default value)**

- **Reset Configuration Data**

No	Disable this function. **(Default value)**
Yes	Clear PnP information in ESCD & update DMI data.

- **VGA Boot From**

AGP	Primary Graphics Adapter From AGP. **(Default Value)**
PCI	Primary Graphics Adapter From PCI.

- **PCI/VGA Palette Snoop**

Enabled	For having Video Card on ISA Bus and VGA Card on PCI Bus.
Disabled	For VGA Card only. **(Default Value)**

- **DMA Channel(0,1,3,5,6,7)**

ISA/ EISA	The resource is used by Legacy ISA device.
PnP	The resource is used by PnP device. **(Default Value)**

Load BIOS Defaults

```
                AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.21
             ( C ) 1999 American Megatrends, Inc. All Rights Reserved

  STANDARD CMOS SETUP              INTEGRATED PERIPHERALS

  BIOS FEATURES SETUP              HARDWARE MONITOR SETUP

  CHIPSET FEATURES SETUP           SUPERVISOR PASSWORD

  POWER MANAGEMENT SETUP           USER PASSWORD

  PNP/PCI CONFIGURATION            IDE HDD AUTO DETECTION
                      Load BIOS Defaults (Y/N)?N
  LOAD BIOS DEFAU

  LOAD SETUP DEFAULTS              EXIT WITHOUT SAVING

  ESC : Quit      ↑↓→← : Select Item   (Shift) F2 : Change Color   F5 : Old Values
  F6   : Load BIOS Defaults   F7: Load SETUP Defaults   F10: Save & Exit

              Load BIOS Defaults except Standard CMOS SETUP
```

Figure 7: Load BIOS Defaults

- **Load BIOS Defaults**

  To load BIOS defaults value to CMOS, enter "Y". If not, enter "N".

Load Setup Defaults

```
        AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.21
      ( C ) 1999 American Megatrends, Inc. All Rights Reserved
```

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	HARDWARE MONITOR SETUP
CHIPSET FEATURES SETUP	SUPERVISOR PASSWORD
POWER MANAGEMENT SETUP	USER PASSWORD
PNP/PCI CONFIGURATION	IDE HDD AUTO DETECTION
LOAD BIOS DEFAU	Load Setup Defaults (Y/N)?N
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING

```
ESC : Quit        ↑↓→← : Select Item      (Shift) F2 : Change Color      F5 : Old Values
F6   : Load BIOS Defaults      F7: Load SETUP Defaults        F10: Save & Exit
```

Load Setup Defaults except Standard CMOS SETUP

Figure 8: Load Setup Defaults

● **Load SETUP Defaults**

To load SETUP defaults value to CMOS, enter "Y". If not, enter "N".

Integrated Peripherals

```
..................................................................................................................
:              AMIBIOS SETUP – INTEGRATED PERIPHERALS                              :
:             ( C ) 1999 American Megatrends, Inc. All Rights Reserved              :
|--------------------------------------------------------------------------------------------------|
| OnBoard Serial Port A          Auto       |                                        |
| OnBoard Serial Port B          Auto       |                                        |
|  Serial PortB Mode             Normal     |                                        |
|   *Duplex Mode                 N/A        |                                        |
|    IR Pins                     N/A        |                                        |
| OnBoard Parallel Port          Auto       |                                        |
|  Parallel Port Mode            ECP        |                                        |
|  Parallel Port DMA             Auto       |                                        |
|  Parallel Port IRQ             Auto       |                                        |
| AC97 Audio                     Auto       |                                        |
| MC97 Modem                     Auto       |                                        |
|                                           |                                        |
| OnBoard Legacy Audio           Enabled    |                                        |
|  Sound Blaster                 Disabled   |                                        |
|    SB I/O Base Address         220h-22Fh  |                                        |
|    SB IRQ Select               IRQ5       | ESC: Quit          ↑↓→ ←: Select Item  |
|    SB DMA Select               DMA1       | F1   : Help             PU/PD+/-/ : Modify |
|  MPU-401                       Disabled   | F5   :Old  Values        (Shift)F2:Color |
|    MPU-401 I/O Address         330h-333h  | F6   : Load BIOS Defaults              |
| Game Port(200h-207h)           Enabled    | F7   : Load SETUP Defaults             |
|--------------------------------------------------------------------------------------------------|
```

Figure 9: Integrated Peripherals

- **On Board Serial Port A**

Auto	BIOS will automatically setup the port A address. **(Default Value)**
3F8/COM1	Enable on Board Serial port A and address is 3F8.
2F8/COM2	Enable on Board Serial port A and address is 2F8.
3E8/COM3	Enable on Board Serial port A and address is 3E8.
2E8/COM4	Enable on Board Serial port A and address is 2E8.
Disabled	Disable on Board Serial port A.

- **On Board Serial Port B**

Auto	BIOS will automatically setup the port B address. **(Default Value)**
3F8/COM1	Enable on Board Serial port B and address is 3F8.
2F8/COM2	Enable on Board Serial port B and address is 2F8.
3E8/COM3	Enable on Board Serial port B and address is 3E8.
2E8/COM4	Enable on Board Serial port B and address is 2E8.
Disabled	Disable on Board Serial port B.

- **Serial Port B Mode**

Normal	Normal operation. **(Default Value)**
IrDA	Onboard I/O chip supports IRDA
ASK IR	Onboard I/O chip supports ASK IR.

- **Duplex Mode**

Half Duplex	IR Function Duplex Half.
N/A	Disabled this function **(Default Value)**.
Full Duplex	IR Function Duplex Full.

- **IR Pins**

IRRX/IRTX	IR Pin Select is IRRX/IRTX. **(Default Value)**
From COM 2.	IR Pin Select is From COM 2.

- **OnBoard Parallel port**

378	Enable On Board LPT port and address is 378.
278	Enable On Board LPT port and address is 278.
3BC	Enable On Board LPT port and address is 3BC.
Auto	Set On Board LPT port is Auto. **(Default Value)**
Disabled	Disable On Board LPT port.

- **Parallel Port Mode**

EPP	Using Parallel port as Enhanced Parallel Port.
ECP	Using Parallel port as Extended Capabilities Port. **(Default Value)**
Normal	Normal Operation.
EPP+ECP	Using Parallel port as Enhanced Parallel Port & Extended Capabilities Port.

● **Parallel Port DMA**

Auto	Set Auto to parallel port mode DMA Channel. . **(Default Value)**.
3	Set Parallel Port DMA is 3.
1	Set Parallel Port DMA is 1.
0	Set Parallel Port DMA is 0.

● **Parallel Port IRQ**

7	Set Parallel Port IRQ is 7.
Auto	Set Auto to parallel Port IRQ DMA Channel. . **(Default Value)**.
5	Set Parallel Port IRQ is 5.

● **AC97 Audio**

Auto	Enabled On Board AC'97 Audio. **(Default Value)**
Disabled	Disabled On Board AC'97 Audio.

● **MC97 Modem**

Auto	Enabled On Board MC'97 Modem. **(Default Value)**
Disabled	Disabled On Board MC'97 Modem.

● **OnBorard Legacy Audio**

Enabled	Enabled OnBoard Legacy Audio. **(Default Value)**
Disabled	Disabled OnBoard Legacy Audio.

● **Sound Blaster**

Enabled	Enabled Sound Blaster.
Disabled	Disabled Sound Blaster. **(Default Value)**

● **SB I/O Base Address**

220h-22Fh	Set SB I/O Base Address is 220h-22Fh. **(Default Value)**.
280h-28Fh	Set SB I/O Base Address is 280h-28Fh.
260h-26Fh	Set SB I/O Base Address is 260h-26Fh.
240h-24Fh	Set SB I/O Base Address is 240h-24Fh.

● **SB IRQ Select**

IRQ 9 / 5 / 7/ 10**(Default Value: 5)**.

● **SB DMA Select**

DMA 0 / 1 / 2/ 3**(Default Value: 1)**.

● **MPU-401**

Enabled	Enabled MPU-401.
Disabled	Disabled MPU-401. **(Default Value)**.

Ps. When Force back joystick is used, MPU-401 needs to be Enable.

● **MUP-401 I/O Address**

330h-333h	Set MUP-401 I/O Address is 330h-333h. **(Default Value)**.
300h-303h	Set MUP-401 I/O Address is 300h-303h.
310h-313h	Set MUP-401 I/O Address is 310h-313h.
320h-323h	Set MUP-401 I/O Address is 320h-323h.

● **Game Port (200h-207h)**

Disabled	Disabled Game Port (200h-207h)
Enabled	Enabled Game Port (200h-207h) **(Default Value)**.

Hardware Monitor Setup

```
                AMIBIOS SETUP – HARDWARE MONITOR SETUP
          ( C ) 1999 American Megatrends, Inc. All Rights Reserved

  ACPI Shut Down Temp.      65°C/149°F
  CPU Temperature           32°C/89°F
  System Temperature        32°C/89°F
  CPU Fan Speed             7123 RPM
  System Fan Speed          0 RPM
  Vcore                     1.6 V
  Vcache                    3.3 V
  Vcc3                      3.312 V
  +5.000V                   5.030 V
  +12.000V                  11.923 V


                                        ESC: Quit         ↑↓→ ←: Select Item
                                        F1  : Help        PU/PD+/-/ : Modify
                                        F5  :Old Values   (Shift)F2:Color
                                        F6  : Load BIOS Defaults
                                        F7  : Load Setup Defaults
```

Figure 10: Hardware Monitor Setup

● **ACPI Shutdown Temp.**

(This function will be effective only for the operating systems that support ACPI Function.)

Disabled	Normal Operation.
60°C / 140°F	Monitor CPU Temp. at 60°C / 140°F, if Temp. > 60°C / 140°F system will automatically power off .
65°C / 149°F	Monitor CPU Temp. at 65°C / 149°F, if Temp. > 65°C / 149°F system will automatically power off . **(Default Value)**
70°C / 158°F	Monitor CPU Temp. at 70°C / 158°F, if Temp. > 70°C / 158°F system will automatically power off .
75°C / 167°F	Monitor CPU Temp. at 75°C / 167°F, if Temp. > 75°C / 167°F system will automatically power off.

● **CPU Temperature**

Detect CPU Temperature automatically.

● **System Temperature**

Detect System Temperature automatically.

● **CPU FAN / System FAN Speed (RPM)**

 Detect Fan speed status automatically.

● **Current CPU Vcore / Vcache / Vcc3 / +12V / +5V**

 Detect system's voltage status automatically.

Set Supervisor / User Password

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

```
        AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.21
        ( C ) 1999 American Megatrends, Inc. All Rights Reserved
┌─────────────────────────────────┬─────────────────────────────────┐
│ STANDARD CMOS SETUP              │ INTEGRATED PERIPHERALS          │
│                                  │                                 │
│ BIOS FEATURES SETUP              │ HARDWARE MONITOR SETUP          │
│                                  │                                 │
│ CHIPSET FEATURES SETUP           │ SUPERVISOR PASSWORD             │
│                                  │                                 │
│ POWER MANAGEMENT SETUP           │ USER PASSWORD                   │
│                                  │                                 │
│ PNP/PCI CONFIG         Enter new supervisor password:     CTION    │
│                                                                    │
│ LOAD BIOS DEFA                                                     │
│                                  │                                 │
│ LOAD SETUP DEFAULTS              │ EXIT WITHOUT SAVING             │
├──────────────────────────────────────────────────────────────────┤
│ ESC : Quit      ↑↓→← : Select Item   (Shift) F2 : Change Color    F5 : Old Values │
│ F6   : Load BIOS Defaults      F7: Load SETUP Defaults     F10: Save & Exit       │
├──────────────────────────────────────────────────────────────────┤
│                  Change / Set / Disable Password                   │
└──────────────────────────────────────────────────────────────────┘
```

Figure 11: Password Setting

Type the password, up to eight characters, and press <Enter>. The password typed now will clear the previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

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

If you select System at Security Option in BIOS Features Setup Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter Setup Menu. If you select Setup at Security Option in BIOS Features Setup Menu, you will be prompted only when you try to enter Setup.

IDE HDD Auto Detection

AMIBIOS SETUP – STANDARD CMOS SETUP
(C) 1999 American Megatrends, Inc. All Rights Reserved

Date (mm/dd/yyyy) : Fri Mar. 25, 2000	
Time (hh/mm/ss) : 10:36:24	
TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE	
Pri Master : Auto	
Pri Slave : Auto	
Sec Master: Auto	
Sec Slave : Auto	
Floppy Drive A: 1.44 MB 3 ½	Base Memory : 640 kb
Floppy Driver B: Not Installed	Other Memory: 384 kb
	Extended Memory: 31mb
Boot Sector Virus Protection : Disabled	Total Memory: 32mb
Month: Jan – Dec	ESC : Exit
Day: 01 – 31	↑↓ : Select Item
Year : 1990– 2099	PU/PD/+/– : Modify
	(Shift)F2 : Color

Figure 12: IDE HDD Auto Detection

Type "Y" will accept the H.D.D. parameter reported by BIOS.

Type "N" will keep the old H.D.D. parameter setup. If the hard disk cylinder number is over 1024, then the user can select LBA mode or LARGER mode for DOS partition larger than 528 MB.

Save & Exit Setup

AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.21 (C) 1999 American Megatrends, Inc. All Rights Reserved	
STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	HARDWARE MONITOR SETUP
CHIPSET FEATURES SETUP	SUPERVISOR PASSWORD
POWER MANAGEMENT SETUP	USER PASSWORD
PNP/PCI CONFIGUR SAVE to CMOS and EXIT(Y/N)? N N	
LOAD BIOS DEFAUL	
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
ESC : Quit ↑↓→← : Select Item (Shift) F2 : Change Color F5 : Old Values F6 : Load BIOS Defaults F7: Load SETUP Defaults F10: Save & Exit	
Save Data to CMOS & Exit SETUP	

Figure 13: Save & Exit Setup

Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS RAM.

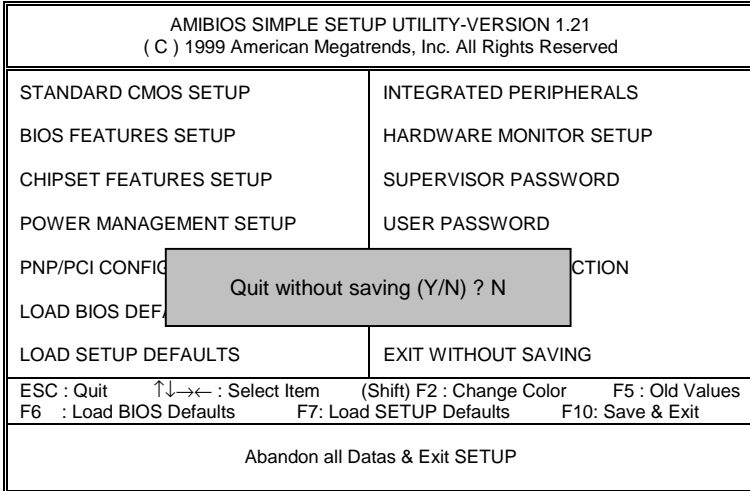Type "N" will return to Setup Utility.

Exit Without Saving

```
╔═══════════════════════════════════════════════════════════════════╗
║           AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.21                ║
║       ( C ) 1999 American Megatrends, Inc. All Rights Reserved     ║
╠═══════════════════════════════════════════════════════════════════╣
║  STANDARD CMOS SETUP          │  INTEGRATED PERIPHERALS            ║
║                               │                                    ║
║  BIOS FEATURES SETUP          │  HARDWARE MONITOR SETUP            ║
║                               │                                    ║
║  CHIPSET FEATURES SETUP       │  SUPERVISOR PASSWORD               ║
║                               │                                    ║
║  POWER MANAGEMENT SETUP       │  USER PASSWORD                     ║
║                               │                                    ║
║  PNP/PCI CONFIG    Quit without saving (Y/N) ? N      CTION        ║
║                                                                    ║
║  LOAD BIOS DEF                                                     ║
║                                                                    ║
║  LOAD SETUP DEFAULTS          │  EXIT WITHOUT SAVING               ║
╠═══════════════════════════════════════════════════════════════════╣
║  ESC : Quit      ↑↓→← : Select Item   (Shift) F2 : Change Color    F5 : Old Values ║
║  F6  : Load BIOS Defaults    F7: Load SETUP Defaults    F10: Save & Exit           ║
╠═══════════════════════════════════════════════════════════════════╣
║                  Abandon all Datas & Exit SETUP                    ║
╚═══════════════════════════════════════════════════════════════════╝
```

Figure 14: Exit Without Saving

Type "Y" will quit the Setup Utility without saving to RTC CMOS RAM.
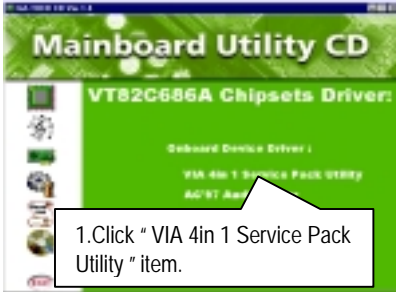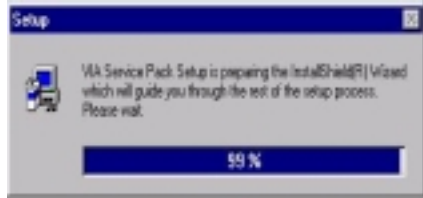
Type "N" will return to Setup Utility.

Appendix

Appendix A: VIA Series VT82C686A Chipsets Driver Installation
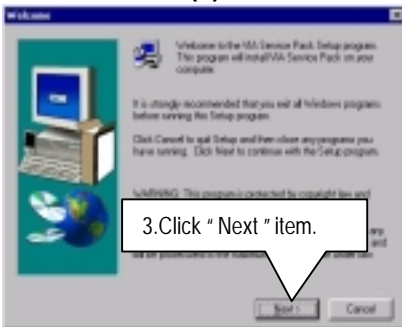
A. VIA 4 in 1 Service Pack Utility:

Insert the support CD that came with your motherboard into your CD-ROM drive or double-click the CD drive icon in My Computer to bring up the setup screen.
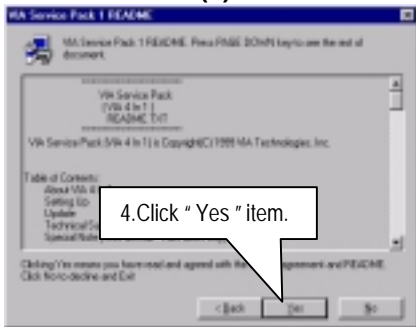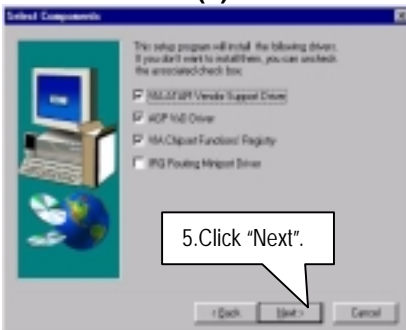

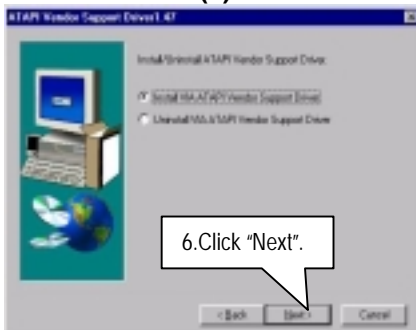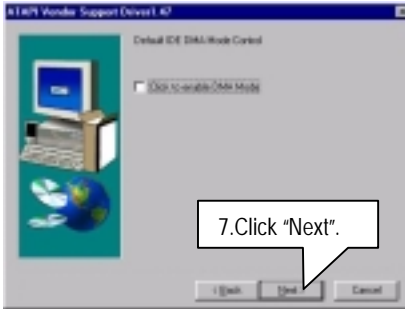1.Click " VIA 4in 1 Service Pack Utility " item.

(1)

(2)

3.Click " Next " item.

(3)

4.Click " Yes " item.

(4)

5.Click "Next".

(5)

6.Click "Next".

(6)

7.Click "Next".

(7)

8.Click "Next".

(8)

9.Click "Next".

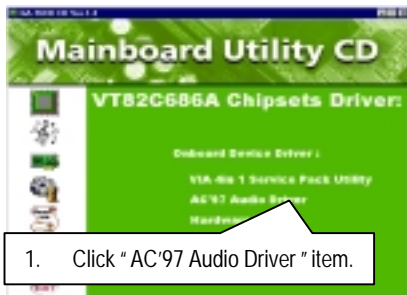**(9)**

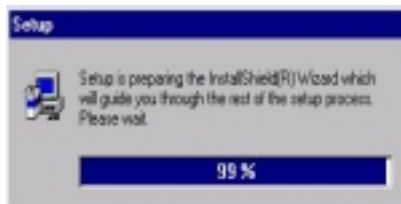10.Click "Finish" to Restart Computer.
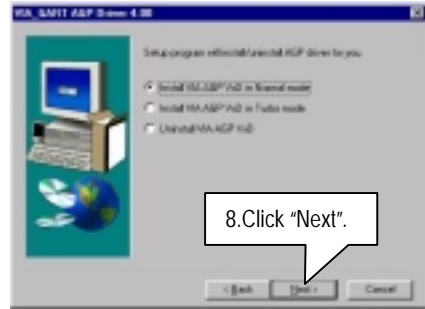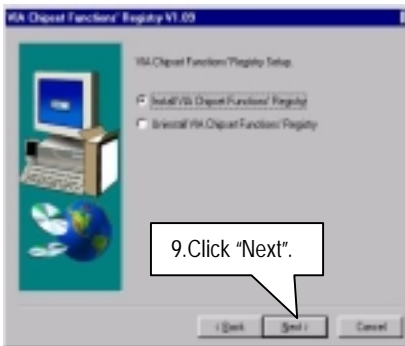
(10)

PS. This driver version doesn't support STR function, If you select "Click to enable DMA Mode" item.
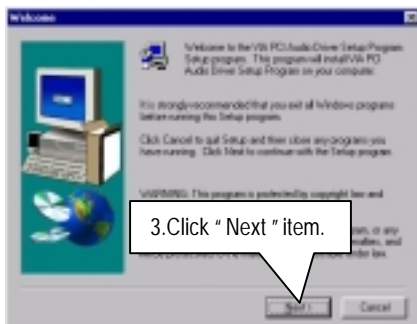
B. AC97 Audio Driver :

Insert the support CD that came with your motherboard into your CD-ROM driver or double –click the CD driver icon in My Computer to bring up the screen.
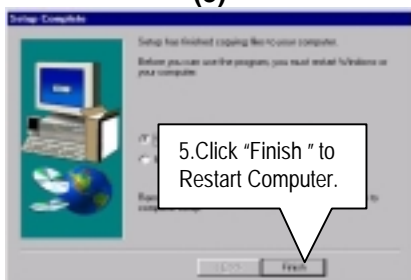

1. Click " AC'97 Audio Driver " item.

(1)

(2)

3.Click " Next " item.

(3)

4.Click " Next " item.

(4)

5.Click "Finish " to Restart Computer.

(5)

BIOS update procedure:
✓   Please check your BIOS vendor (AMI or AWARD) on the motherboard.

✓   It is recommended you copy the AWDFlash.exe or AMIFlash.exe in driver CD
    (D:\>Utility\BIOSFlash) and the BIOS binary files into the directory you made in your hard
    disk. 【i.e:C:\>Utility\ (C:\>Utility : denotes the driver and the directory where you put the flash
    utilities and BIOS file in.)】

✓   Restart your computer into MS-DOS mode or command prompt only for Win95/98, go into
    the directory where the new BIOS file are located use the utility AWDFlash.exe or
    AMIFlash.exe to update the BIOS.

✓   Type the following command once you have enter the directory where all the files are located
    C:\utility\ AWDFlash or AMIFlash <filename of the BIOS binary file intended for flashing>

✓   Once the process is finished, reboot the system

☞Note: Please download the newest BIOS from our website (www.gigabyte.com.tw) or contact
        your local dealer for the file.

Appendix B: Issues To Beware Of When Installing AMR

Please use inverse AMR card like the one in order to avoid mechanical problem. (See Figure A)
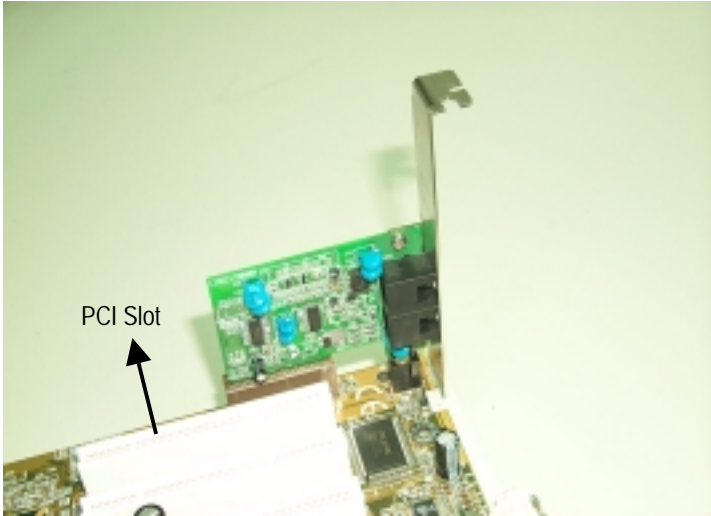

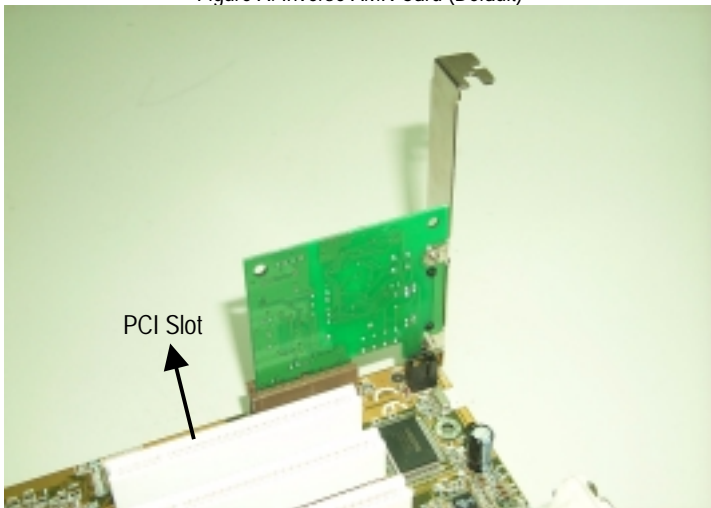Figure A: Inverse AMR Card (Default)

Figure B: Non inverse AMR Card

Appendix C: Acronyms

Acor.	Meaning
ACPI	Advanced Configuration and Power Interface
POST	Power-On Self Test
LAN	Local Area Network
ECP	Extended Capabilities Port
APM	Advanced Power Management
DMA	Direct Memory Access
MHz	Megahertz
ESCD	Extended System Configuration Data
CPU	Central Processing Unit
SMP	Symmetric Multi-Processing
USB	Universal Serial Bus
OS	Operating System
ECC	Error Checking and Correcting
IDE	Integrated Dual Channel Enhanced
SCI	Special Circumstance Instructions
LBA	Logical Block Addressing
EMC	Electromagnetic Compatibility
BIOS	Basic Input / Output System
SMI	System Management Interrupt
IRQ	Interrupt Request
NIC	Network Interface Card
A.G.P.	Accelerated Graphics Port
S.E.C.C.	Single Edge Contact Cartridge
LED	Light Emitting Diode
EPP	Enhanced Parallel Port
CMOS	Complementary Metal Oxide Semiconductor
I/O	Input / Output
ESD	Electrostatic DISCHARGE
OEM	Original Equipment Manufacturer
SRAM	Static Random Access Memory
VID	Voltage ID
DMI	Desktop Management Interface
MIDI	Musical Interface Digital Interface
IOAPIC	Input Output Advanced Programmable Input Controller
DIMM	Dual Inline Memory Module
DRAM	Dynamic Random Access Memory
PAC	PCI A.G.P. Controller
AMR	Audio Modem Riser

To be continued…

Acor.	Meaning
PCI	Peripheral Component Interconnect
RIMM	Rambus in-line Memory Module
DRM	Dual Retention Mechanism
ISA	Industry Standard Architecture
MTH	Memory Translator Hub
CRIMM	Continuity RIMM