4.BIOS CONFIGURATION

Award's BIOS ROM has a built-in Setup 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.

4.1. 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>, and <Del> keys.

4.2. CONTROL KEYS

Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item in the left hand
Right arrow	Move to the item in the right hand
Esc key	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 key	Increase the numeric value or make changes
PgDn key	Decrease the numeric value or make changes
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu
F2 key	Change color from total 16 colors
F3 key	Reserved
F4 key	Reserved
F5 key	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
F6 key	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
F7 key	Load the default
F8 key	Reserved
F9 key	Reserved
F10 key	Save all the CMOS changes, only for Main Menu

4.3. GETTING HELP

4.3.1. Main Menu

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

4.3.2. 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>.

4.4. THE MAIN MENU

Once you enter Award BIOS CMOS Setup Utility, the Main Menu (Figure 4.1) 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.

Figure 4.1: Main Menu

- Standard CMOS setup

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

- BIOS features setup

  This setup page includes all the items of Award 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 configuration

  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 Performance defaults

  Performance 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.

- 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.

4.5. STANDARD CMOS SETUP MENU

The items in Standard CMOS Setup Menu (Figure 4.2) 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.

```
                    ROM PCI/ISA BIOS (2A5KKG09)
                        STANDARD CMOS SETUP
                        AWARD SOFTWARE, INC.

  Date (mm:dd:yy) : Thu, Oct 15 1998
  Time (hh:mm:ss) : 16 : 5 : 52

  HARD DISKS        TYPE   SIZE   CYLS HEAD PRECOMP LANDZ SECTOR  MODE

  Primary Master  : AUTO    0      0    0      0     0      0    AUTO
  Primary Slave   : AUTO    0      0    0      0     0      0    AUTO
  Secondary Master: AUTO    0      0    0      0     0      0    AUTO
  Secondary Slave : AUTO    0      0    0      0     0      0    AUTO

  Drive A : 1.44M, 3.5 in.
  Drive B : None                          Base Memory:      640K
  Floppy 3 Mode Support : Disabled     Extended Memory:   15360K
                                          Other Memory:     384K
  Video   : EGA/VGA
  Halt On : No  Errors                   Total Memory:    16384K

  ESC : Quit            ↑↓→←  : Select Item   PU/PD/+/- : Modify
  F1  : Help         (Shift)F2 : Change Color
```

Figure 4.2: Standard CMOS Setup Menu

- Date

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

day	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 1994 through 2079

- 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.

- Primary HDDs / Secondary HDDs

  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 user definable type. User 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.

- Floppy 3 Mode Support (for Japan Area)

Disabled	Normal Floppy Drive.
Drive A	Drive A is 3 mode Floppy Drive.
Drive B	Drive B is 3 mode Floppy Drive.
Both	Drive A & B are 3 mode Floppy Drives.

- Video

The category detects the type of adapter used for the primary system monitor that must match your video display card and monitor. Although secondary monitors are supported, you do not have to select the type in setup.

EGA/VGA	Enhanced Graphics Adapter/Video Graphics Array. For EGA, VGA, SVGA, or PGA monitor adapters
CGA 40	Color Graphics Adapter, power up in 40 column mode
CGA 80	Color Graphics Adapter, power up in 80 column mode
MONO	Monochrome adapter, includes high resolution monochrome adapters

- Halt on

The category determines whether the computer will stop if an error is detected during power up.

NO Errors	The system boot will not stop for any error that may be detected and you will be prompted
All Errors	Whenever the BIOS detects a non-fatal error the system will be stopped
All, But Keyboard	The system boot will not stop for a keyboard error; it will stop for all other errors
All, But Diskette	The system boot will not stop for a disk error; it will stop for all other errors
All, But Disk/Key	The system boot will not stop for a keyboard or disk error; it will stop for all other errors

- 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.

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.

Expanded Memory

   Expanded Memory in memory defined by the Lotus / Intel / Microsoft (LIM) standard as EMS.

   Many standard DOS applications can not utilize memory above 640 K; the Expanded Memory Specification (EMS) swaps memory, which not utilized by DOS with a section, or frame, so these applications, can access all of the system memory.

   Memory can be swapped by EMS is usually 64 K within 1 MB or memory above 1 MB, depends on the chipset design.

   Expanded memory device driver is required to use memory as Expanded Memory.

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.

4.6. BIOS FEATURES SETUP

Figure 4.3: BIOS Features Setup

- Virus Warning

  If it is set to enable, the category will flash on the screen when there is any attempt to write to the boot sector or partition table of the hard disk drive. The system will halt and the following error message will appear in the mean time. You can run anti-virus program to locate the problem.

  Default value is Disabled.

Enabled	Activate automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table
Disabled	No warning message to appear when anything attempts to access the boot sector or hard disk partition table

- CPU Internal Cache / External Cache

  These two categories speed up memory access. However, it depends on CPU / chipset design. The default value is Enabled.

Enabled	Enable cache
Disabled	Disable cache

- CPU L2 Cache ECC Checking

  The default value is Enabled.

Enabled	Enable CPU L2 Cache ECC Checking
Disabled	Disable CPU L2 Cache ECC Checking

- Quick Power On Self Test

  This category speeds up Power On Self Test (POST) after you power on the computer. If it is set to Enable, BIOS will shorten or skip some check items during POST.

  The default value is Enabled.

Enabled	Enable quick POST
Disabled	Normal POST

- Boot From LAN First

  The default value is Enabled.

Auto	Enable Boot From LAN First Function
Enabled	Enable Boot From LAN First
Disabled	Disable Boot From LAN First

  ☞You can set "Auto" or "Enabled" to boot from LAN first.

- Boot Sequence

  This category determines which drive computer searches first for the disk operating system (i.e., DOS). Default value is A, C, SCSI.

X1, X2, X3	System will first search for X1 disk drive then X2 disk drive and then X3 disk drive.

- Swap Floppy Drive

  The default value is Disabled.

Enabled	Floppy A & B will be swapped under DOS
Disabled	Floppy A & B will be normal definition

- VGA Boot From

  The default value is PCI Slot

AGP	System will boot from AGP Display Card
PCI Slot	System will boot from PCI Slot VGA Card

- Boot Up Floppy Seek

  During POST, BIOS will determine the floppy disk drive installed is 40 or 80 tracks. 360 K type is 40 tracks 720 K, 1.2 M and 1.44 M are all 80 tracks. The default value is Enabled.

Enabled	BIOS searches for floppy disk drive to determine it is 40 or 80 tracks. Note that BIOS can not tell from 720 K, 1.2 M or 1.44 M 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 K

- Boot Up NumLock Status

  The default value is On.

On	Keypad is number keys
Off	Keypad is arrow keys

- Memory Parity/ECC Check

  The default value is Disabled.

Enabled	Enabled Memory Parity/ECC Check.
Disabled	Disabled Memory Parity/ECC Check.

- Typematic Rate Setting

  The default value is Disabled.

Enabled	Enable Keyboard Typematic rate setting.
Disabled	Disable Keyboard Typematic rate setting.

- Typematic Rate (Chars / Sec.)

  The default value is 6.

6-30	Set the maximum Typematic rate from 6 chars. Per second to 30 characters. Per second.

- Typematic Delay (Msec.)

  The default value is 250.

250-1000	Set the time delay from first key to repeat the same key in to computer.

- Security Option

  This category allows you to limit access to the system and Setup, or just to Setup. The default value is Setup.

System	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

- PCI/VGA Palette Snoop

  The default value is Disabled.

Enabled	For having Video Card on ISA Bus and VGA Card on PCI Bus.
Disabled	For VGA Card only.

- Assign IRQ For VGA

  The default value is Enabled.

Enabled	Assign IRQ For VGA
Disabled	Not assign IRQ For VGA

- OS Select For DRAM>64MB

  The default value is Non-OS2.

Non-OS2	Using non-OS2 operating system.
OS2	Using OS2 operating system and DRAM>64MB.

● HDD S.M.A.R.T. Capability

The default value is Disabled.

Enabled	Enabled HDD S.M.A.R.T. Capability
Disabled	Disabled HDD S.M.A.R.T. Capability

● Report No FDD For WIN 95

The default value is No.

No	Assign IRQ6 For FDD.
Yes	FDD Detect IRQ6 Automatically.

● Video BIOS Shadow

The default value is Enabled.

Enabled	Video shadow is enabled
Disabled	Video shadow is disabled

4.7. CHIPSET FEATURES SETUP
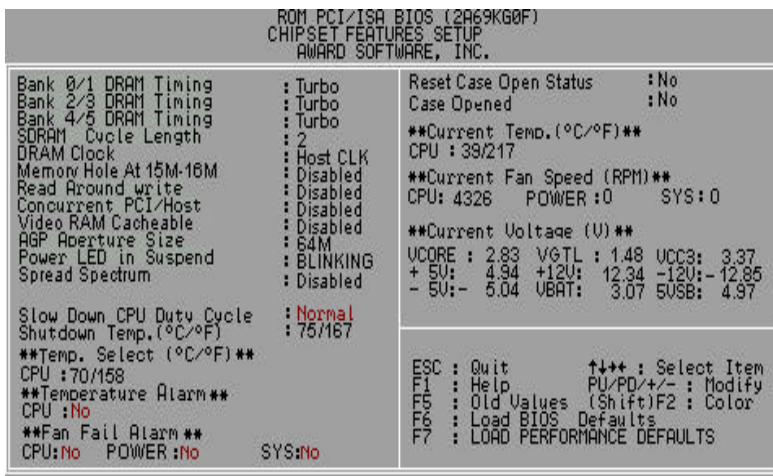
Figure 4.4: Chipset Features Setup

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

  The default value is Turbo.

Turbo	For Turbo DRAM timing operation.
SDRAM 10ns	For SDRAM 10ns DRAM timing operation.

- SDRAM Cycle Length

  The default value is 2.

3	For Slower SDRAM DIMM module.
2	For Fastest SDRAM DIMM module.

- DRAM Clock

  The default value is Host CLK.

Host CLK	Set DRAM Clock to Host CLK.
66 MHz	Set DRAM Clock to 66 MHz.

- Memory Hole At 15M-16M

  The default value is Disabled.

Disabled	Normal Setting.
15M-16M	Set Address=15~16MB remap to ISA BUS.

- Read Around write

  The default value is Disabled.

Enabled	When set Enabled this feature speeds up data read performance.
Disabled	Normal operation.

- Concurrent PCI/Host

  The default value is Disabled.

Enabled	Enabled Concurrent PCI/Host.
Disabled	Disabled Concurrent PCI/Host.

- Video RAM Cacheable

  The default value is Disabled.

Disabled	Disable this function.
Enabled	Enable this function to get better VGA performance; while some brands of VGA must be disabled this function (e.g.ET4000W32P).

- AGP Aperture Size

  The default value is 64MB.

4MB	Set AGP Aperture Size to 4MB.
8MB	Set AGP Aperture Size to 8MB.
16MB	Set AGP Aperture Size to 16MB.
32MB	Set AGP Aperture Size to 32MB.
64MB	Set AGP Aperture Size to 64MB.
128MB	Set AGP Aperture Size to 128MB.

- Power LED In Suspend

  The default value is BLINKING.

OFF/ DUAL	Set Power LED In Suspend to OFF/DUAL.
ON	Set Power LED In Suspend to ON.
BLINKING	Set Power LED In Suspend to BLINKING.

- Spread Spectrum

  The default value is Disabled.

Disabled	Disabled this function
Enabled	Enabled Clock Spread Spectrum

- Slow Down CPU Duty Cycle (Optional)

  The default value is Normal.

Normal	Normal Operation
12.5%~75.0%	Monitor CPU Temp. will cause system slow down CPU Duty Cycle to 12.5%~75.0%.

- Shutdown Temp. (°C / °F) (Optional)

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

  The default value is 75°C / 167°F

Disabled	Normal Operation
65°C / 149°F	Monitor CPU Temp. at 65°C / 149°F, if Temp. > 65°C / 149°F system will automatically power off .
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 .
80°C / 176°F	Monitor CPU Temp. at 80°C / 176°F, if Temp. > 80°C / 176°F system will automatically power off .
85°C / 185°F	Monitor CPU Temp. at 85°C / 185°F, if Temp. > 85°C / 185°F system will automatically power off .
90°C / 194°F	Monitor CPU Temp. at 90°C / 194°F, if Temp. > 90°C / 194°F system will automatically power off .
95°C / 203°F	Monitor CPU Temp. at 95°C / 203°F, if Temp. > 95°C / 203°F system will automatically power off .

- Temp. Select (°C / °F) (Optional)

  The default value is 70°C /158°F

65°C /149°F	Monitor CPU Temp. at 65°C / 149°F
70°C / 158°F	Monitor CPU Temp. at 70°C / 158°F
75°C / 167°F	Monitor CPU Temp. at 75°C / 167°F
80°C / 176°F	Monitor CPU Temp. at 80°C / 176°F
85°C / 185°F	Monitor CPU Temp. at 85°C / 185°F
90°C / 194°F	Monitor CPU Temp. at 90°C / 194°F
95°C / 203°F	Monitor CPU Temp. at 95°C / 203°F

- Temperature Alarm (Optional)

  The default value is No

No	When CPU Temp. overheat, then system won't alarm.
Yes	When CPU Temp. overheat, then system will alarm.

- Fan Fail Alarm (Optional)

  CPU/POWER/SYS.

No	Fan Fail Alarm Function Disabled.
Yes	Fan Fail Alarm Function Enabled.

- Reset Case Open Status (Optional)

- Case Opened (Optional)

  If the case is closed, "Case Opened" will show "No".
  If the case have been opened, "Case Opened" will show "Yes" .
  If you want to reset "Case Opened" value, set "Reset Case Open Status"
  to "Yes" and save CMOS, your computer will restart.

- Current Temp. (°C / °F) (Optional)

  Detect Temp. automatically.

- Current FAN Speed (RPM) (Optional)

  Detect Fan speed status automatically.

- Current Voltage (v) VCORE / VGTL/ VCC3 / ±12V / ±5V /VBAT /5VSB
(Optional)

    Detect system's voltage status automatically.
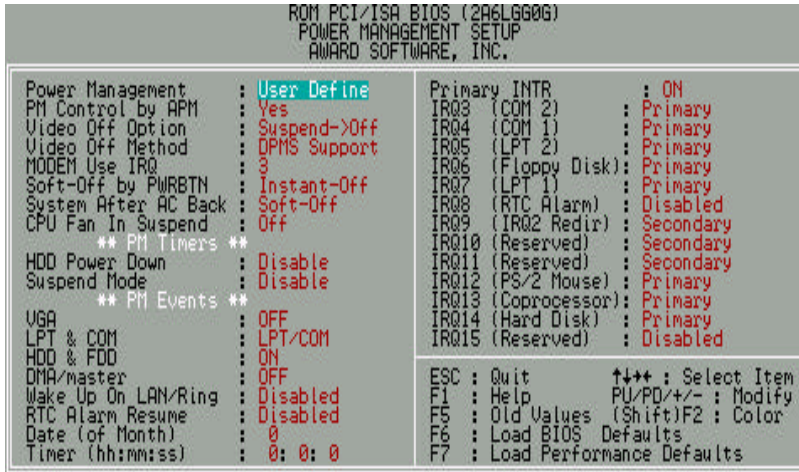
4.8. POWER MANAGEMENT SETUP

Figure 4.5: Power Management Setup

* These two items will show up when "RTC Alarm Resume " is enabled.

- Power Management

    The default value is User Define.

User Define	Set Power Management to User Define .
Min Saving	Set Power Management to Min Saving .
Max Saving	Set Power Management to Max Saving .

- PM Control by APM

    The default value is Yes.

* *	Yes	Enable software APM function.
	No	Disable software APM function.

- Video Off Option

  The default value is Suspend->Off.

Suspend->Off	Set Video Off Option to Suspend->Off.
All Modes->Off	Set Video Off Option to All Modes->Off.
Always On	Set Video Off Option to Always On.

- Video off Method

  The default value is DPMS Support.

V/H SYNC+Blank	BIOS will turn off V/H-SYNC when gets into Green mode for Green monitor power saving.
Blank Screen	BIOS will only black monitor when gets into Green mode.
DPMS Support	BIOS will use DPMS Standard to control VGA card. (The Green type VGA card will turn off V/H-SYNC automatically.)

- MODEM Use IRQ

  The default value is 3.

NA	Set MODEM Use IRQ to NA.
3	Set MODEM Use IRQ to 3.
4	Set MODEM Use IRQ to 4.
5	Set MODEM Use IRQ to 5.
7	Set MODEM Use IRQ to 7.
9	Set MODEM Use IRQ to 9.
10	Set MODEM Use IRQ to 10.
11	Set MODEM Use IRQ to 11.

- Soft-off by PWRBTN

  The default value is Instant-Off.

Instant-off	Soft switch ON/OFF for POWER ON/OFF
Delay 4 Sec.	Soft switch ON 4sec. for POWER OFF.

- System After AC Back

  The default value is Soft-Off.

Memory	This function depends on computer status
Soft-Off	Set System Soft-Off Status.
Full-On	Set System Full-On Status.

- CPU FAN In Suspend

  The default value is Off.

Off	Disabled this function.
On	Stop CPU FAN when entering Suspend mode.

- HDD Power Down

  The default value is Disable.

Disable	Disable HDD Power Down mode function.
1-15 mins.	Enable HDD Power Down mode between 1 to 15 mins.

- Suspend Mode

  The default value is Disable.

Disable	Disable Suspend Mode.
10 Sec - 1 Hour	Setup the timer to enter Suspend Mode.

- VGA

  The default value is OFF.

OFF	Disable monitor VGA activity.
ON	Enable monitor VGA activity.

- LPT & COM

  The default value is LPT/COM.

LPT/COM	Enabled LPT/COM Ports Activity.
NONE	Normal Operation.
LPT	Enabled LPT Ports Activity.

COM	Enabled COM Ports Activity.

- HDD & FDD

  The default value is ON.

ON	Enabled HDD & FDD Ports Activity
OFF	Disabled HDD & FDD Ports Activity

- DMA/master

  The default value is OFF.

ON	Don' t detect DMA/master PM event.
OFF	Normal Operation.

- Wake Up On LAN/Ring

  The default value is Disabled.

Disabled	Disabled this function.
Enabled	Enabled Wake Up On LAN/Ring.

- RTC Alarm Resume

  The default value is Disabled.

Disabled	Disable this function.
Enabled	Enable alarm function to POWER ON system.

  If the "RTC Alarm Resume" is Enabled.

Date (of Month) Alarm :	0~31
Time (hh: mm: ss) Alarm :	(0~23) : (0~59) : (0~59)

- Primary INTR

  The default value is ON.

OFF	Disable this function.
ON	Enabled Primary INTR Function.

- IRQ [3-7,9-15]

  The default value is Primary/Secondary/Disabled.

Disabled	Disable this function.
Primary	The resource is used by Primary device .
Secondary	The resource is used by Secondary device .
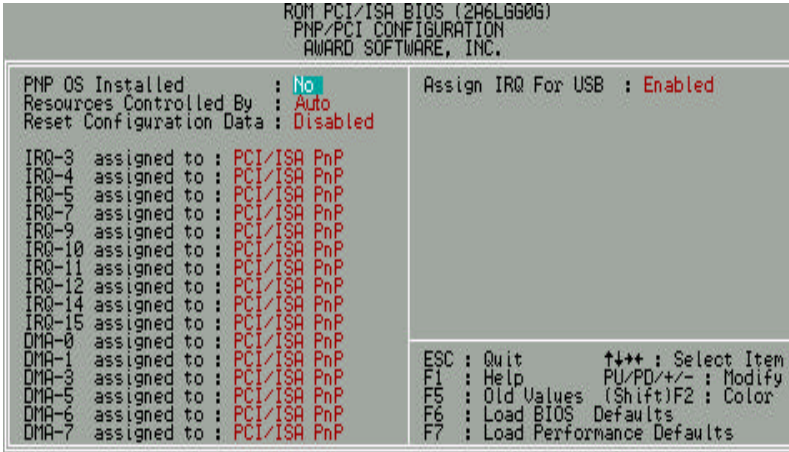
4.9. PNP/PCI CONFIGURATION

Figure 4.6: PCI Slot Configuration

✒ IRQ[3.4.5.7.9.10.11.12.14.15] & DMA[1.3.5.6.7]These items will show up when "Resources Controlled By" is Manual.

● PNP OS Installed

The default value is No.

Yes	Enable PNP OS Installed function.
No	Disable PNP OS Installed function.

● Resources Controlled by

The default value is Auto.

Manual	User can set the PnP resource (I/O Address, IRQ & DMA channels) used by legacy ISA DEVICE.
Auto	BIOS automatically use these PnP rescuers.

- Reset Configuration Data

  The default value is Disabled.

Disabled	Disable this function.
Enabled	Enable clear PnP information in ESCD.

- IRQ (7,12,14,15) & IRQ (3,4,5,9,10,11,DMA(0,1,3,5,6,7) assigned to

  The default value is PCI/ISA PnP.

Legacy ISA	The resource is used by Legacy ISA device.
PCI/ISA PnP	The resource is used by PCI/ISA PnP device (PCI or ISA).

- Assign IRQ For USB

  The default value is Enabled.

Enabled	Assign a specific IRQ for USB
Disabled	No IRQ is assigned for USB

4.10. LOAD BIOS DEFAULTS
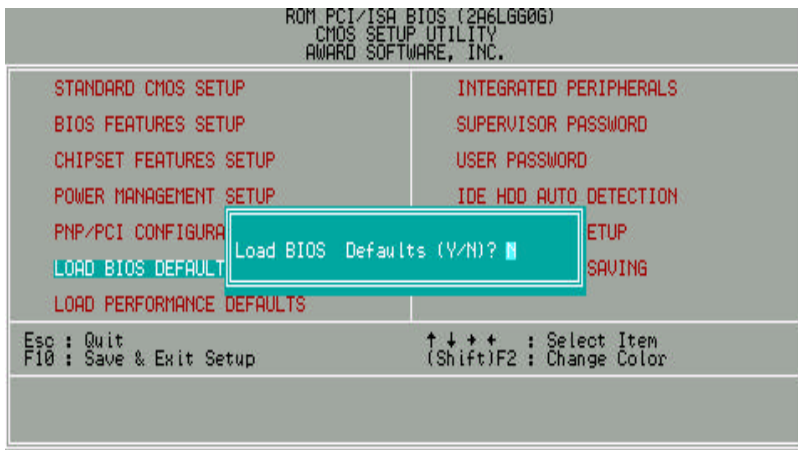
Figure 4.7: Load Bios Defaults

- Load BIOS Defaults

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

4.11. LOAD PERFORMANCE DEFAULTS
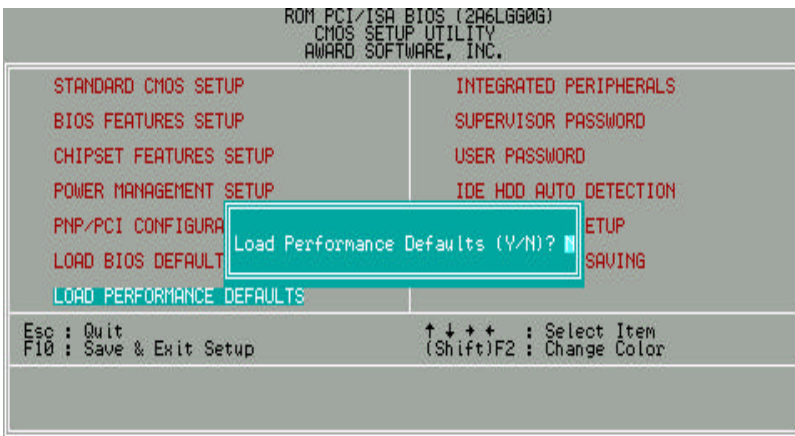
Figure 4.8: Load Performance Defaults

- Load Performance Defaults

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

```
                 ROM PCI/ISA BIOS (2A6LGG0G)
                    INTEGRATED PERIPHERALS
                     AWARD SOFTWARE, INC.

OnChip IDE Channel0  : Enabled    PS/2 Mouse Power On   : Disabled
OnChip IDE Channel1  : Enabled     Keyboard Power On    : Power Key
IDE Prefetch Mode    : Enabled   *KB Power ON Multikey  : Enter
IDE HDD Block Mode   : Enabled
Primary Master   PIO : Auto
Primary Slave    PIO : Auto
Secondary Master PIO : Auto
Secondary Slave  PIO : Auto
Primary Master  UDMA : Auto
Primary Slave   UDMA : Auto
Secondary MasterUDMA : Auto
Secondary Slave UDMA : Auto
OnChip USB           : Disabled
USB Keyboard Support : Disabled
Onboard FDC Controller: Enabled
Onboard Serial Port 1 : 3F8/IRQ4  ESC : Quit        ↑↓→← : Select Item
Onboard Serial Port 2 : 2F8/IRQ3  F1  : Help        PU/PD/+/- : Modify
Onboard Parallel Port : 378/IRQ7  F5  : Old Values  (Shift)F2 : Color
Parallel Port Mode    : SPP       F6  : Load BIOS  Defaults
                                  F7  : Load Performance Defaults
```

4.12. INTEGRATED PERIPHERALS

Figure 4.9: Integrated Peripherals

* This item will show up when "Keyboard Power On: Multikey" is selected.

** This item will show up when "OnChip USB: Enabled" is selected.

- OnChip IDE Channel 0

    The default value is Enabled.

Enabled	Enabled onboard 1st channel IDE port.
Disabled	Disabled onboard 1st channel IDE port.

☻* OnChip IDE Channel 1

    The default value is Enabled.

Enabled	Enabled onboard 1st channel IDE port.
Disabled	Disabled onboard 1st channel IDE port.

● IDE Prefetch Mode

The default value is Enabled.

Enabled	Enabled IDE Prefetch Mode
Disabled	Disabled IDE Prefetch Mode

● IDE HDD Block Mode

The default value is Enabled.

Enabled	Enable IDE HDD Block Mode
Disabled	Disable IDE HDD Block Mode

● Primary Master PIO (for onboard IDE 1st channel).

The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Mode0~4	Manually set the IDE Accessing mode.

● Primary Slave PIO (for onboard IDE 1st channel).

The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Mode0~4	Manually set the IDE Accessing mode.

● Secondary Master PIO (for onboard IDE 2nd channel).

The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Mode0~4	Manually set the IDE Accessing mode.

- Secondary Slave PIO (for onboard IDE 2nd channel).

  The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Mode0~4	Manually set the IDE Accessing mode.

- Primary Master UDMA.

  The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disable UDMA function.

- Primary Slave UDMA.

  The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disable UDMA function.

- Secondary Master UDMA.

  The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disable UDMA function.

- Secondary Slave UDMA.

  The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disable UDMA function.

- OnChip USB

  The default value is Disabled.

Enabled	Enabled OnChip USB port.
Disabled	Disabled OnChip USB port.

- USB Keyboard Support

  The default value is Disabled.

Enabled	Enabled USB Keyboard Support.
Disabled	Disabled USB Keyboard Support.

- Onboard FDC Controller

  The default value is Enabled.

Enabled	Enable onboard FDC port.
Disabled	Disable onboard FDC port.

- Onboard Serial Port 1

  The default value is 3F8/IRQ4.

Auto	BIOS will automatically setup the port 1 address.
3F8/IRQ4	Enable onboard Serial port 1 and address is 3F8.
2F8/IRQ3	Enable onboard Serial port 1 and address is 2F8.
3E8/IRQ4	Enable onboard Serial port 1 and address is 3E8.
2E8/IRQ3	Enable onboard Serial port 1 and address is 2E8.
Disabled	Disable onboard Serial port 1.

- Onboard Serial Port 2

  The default value is 2F8/IRQ3.

Auto	BIOS will automatically setup the port 2 address.
3F8/IRQ4	Enable onboard Serial port 2 and address is 3F8.
2F8/IRQ3	Enable onboard Serial port 2 and address is 2F8.
3E8/IRQ4	Enable onboard Serial port 2 and address is 3E8.
2E8/IRQ3	Enable onboard Serial port 2 and address is 2E8.
Disabled	Disable onboard Serial port 2.

● Onboard Parallel port

The default value is 378/IRQ7.

378/IRQ7	Enable onboard LPT port and address is 378/IRQ7.
278/IRQ5	Enable onboard LPT port and address is 278/IRQ5.
Disabled	Disable onboard LPT port.
3BC/IRQ7	Enable onboard LPT port and address is 3BC/IRQ7.

● Parallel Port Mode

The default value is SPP.

SPP	Using Parallel port as Standard Printer Port.
EPP	Using Parallel port as Enhanced Parallel Port.
ECP	Using Parallel port as Extended Capabilities Port.
ECP/EPP	Using Parallel port as ECP/EPP mode.

● PS/2 Mouse Power on

The default value is Disabled.

Disabled	Disable PS/2 Mouse Power on .
Left Double	Click twice on PS/2 mouse left button to Power on system.
Right Double	Click twice on PS/2 mouse right button to Power on system.

● Keyboard Power on

The default value is POWER Key.

Disabled	Disable Keyboard Power on .
Multikey	Enter multikey combination to Power on system.
POWER Key	If your keyboard have "POWER Key" button, you can press the key to power on your system.

● KB Power ON Multikey

Enter	Enter from 1 to 5 characters to set the Keyboard Power On Password.

   You can power on your system by entering password from the Keyboard after setting the "Keyboard power on" jumper (JP1) and password in CMOS Setup.

4.13. 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.
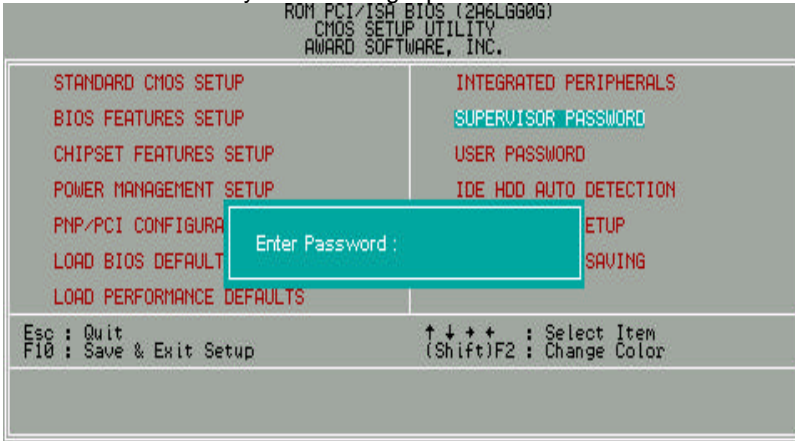
Figure 4.10: Password Setting

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.

4.14. IDE HDD AUTO DETECTION
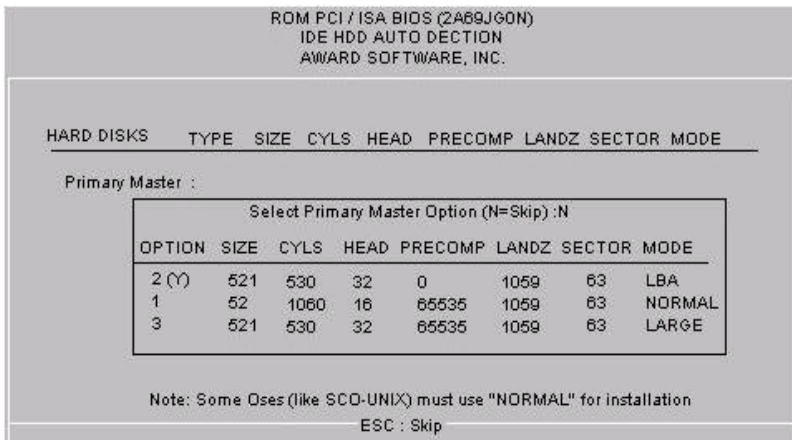
Figure 4.11: IDE HDD Auto Detection

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.

```
                    ROM PCI/ISA BIOS (2A6LGG0G)
                       CMOS SETUP UTILITY
                      AWARD SOFTWARE, INC.

    STANDARD CMOS SETUP              INTEGRATED PERIPHERALS

    BIOS FEATURES SETUP             SUPERVISOR PASSWORD

    CHIPSET FEATURES SETUP          USER PASSWORD

    POWER MANAGEMENT SETUP          IDE HDD AUTO DETECTION

    PNP/PCI CONFIGURA┌──────────────────────────────┐ETUP
                     │  SAVE to CMOS and EXIT (Y/N)? N │
    LOAD BIOS DEFAULT└──────────────────────────────┘SAVING

    LOAD PERFORMANCE DEFAULTS

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

4.15. SAVE & EXIT SETUP

Figure 4.12: Save & Exit Setup

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

Type "N" will return to Setup Utility.

4.16. EXIT WITHOUT SAVING
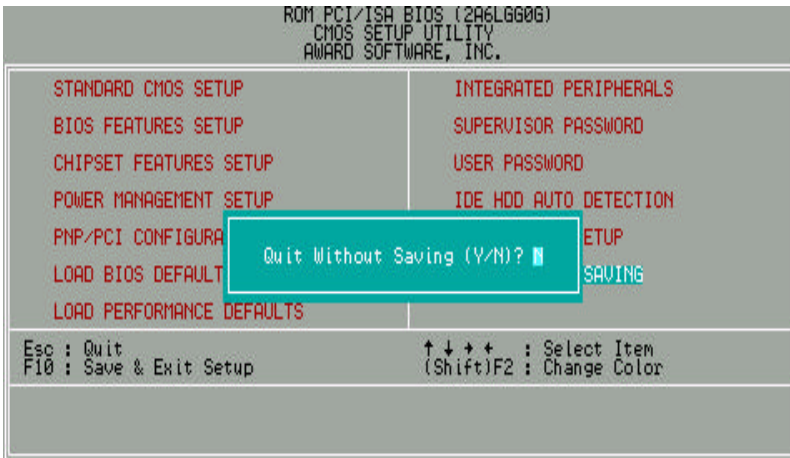
Figure 4.13: Exit Without Saving

Type "Y" will quit the Setup Utility without saving to RTC CMOS SRAM.

Type "N" will return to Setup Utility.

APPENDIX A: VIA Chipset Driver Installation

When loading the VIA drivers for the system, the Windows version should be OSR 2.1 or later or Windows 98 Bata3 or later.

If your system version is Win95 or OSR 2.0, You must use the **USB support update** (make sure the update language is the same with your system language) to upgrade your system to OSR 2.1.

♣ You can found the **USB support update** in the **April 1997 MSDN Disc1\OSR2\USBSUPP**.

A.1 VIA Patch 95/98 Driver Ver.1.1(Win95/98 ONLY)

Step By Step Installation

STEP 1:
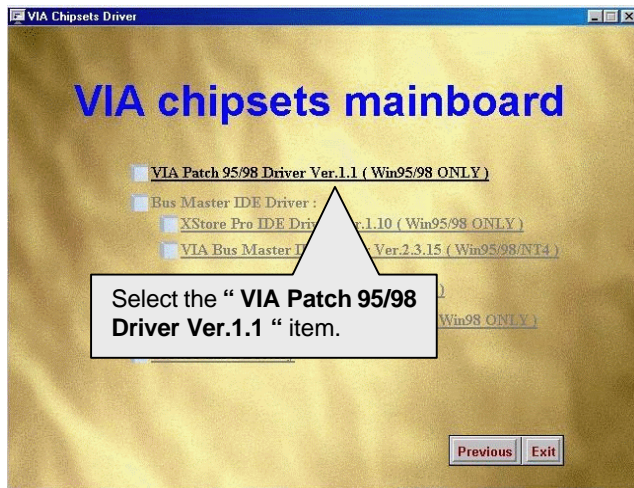
STEP 2:
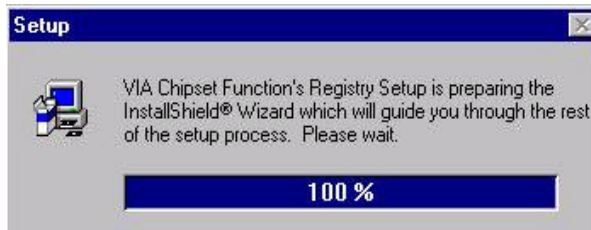
STEP 3:
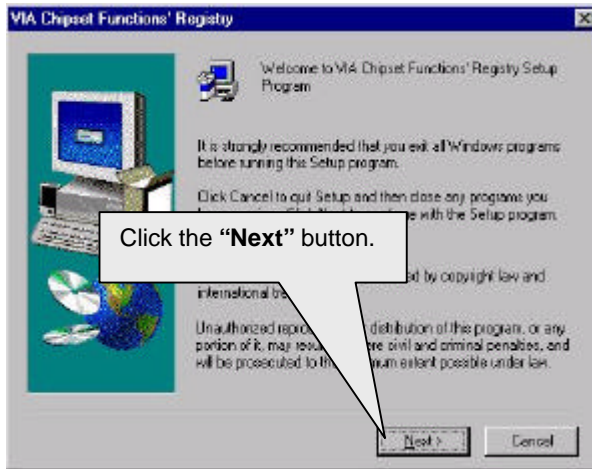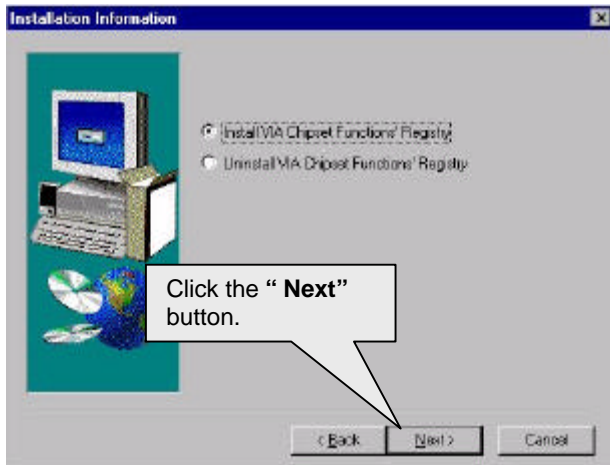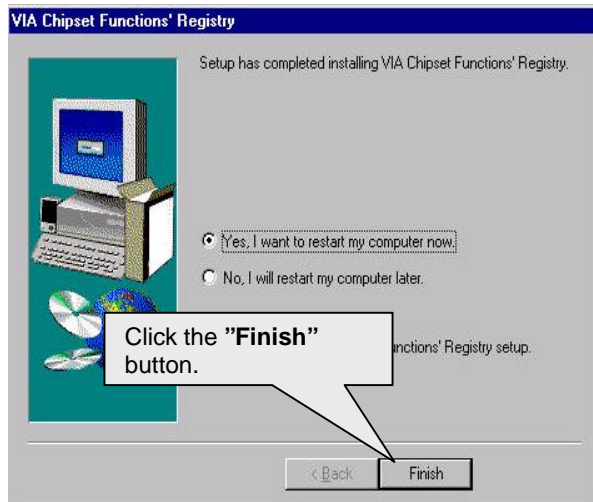
STEP 4:

STEP 5:

STEP 6:

System will restart and start up using the VIA chipset driver.

A.2 VIA AGP Driver Ver.3.2 (Win95/98 ONLY)

STEP 1:
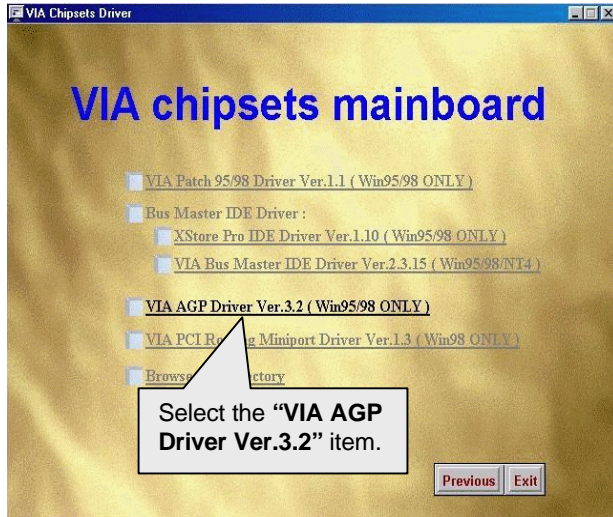
STEP 2:
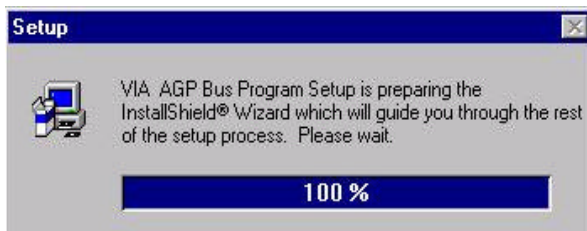
STEP 3:
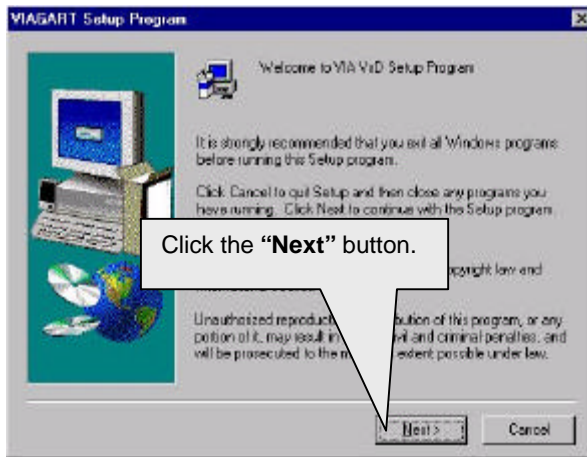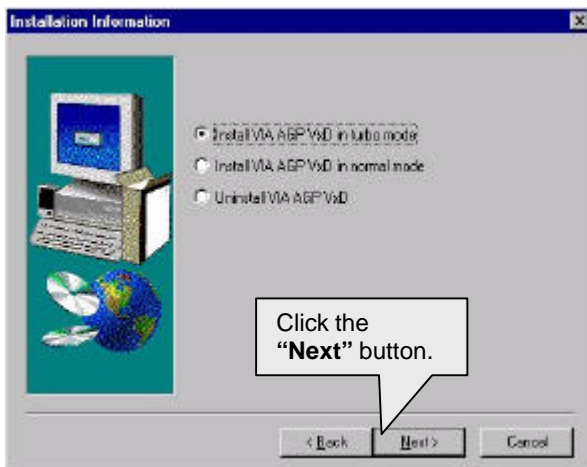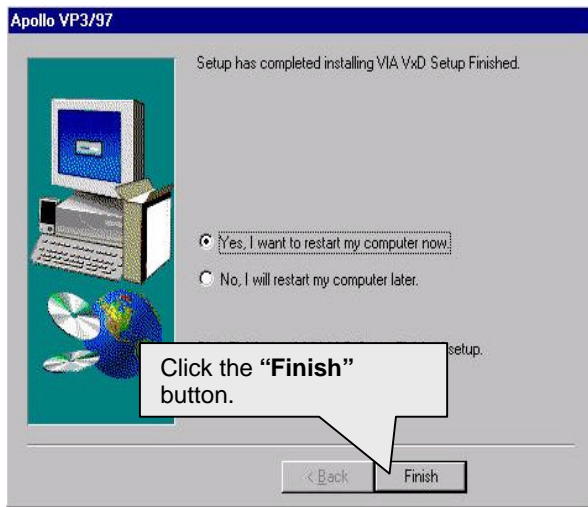
STEP 4:

STEP 5:

STEP 6:

System will restart and start up using the VIA chipset driver.

A.3 VIA PCI Routing Miniport Driver Ver.1.3 (Win98 ONLY)

STEP 1:

Select the **"VIA PCI Routing Miniport Driver Ver.1.3"** item.

STEP 2:

STEP 3:

Click the **"Next"** button.

STEP 4:

Click the **"Finish"** button.
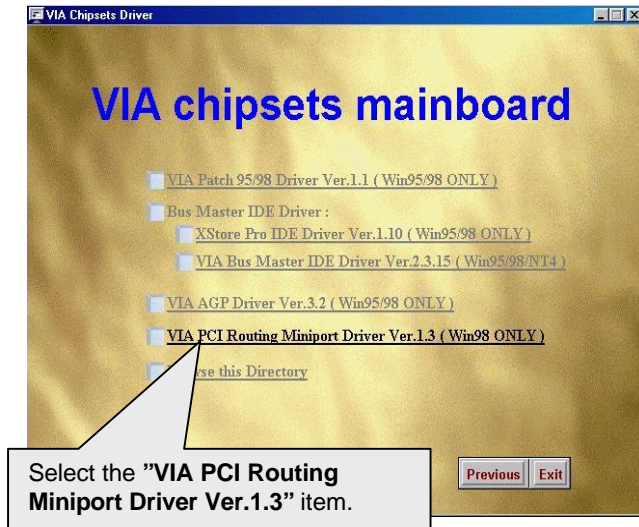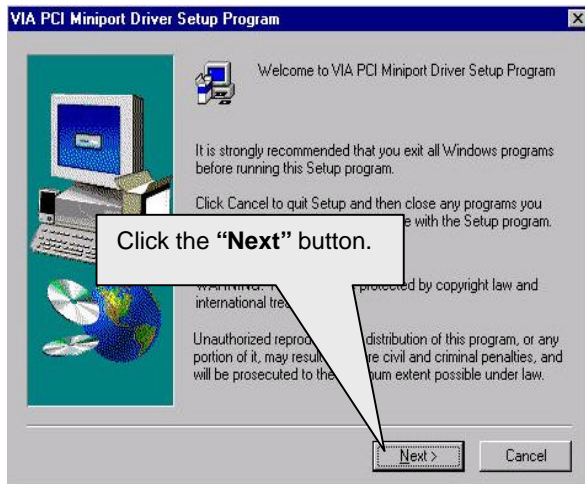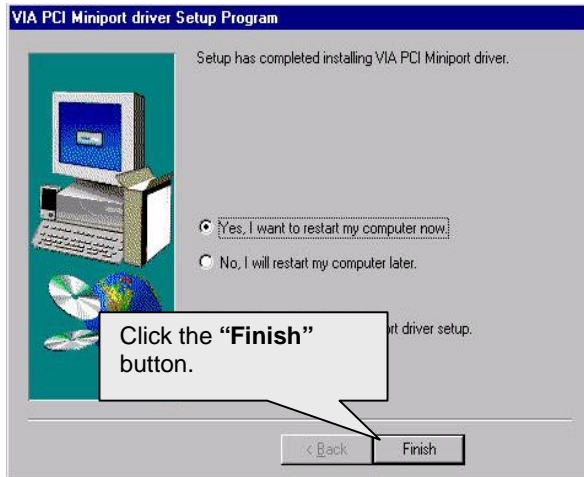
STEP 5:

System will restart and start up using the VIA chipset driver.

A.4 Bus Master IDE Driver

We support two kinds of high performance IDE Bus master (Ultra DMA) Drivers. You could install one of them to enable the DMA operation of your hard disk/CD-ROM drives.

Select the **"Xstore Pro IDE Driver Ver.1.10"** or **"VIA Bus Master IDE Driver Ver2.3.15** item.
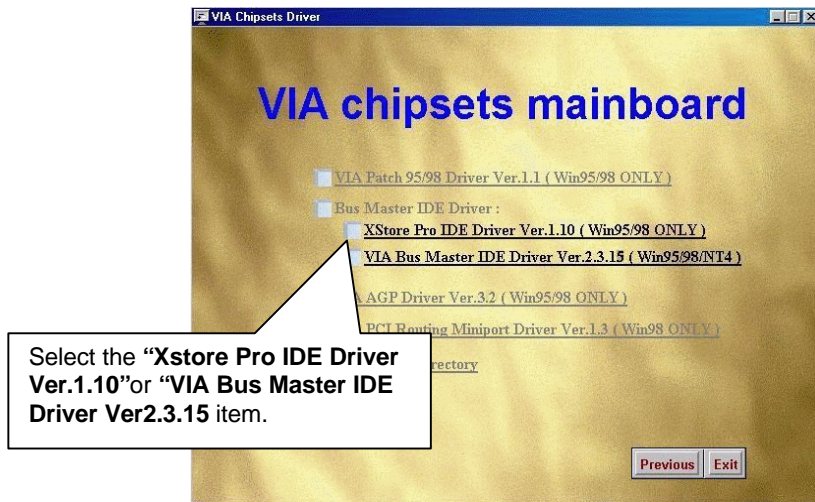
APPENDIX B: Audio Driver Installation

B.1. ESS Solo-1 PCI sound driver installation:

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

When starting Windows 95/98, the operation system will detect that you have a new PCI Multimedia Audio Device, and the **Add New Hardware Wizard** will show up.

STEP 1:

After the system finishes loading. You must insert the **UUCD** Installation CD disk into your CD-ROM, then you can see the AUTORUN window. If it does not show up, please run **"D:\Setup.exe"**

STEP 2:

STEP 3:
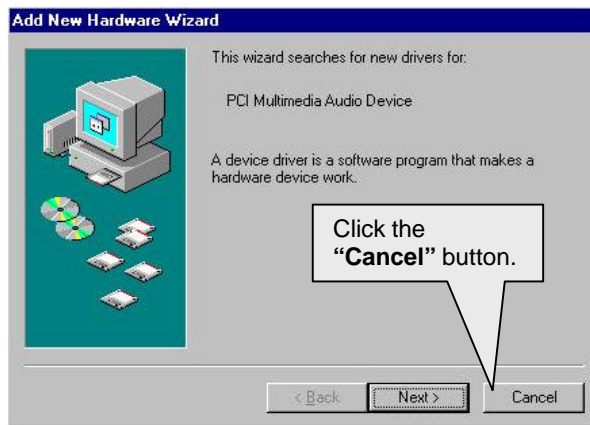
STEP 4:
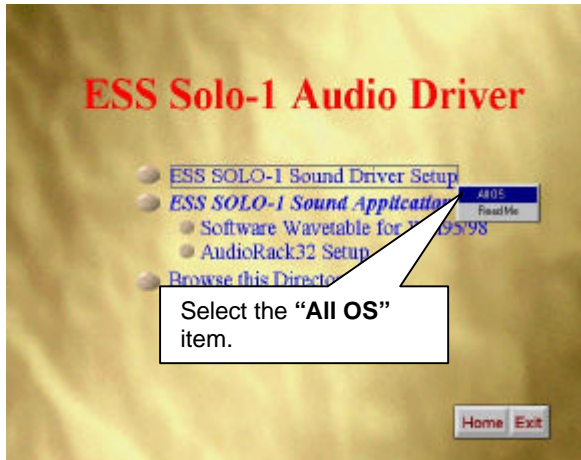
Please select the Operation System you want to install.
(Ex.If you are using windows 98, select the Win9x file folder.
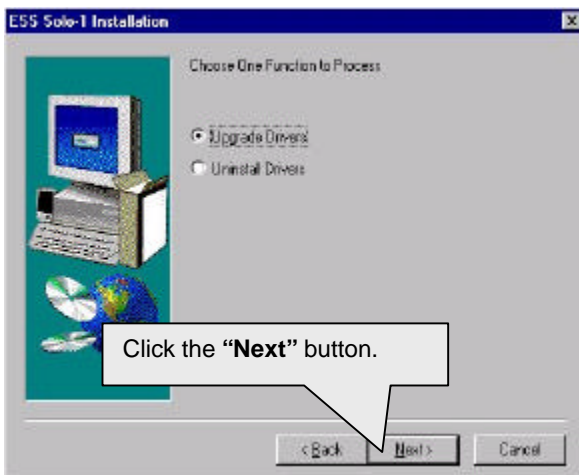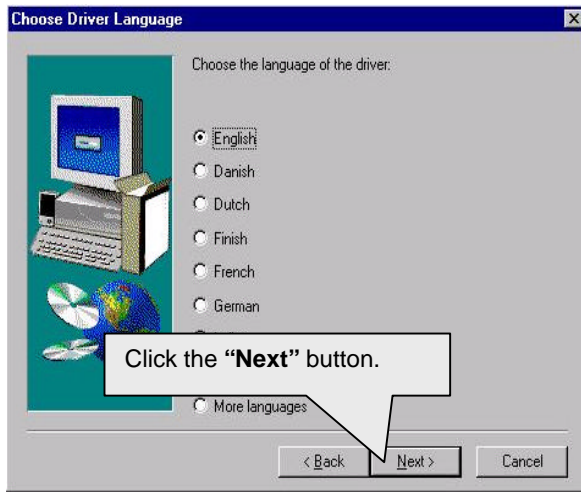   If you are using Windows NT4.0, select the Nt4.0 file folder.)

STEP 5:

STEP 6:
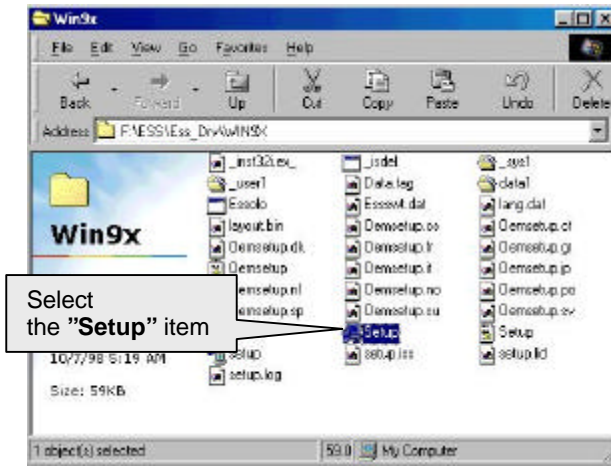
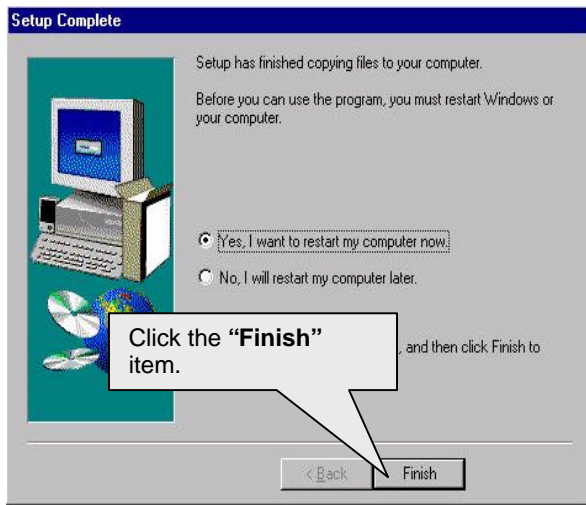**STEP 7:**
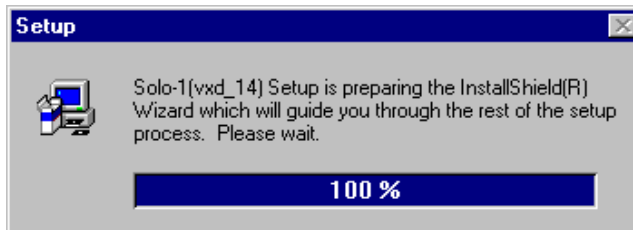
STEP 8:
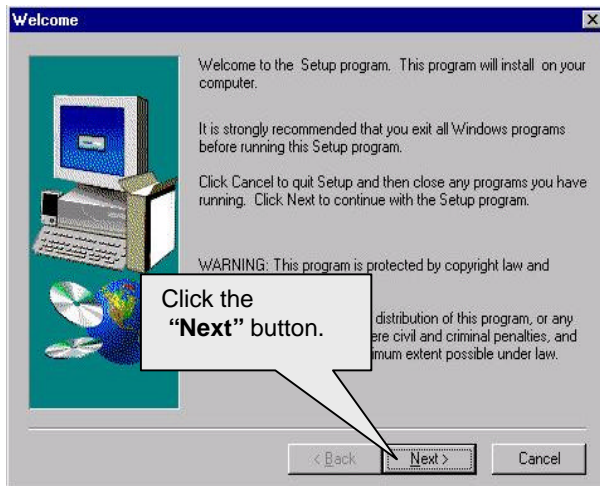
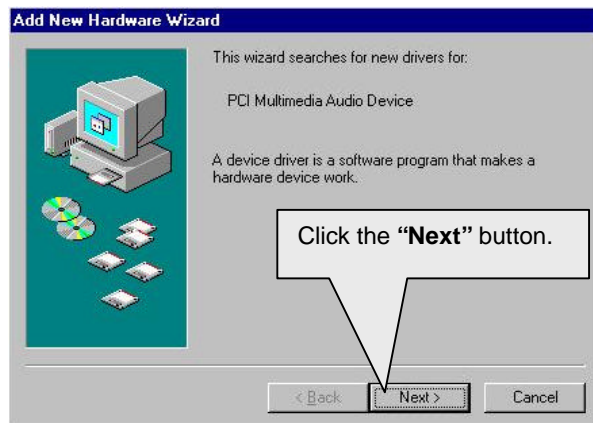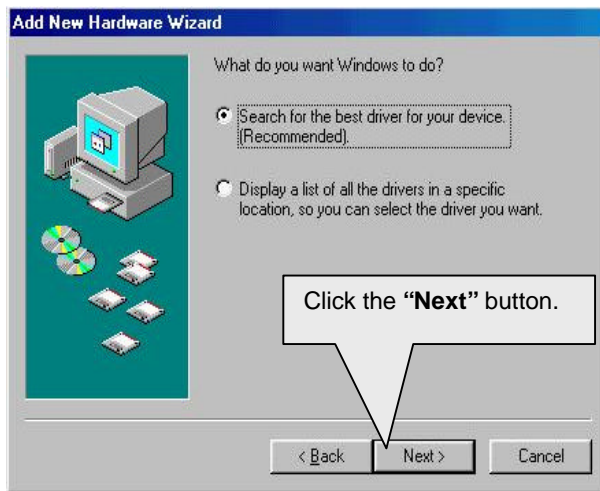**STEP 9:**

STEP 10:

STEP 11:

STEP 12:

When restarting Windows95/98, the operation system will detect that you have "PCI Multimedia Audio Device", and the **Add New Hardware Wizard** will show up.
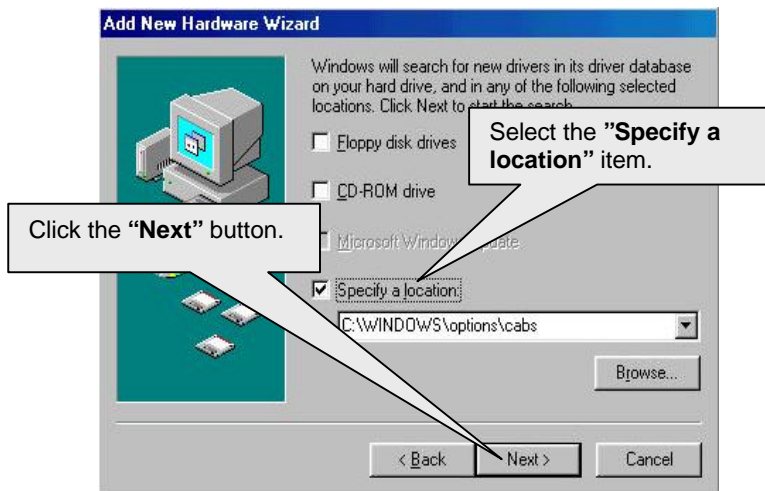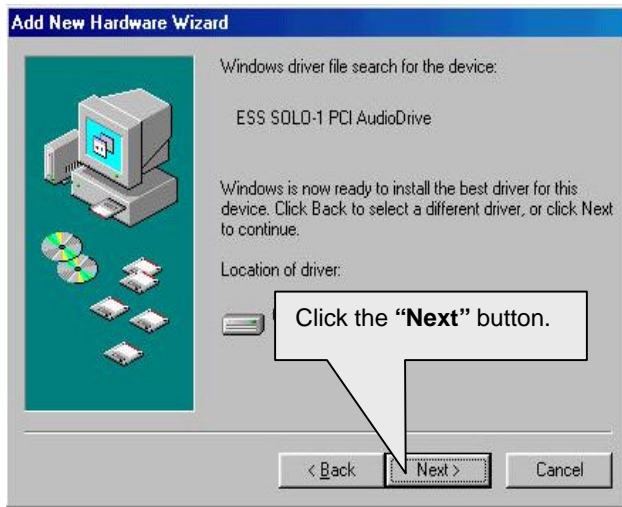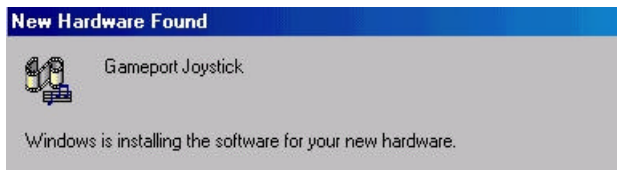
Please follow the steps below:

STEP 13:

STEP 14:

STEP 15:

STEP 16:

Click the **"Next"** button.

STEP 17:

Click the **"Finish"** button.

STEP 18:

New Hardware Found

Gameport Joystick

Windows is installing the software for your new hardware.

STEP 19:

Insert Disk

Please insert the disk labeled 'Windows 98 CD-ROM', and then click OK.

OK

Click "OK" button

STEP 20:

New Hardware Found

The file 'msjstick.drv' on Windows 98 CD-ROM cannot be found.

Insert Windows 98 CD-ROM in the selected drive, and click OK.

Copy files from:

D:\win98

OK

Cancel

Skip File

Details...

Browse...

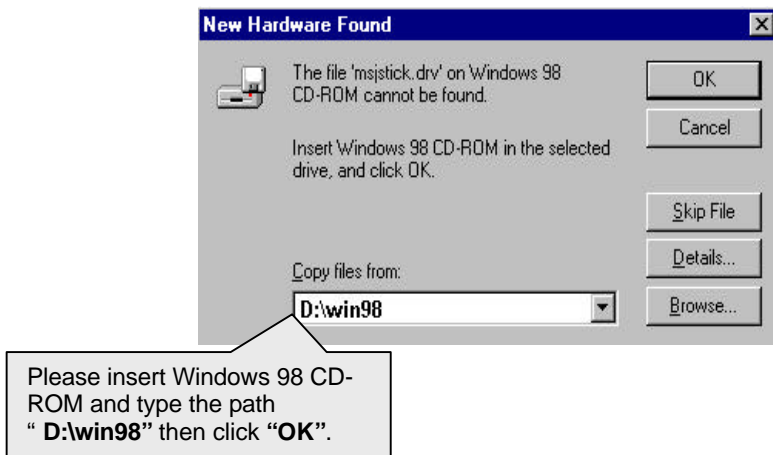Please insert Windows 98 CD-ROM and type the path " **D:\win98"** then click **"OK"**.

Then the sound driver installation is completed.

APPENDIX C : **Bugs & Limitations**

1. For some SDRAM Modules, when you are running Winstone 99 (Business Winstone 99) under the Windows NT4.0 operating system, the following error message may appear:

" mtrun-exe-Bad image: The application or DLL C:\ WINNT \ System \ MSVCRi40.DLL is not a valid Windows NT image. Please check this against your installation diskette."

```
                    ROM PCI/ISA BIOS (2A69KG0F)
                    CHIPSET FEATURES SETUP
                      AWARD SOFTWARE, INC.

Bank 0/1 DRAM Timing    : Turbo    Reset Case Open Status    :No
Bank 2/3 DRAM Timing    : Turbo    Case Opened               :No
Bank 4/5 DRAM Timing    : Turbo
SDRAM  Cycle Length     : 2        **Current Temp.(°C/°F)**
DRAM Clock              : Host CLK  CPU : 39/217
Memory Hole At 15M-16M  : Disabled
Read Around write       : Disabled **Current Fan Speed (RPM)**
Concurrent PCI/Host     : Disabled CPU: 4326    POWER :0    SYS:0
Video RAM Cacheable     : Disabled
AGP Aperture Size       : 64M      **Current Voltage (V)**
Power LED in Suspend    : BLINKING VCORE : 2.83  VGTL : 1.48 VCC3:  3.37
Spread Spectrum         : Disabled + 5V:   4.94 +12V:  12.34 -12V:-12.85
                                   - 5V:-  5.04 VBAT:   3.07 5VSB:  4.97
Slow Down CPU Duty Cycle : Normal
Shutdown Temp.(°C/°F)    : 75/167
**Temp. Select (°C/°F)**
CPU :70/158                        ESC : Quit       ↑↓←→ : Select Item
**Temperature Alarm**              F1  : Help       PU/PD/+/- : Modify
CPU :No                            F5  : Old Values  (Shift)F2 : Color
**Fan Fail Alarm**                 F6  : Load BIOS  Defaults
CPU:No   POWER :No      SYS:No     F7  : LOAD PERFORMANCE DEFAULTS
```

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)

GA-6VMA

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

of radio disturbance characteristics of industrial, scientific and medical (ISM high frequency equipment	electrical equipment "Harmonics"
of radio disturbance characteristics of broadcast receivers and associated equipment	electrical equipment "Voltage fluctuations"
of radio disturbance characteristics of household electrical appliances, portable tools and similar electrical apparatus	Residual, commercial and light industry Residual, commercial and light industry
of radio disturbance characteristics of fluorescent lamps and luminaries	Industrial environment
broadcast receivers and associated equipment	Industrial environment
of radio disturbance characteristics of information technology equipment	appliances tools and similar apparatus

**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

Date : Mar. 4, 1999

Signature : Rex Lin

Name : Rex Lin