Chapter 4

BIOS Features Setup
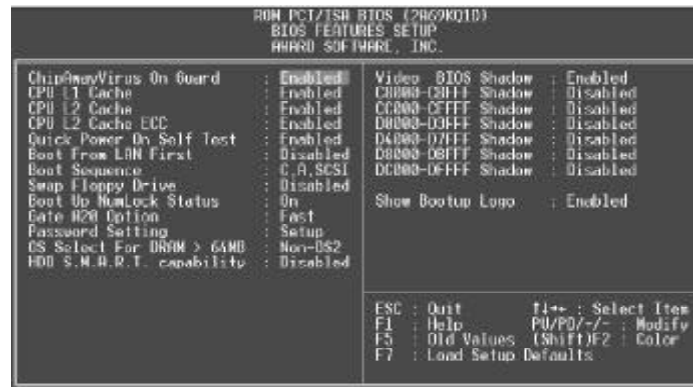

Figure-4   BIOS Features Setup Menu

The following indicates the options of each item and describes their meaning.

Item	Option	Description
● ChipAway Virus On Guard	*Enabled*	Guards against boot virus threats early in the boot cycle, before they have a chance to load into your system, ensuring your computer boots to a clean operating system.
	Disabled	Invalidates this function.
● CPU L1/L2 Cache	*Enabled*	Enables CPU internal Level1/Level2 cache.
	Disabled	Disables CPU internal Level1/Level2 cache.
● CPU L2 Cache ECC	*Enabled*	Enables CPU L2 Cache ECC (Error Checking and Correction) function.
	Disabled	Disables CPU L2 Cache ECC function.
● Quick Power On Self Test	*Enabled*	Enables quick POST. BIOS will shorten or skip some check items during POST to speed up POST after you power on the computer.
	Disabled	Normal POST.
● Boot From LAN First	*Enabled*	Boot from LAN is ahead of any boot sequence selection (LAN Adapter must support this function).
	Disabled	Does not boot from LAN first.
● Boot Sequence	C,A,SCSI,... C,CDROM,A LS/ZIP, C	Any search sequency can be chosen for booting.

|		
● Swap Floppy Drive	*Enabled*	Exchanges the assignment of A&B floppy drives.
	Disabled	The assignment of A&B floppy drives are normal.
● Boot Up Numlock Status	*On*	Keypad is used as number keys.
	Off	Keypad is used as arrow keys.
● Gate A20 Option	*Normal*	The A20 signal is controlled by the keyboard controller or chipset hardware.
	Fast	Default setting. The A20 signal is controlled by Port 92 or the chipset specific method.
● Password Setting	*System*	The system will not boot and access to Setup will be denied if the correct password is not entered when prompted.
	Setup	The system will boot up, but access to Setup will be denied if the correct password is not entered when prompted.
● OS Select For DRAM>64MB	*Non-OS2*	If your operating system is not OS/2, please select this item.
	OS2	If system DRAM is more than 64MB and the operating system is OS/2, please select this item.
● HDD S.M.A.R.T Capability	Enabled	Enables S.M.A.R.T hard disk support.
	Disabled	Invalidates this feature.
● Video BIOS Shadow	*Enabled*	Video BIOS will be copied to RAM. Video Shadow will increase the video speed.
	Disabled	Video shadow is disabled.
● C8000~CBFFF Shadow: DC000-DFFFF Shadow:	*Enabled*	Optional ROM will be copied to RAM by 16K bytes per unit.
	Disabled	The shadow function is disabled.
● Show Bootup Logo	*Enabled*	Enables the logo when system boots up.
	Disabled	Logo will not be shown when system boots up.

Chipset Features Setup
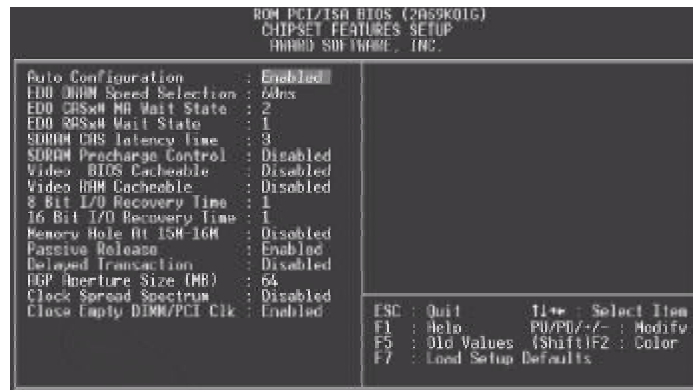
Figure-5   Chipset Features Setup Menu

The following indicates the options of each item and describes their meaning.

Item	Option	Description
● Auto Configuration	*Enabled*	Automatically configures DRAM Timing according to the value of "DRAM Speed Selection".
	Disabled	Manually configures.
		*Note: It is recommended that the "Enabled" option be chosen by common users.
● EDO DRAM Speed Selection	*50ns, 60ns*	This item is of selected EDO DRAM read/write timing. You must ensure that your DIMMs are as fast as 50ns, otherwise 60ns should be selected .
● EDO CASx# MA Wait State	*2*	One additional wait state is inserted before the assertion of the first CASx# for page hit cycles. This allows one additional clock of MA setup time to the CASx# for the leadoff page hit cycle. Page miss and row miss timing are not affected by this bit.
	1	Without additional wait state.
● EDO RASx# Wait State	*2*	One additional wait state is inserted before RASx# is asserted for row misses. This provides one clock of additional MAX[13:0] setup time to RASx# assertion. This bit does not affect page misses since the MAX[13:0] lines are setup several clocks in advance of RASx# assertion for page misses.
	1	Without additional wait state.

● SDRAM CAS Latency Time	*2*	Defines the CLT timing parameter of SDRAM. Latency Time=2x system clocks.
	3	Latency Time=3x system clocks.
● SDRAM Percharge Control	*Enabled*	Default setting is suggested.
	Disabled	
● Video BIOS Cacheable	*Enabled*	Beside conventional memory, video BIOS area is also cacheable.
	Disabled	Video BIOS area is not cacheable.
● Video RAM Cacheable	*Enabled*	Besides Conventional memory, Video RAM area is also cacheable.
	Disabled	Video RAM area is not cacheable.
● 8 Bit I/O Recovery Time.	*1~ 8*	Defines the ISA Bus 8 bit I/O operating recovery time.
	NA	8 bit I/O recovery time does not exist.
● 16 Bit I / O Recovery Time	*1~ 4*	Defines the ISA Bus 16 bit I/O operating recovery time.
	NA	16 bit I/O recovery time does not exist.
● Memory Hole at 15m-16m	Enabled	Memory hole at 15-16m is reserved for expamded
● Passive Release	*Enabled*	Default setting is suggested.
	Disabled	
● Delayed Transaction	*Enabled*	Default setting is suggested.
	Disabled	
● AGP Aperture Size (MB)	*4~256*	Sets the effective size of the Graphics Aperture to be used in the particular PAC Configuration.
● Clock Spread Spectrum	*Enabled*	Enables Clock Spread Spectrum to reduce EMI.
	Disabled	Disables Clock Spread Spectrum.
● Close Empty DIMM/PCI Clk	*Enabled*	Closes empty DIMM clock or PCI clock to reduce EMI.
	Disabled	Does not close empty DIMM or PCI clock.

Power Management Setup

Figure-6   Power Management Setup Menu

The following indicates the options of each item and describes their meaning.

Item	Option	Description
● ACPI function	*Disabled*	Invalidates ACPI function.
	Enabled	Validates ACPI function.
● Power Management	*Disabled*	Global Power Management (PM) will be disabled.
	User Define	Users can configure their own Power Management Timer.
	Min Saving	Pre - defined timer values are used. All timers are in their MAX values.
	Max Saving	Pre - defined timer values are used. All timers are in their MIN values.
● PM Control by APM	No	System BIOS will ignore APM when Power Management is enabled.
	Yes	System BIOS will wait for APM's prompt before enterring any PM mode e.g. Standby or Suspend. **Note: If APM is installed, and there is a task running, even when the timer is time out, the APM will not prompt the BIOS to put the system into any power saving mode. But if APM is not installed, this option has no effect.**
● Video Off Method	*Blank Screen*	The system BIOS will only blank off the screen when disabling video.

	V / H SYNC +	In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA cards to monitor.
	DPMS	This function is enabled only for the VGA card supporting DPMS. **Note: When the green monitor detects the V/H-SYNC signals, the electron gun will be turned off.**
● Video Off After	N/A	System BIOS will never turn off the screen.
	Suspend	Screen blanks after the system enters Suspend mode.
	Standby	Screen blanks after the system enters Standby mode.
	Doze	Screen blanks after the system enters Doze mode.
● MODEM Use IRQ	3,7,5,7,9, 10,11	Special wake-up event for the Modem.
	NA	Invalidates this feature.
● Doze mode	Disabled	The system never enters Doze mode.
	1Min ~ 1 Hr	Defines the continuous idle time before the system enters Doze mode. If any items defined in "Wake Up Events In Doze & Suspend" are On and activated, the system will be woken up.
● Standby Mode	Disabled 1 Min ~ 1Hr	The system never enters Standby mode. Defines the continuous idle time before the system enters Standby mode. If any items defined in "Wake Up Events In Doze & Suspend" are On and activated, the system will be woken up.
● Suspend Mode	Disabled Min ~ 1Hr	The system will never enter Suspend mode. Defines the continuous idle time before the system enters Suspend mode. If any items defined in "Wake Up Events In Suspend" are On and activated, the system will be woken up.
● HDD Power Down	Disabled	HDD's motor will not be off.
	1 ~15 Min	Defines the continuous HDD idle time before the HDD enters the power saving mode (motor off)
● HDD Down When suspend		
● Throttle Duty Cycle	12.5% 25% 37.5% 50 % 62.5% 75% 87.5%	Selects the duty cycle of the STPCLK# signal, slowing down the CPU speed when the system enters the green mode.

● VGA Active Monitor	*Enabled*	VGA active reloads global timer.
	Disabled	VGA active has no influence to global timer.
● Soft-Off by PWR-BTTN	*Instant-Off*	The system will power off immediately once the "Power" button is pressed.
	Delay 4 Secs	The system will not power off until the "Power" button is pressed continuously for more than 4 seconds.
● CPUFAN Off In Suspend	*Enabled*	CPU FAN will be automatically turned off when the system enters suspend mode.
	Disabled	CPU FAN remains on when the system enters suspend mode.
● Resume by Ring	*Enabled*	Allows the system to be powered on when a ring indicator signal comes up to UART1 or UART2 from an external modem or comes up to WOM header from an internal modem card.
	Disabled	Does not allow Ring Power-On.
● Resume by Alarm	*Enabled*	RTC alarm can be used to generate a wake event to power up the system which is in power-off status. You can set any date or any time to power up the system.
	Disabled	RTC has no alarm function.
● Wake Up On LAN	*Enabled*	Allows the system to be powered on when a remote waker-up signal comes up to the WOL header from LAN adapter.
	Disabled	Does not allow wake-up on LAN.
● IRQ 8 Break Suspend	*Enabled*	Generates a clock event.
	Disabled	Does not generate a clock event.
● IRQ [3-7, 9-15], NMI	*Enabled*	Reloads global timer.
	Disabled	Does not influence the global timer.

..... Parallel Port

PNP/PCI Configuration Setup


```
ROM PCI/ISA BIOS (2A69KQ1D)
PNP/PCI CONFIGURATION
AWARD SOFTWARE, INC.

PNP OS Installed      : No          PCI Slot 1 IRQ No.  : Auto
Resources Controlled By : Manual    PCI Slot 2 IRQ No.  : Auto
Force Updating ESCD   : Disabled    PCI Slot 3 IRQ No.  : Auto

IRQ-3  assigned to : Legacy ISA
IRQ-4  assigned to : Legacy ISA
IRQ-5  assigned to : PCI/ISA PnP    Used MEM base addr  : N/A
IRQ-7  assigned to : PCI/ISA PnP
IRQ-9  assigned to : PCI/ISA PnP    Assign IRQ For USB  : Enabled
IRQ-10 assigned to : PCI/ISA PnP    Assign IRQ For VGA  : Disabled
IRQ-11 assigned to : PCI/ISA PnP
IRQ-12 assigned to : PCI/ISA PnP
IRQ-14 assigned to : Legacy ISA
IRQ-15 assigned to : Legacy ISA
DMA-0  assigned to : PCI/ISA PnP
DMA-1  assigned to : PCI/ISA PnP    ESC : Quit        ↑↓→← : Select Item
DMA-3  assigned to : PCI/ISA PnP    F1  : Help        PU/PD/+/- : Modify
DMA-5  assigned to : PCI/ISA PnP    F5  : Old Values  (Shift)F2 : Color
DMA-6  assigned to : PCI/ISA PnP    F7  : Load Setup Defaults
DMA-7  assigned to : PCI/ISA PnP
```
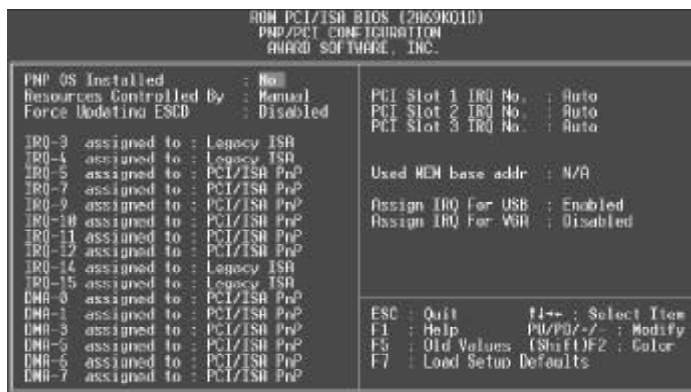
Figure-7   PNP/PCI Configuration Setup Menu

The following indicates the options of each item and describes their meaning.

Item	Option	Description
● PNP OS Installed	Yes	Device resources assigned by PnP OS.
	No	Device resources assigned by BIOS.
● Resources Controlled by	Manual	Assigns the system resources (IRQ and DMA) manually .
	Auto	Assigns system resources (IRQ and DMA) automatically by BIOS.
● Force Update ESCD	Enabled	The system BIOS will force updating ESCD once, then automatically set this item as Disabled.
	Disabled	Disables the forced update ESCD function.
● IRQ-3~IRQ-15 assigned to	Legacy ISA	The specified IRQ-x will be assigned to ISA only.
	PCI/ISA PnP	The specified IRQ-x will be assigned to ISA or PCI.
● DMA-0~DMA-7 assigned to	Legacy ISA	The specified DMA-x will be assigned to ISA only.
	PCI/ISA PnP	The specified DMA-x will be assigned to ISA or PCI.
● PCI Slot 1/2/3 IRQ No.	Auto,3,4,5,7,9 10,11,12,14,15	Assigns an IRQ for PCI slot1/2/3 manually or automatically.
● Used MEM base address	C800/8~64K	Claims a memory space to be occupied by legacy ISA card. The memory address and the memory size (8/16/32/64K) can be chosen from the options.
	N/A	Invalidates this feature.

● Assign IRQ for USB	*Enabled*	Assigns an IRQ for USB. If an USB device is used, enable this item.
	Disabled	Does not assign an IRQ for USB. If USB device isn' t used, disabling this item can release the IRQ.
● Assign IRQ for VGA	*Enabled*	Assigns the needed IRQ for the VGA Card.
	Disabled	Does not assign an IRQ for the VGA card in order to release the IRQ.

Integrated Peripherals

Figure-8 Integrated Peripherals Menu

The following indicates the options of each item and describes their meaning.

Item	Option	Description
● IDE HDD Block Mode	Enabled	Allows IDE HDD to read/write several sectors at once.
	Disabled	IDE HDD only reads/writes a sector once.
● IDE Primary/ Secondary Master/Slave PIO	Mode 0 - 4	Defines the IDE primary/secondary master/ slave PIO mode.
	Auto	The IDE PIO mode is defined by auto -detection.
● IDE Primary/ Secondary Master/Slave UDMA	Auto	Ultra DMA mode will be enabled if ultra DMA device is detected.
	Disabled	Disables this function.
● On-chip Primary/Secondary PCI IDE	Enabled	On-chip primary/secondary PCI IDE port is enabled.
	Disabled	On-chip primary/secondary PCI IDE port is disabled.
● USB Keyboard Support	Enabled	USB Keyboard Support is enabled.
	Disabled	USB Keyboard Support is disabled.
● POWER ON Function	BUTTON ONLY	Use the power button to power up the system.
	Password	Enables the Keyboard Password Power-on function and disables the power button's power-on function. Other than choosing this option, the password should be entered to implement this function.

|		
		Note: If this option(Password) is chosen, the jumperJP2 must be set as PIN1&PIN 2 closed, or this will prevent you from powering up your system.
● Onboard FDC Controller	*Enabled*	Onboard floppy disk controller is enabled.
	Disabled	Onboard floppy disk controller is disabled.
● Onboard Serial 1/2	*3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3,*	Defines the onboard serial port address and required interrupt number.
	Auto	Onboard serial port address and IRQ are automatically assigned
	Disabled	Onboard serial port is disabled.
● Serial Port 2 Mode	*Normal*	Defines Serial Port 2 as standard serial port.
	ASKIR	Supports SHARP ASK-IR protocol with maximum baud rate up to 57600bps.
	IrDA	Supports IrDA version1.0 SIR protocol with maxiumum baud rate up to 115.2Kbps.
● Onboard Parallel Port	*378/IRQ7, 278/IRQ5, 3BC/IRQ7*	Defines onboard parallel port address and IRQ channel.
	Disabled	Onboard parallel port is disabled.
● Parallel Port Mode	*SPP EPP ECP, ECP+EPP*	Defines the parallel port mode as Standard Parallel Port (SPP), Enhanced Parallel Port (EPP), or Extended Capabilities Port (ECP).
● PWRON After PWR-Fail	*Off*	The system resumes OFF when the AC power supply powers on.
	On	The system will be powered up when the AC power supply powers on.
	Former-Sts	Whatever the system status is before the AC power supply powers down, the system resumes in the previous status (ON/OFF) when the AC power supply powers on.

System Monitor Setup
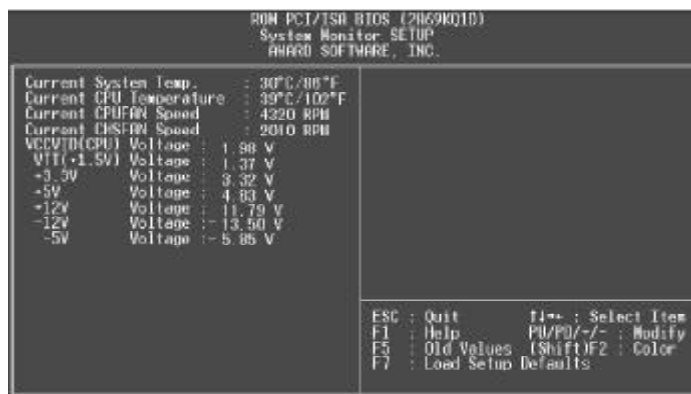
Figure-9 System Monitor Setup Menu

The following describes the meaning of each item.

Item	Current Data Shown	Description
● Current System Temp.	$30^0C/ 86^0C$	The temperature inside the chassis.
● Current CPU Temperature	$39\ ^0C/102^0F$	The temperature of the CPU core.
● Current CPUFAN Speed Current CHSFAN Speed	4320 RPM 2010 RPM	RPM(Revolution Per Minute) speed of fan connected to the fan header CPUFAN or CHSFAN. Fan speed value is based on an assumption that tachometer signal is two pulses per revolution; In other cases, you should regard it relatively.
● VCCVID(CPU) Voltage VTT (+1.5) Voltage, + 3.3V + 5V + 12V, - 12V, - 5V.	1.98V 1.37V 3.32V 4.83V 11.79V -13.50V -5.85V	Displays current Voltage values including all significant voltages of the motherboard. 3.3V, +5V, +12V, -12V, -5V are voltages from the ATX power supply, VTT (+1.5) Voltage is GTL Termination Voltage from the on-board regulator, and VCCVID (CPU) Voltage is CPU Core Voltage from the on board switching Power Supply.

SecurityEasy Setup

Figure-10   SecurityEasy Setup Menu

The following describes the options of each item and describes their meaning

Item	Current Data Shown	Description
● Lock Function Select	Enabled	Enables the LOCK function
	Disabled	The system will never enter the LOCK mode.
● SecurityEasy Password	Enter	To type in the SecurityEasy password is the only way to exit the LOCK mode. When you select this function. The following message "ENTER PASSWORD" appears at the center of the screen to assist you in creating a password. Type the SecurityEasy Password no more than to six characters, then press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>.
● Keyboard Inactive Timer	Disabled	The system will not enter the LOCK mode due to the Keyboard Inactive Timer
	1Min~ 1 Hour	Set the continuous idle time of the keyboard before the system enters the LOCK mode.
● Video Blanking Control	Enabled	Video is blank in the LOCK mode.
	Disabled	Video is normal in the LOCK mode.

Note: See also Chapter 3

Password Setting

When this function is selected, the following message appears at the center of the screen to assist you in creating a password.

ENTER PASSWORD

Type the password, up to eight characters, and press <Enter>. The password typed now will clear any 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.

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

PASSWORD DISABLED

If you have selected "**System**" at "Password Setting" of "BIOS Features Setup" menu, you will be prompted for the password every time the system is rebooted or any time you try to enter "CMOS Setup".

If you have selected "**Setup**" at "Password Setting" of "BIOS Features Setup" menu, you will be prompted for the password only when you try to enter "CMOS Setup".

IDE HDD Auto Detection

The Enhanced IDE features are included in all Award BIOS. Below is a brief description of these features.

```
        ROM  PCI/ISA BIOS (2A69KQ10)
             CMOS SETUP UTILITY
           AWARD SOFTWARE, INC.

HARD DISKS   TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE
Primary Master:

        Select Primary Master Option (N=Skip): N

OPTION SIZE  CYLS HEAD PRECOMP  LANDZ     SECTOR    MODE
  2(Y)  541   525  32     0      1049       67       LBA
  1     541  1050  16   65535    1049       63      NORMAL
  3     541   525  32   65535    1049       63      LARG
  Note:  Some OSes (like SCO-UNIX) must use "NORMAL" for installation
                      │ ESC:  Skip │
```

Figure-11 IDE HDD Auto Detection Menu

1. Setup Changes

With auto-detection

- BIOS setup will display all possible modes supported by the HDD including NORMAL, LBA and LARGE.
- If HDD does not support LBA modes, no "LBA" option will be shown.
- If number of physical cylinder is less than or equal to 1024,"LARGE" option may not be shown.
- Users can select their appropriate mode .

With Standard CMOS Setup

	CYLS	HEADS	PRECOMP	LAND ZONE	SECTOR	MODE
Drive C: User(516MB)	1120	16	65535	1119	59	Normal
Drive D: None(203MB)	684	16	65535	685	38	--------

When HDD type is in "user" type, the "MODE" option will be available for users to select their own HDD mode.

2. **HDD Modes**

The Award BIOS supports 3 HDD modes: NORMAL, LBA and LARGE, also Auto detect.

NORMAL

Generic access mode in which neither the BIOS nor the IDE controller will make any transformation during accessing. The maximum number of cylinders, heads and sectors for NORMAL mode are 1024,16 and 63.

If the user sets his HDD to NORMAL mode, the maximum accessible HDD size will be 528 megabytes even though its physical size may be greater than that.

LBA (Logical Block Addressing) mode

A new HDD accessing method to overcome the 528 Megabyte bottleneck. The number of cylinders, heads and sectors shown in setup may not be the number physically contained in the HDD.

During HDD accessing, the IDE controller will transform the logical address described by sector, head and cylinder number into its own physical address inside the HDD. The maximum HDD size supported by LBA mode is 8.4 Gigabytes.

LARGE mode

Some IDE HDDs contain more than 1024 cylinder without LBA support (in some cases, users do not want LBA). The Award BIOS provides another alternative to support these kinds of HDD.

BIOS tricks DOS (or other OS) that the number of cylinders is less than 1024 by dividing it by 2. At the same time, the number of heads is multiplied by 2. A reverse transformation process will be made inside INT13h in order to access the right HDD address.

Auto detect

If using Auto detect, the BIOS will automatically detect the IDE hard disk mode and set it as one of the three modes.

3. **Remark**

To support LBA or LARGE mode of HDDs, there must be some softwares involved which are located in Award HDD Service Routine(INT13h).It may fail to access a HDD with LBA (LARGE) mode selected if you are running under an Operating System which replaces the whole INT 13h.

Power - On Boot

If you have made all the changes to CMOS values and the system can not boot with the CMOS values selected in Setup, restart the system by turning it OFF then ON or press the "RESET" button on the system case. You may also restart the system by simultaneously pressing < Ctrl >, < Alt > and < Del > keys.

Chapter 5
Creative Audio Description

On-board audio system is based on the high performance Creative ViBRA™16XV CT2511 chip that integrates 3D stereo enhancement technology. It incorporates the best features of Sound Blaster™, Sound Blaster™Pro, Microsoft Windows Sound System and MPU-401 for all multimedia applications, entertainment, educational sound and business audio.

Features

Analog Audio

- Analog mixing of 7 audio sources: Digital Audio (Stereo), CD Audio (Stereo), Synthesised Music (Stereo), Line Level Audio (Stereo), Auxiliary Level Audio (Stereo), Microphone Level Audio (Mono), and Mono Audio (Mono).
- Individual software programmable volume controls.

Digital Audio

- Variable sampling rates from 5KHz to 48KHz.
- Full-duplex record and playback.
- 8/16 bit stereo/mono digital audio playback and recording.
- FIFO's for digital audio playback and recording for optimum Windows operations.

Mixer

- 32-level volume control mixer.

Music Synthesizer and DAC

- Creative Music synthesizer.

Stereo Enhancement

- Built-in Creative Stereo Enhancement.
- Supports enhancement effect on all inputs to the mixer.
- CD audio, Line-in, Auxiliary, VOC, Midi, Mic or Mono.

PnP Support

- Built-in PnP interface.
- Supports direct connection to ISA bus.

Joystick Port

- Built-in Analog Joystick quad timer.

Creative Software Installation
I. Installation of Windows 95 driver

- While running Window95, insert the QDI Motherboard Utility CD into the CD-ROM drive.
- Direct the path to D:\ DevDrv\ Sound \ CT2511\ Win 95 and run setup.exe. The Creative software installation will guide you through the setup process.

- Restart the computer when prompted.
- After completing installation, the sound , video and game controllers should be listed in Device Manager from System Properties as shown below.
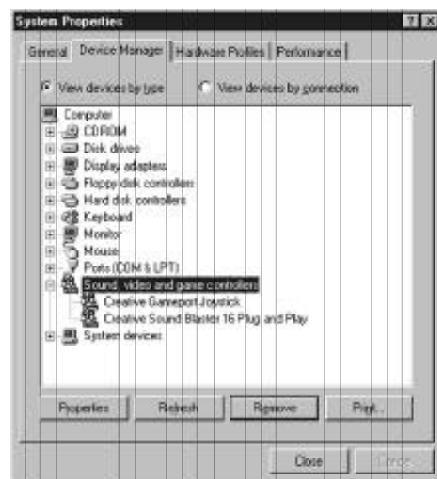
II . Installing Driver in DOS/ Windows 3.1X

Before installing the audio card' s software from the CD-ROM, a CD-ROM drive must be installed and working properly in your system . If you have not yet installed a CD-ROM drive and associated drivers, refer to your CD-ROM drive' s documentation for instructions. Use the diskette provided with the CD-ROM to install the needed drivers.

To install the audio card' s software from the CD-ROM:

1. Start your system.
2. Insert the QDI Motherboard Utility CD into your CD-ROM drive.
3. At the DOS prompt, change to the drive containing your CD-ROM. For example, type D:
4. Change to the directory D:\DevDrv\ Sound\ CT2511\ Win31
5. Type **INSTALL** then press <Enter>.
6. Follow the instructions presented to complete the installation.

Note: The installation will be unsuccessful if installed from the Windows DOS prompt.

III. Installation of Windows NT 4.0 Driver

Installing Audio Drivers in Windows NT4.0

1. Installing PNPISA.INF

- In Windows NT4.0, insert the Windows NT 4.0 CD-ROM into the CD-ROM drive.
- Locate the file PNPISA.INF in the CD directory \DRVLIB\PNPISA\X86 .
- If this file can not be located, click Options on the View menu of Windows NT Explorer, select the Show All Files option and clear the Hide Extensions For Known File Types check box, then click the OK button.
- The file PNPISA.INF will be now displayed. Right-click on this file and select Install.
- Restart your computer when prompted.

2. Installing Creative Audio Drivers

- When the system restarts, the New Hardware Found message boxes for the various devices will appear.
- If you have previously installed Windows NT 4.0 Service Pack 3, the system might prompt for the Service Pack 3 CD to install sound driver, click the cancel button.
- However, if WindosNT 4.0 service pack 3 is not installed, When prompted for the driver, click the Cancel button.
- Insert the QDI Motherboard Utility CD into the CD-ROM drive.
- Run UPDPNPNT.EXE in the directory \DevDrv\Sound\CT2511\Winnt40 .
- Click the OK button If the Sound Blaster 16 Configuration box appears with no conflicts.
- If you are prompted for the Windows NT CD-ROM to install the Joystick port enabler, insert the Windows NT4.0 CD-ROM into the drive, direct the path to \DRVLIB\AUDIO\SBPNP\i386 and click the OK button.
- Restart the computer when prompted.

Please refer to the readme file in the directory

D:\ DevDrv \ Sound\ CT2511\ Winnt 40 for detailed information on installing Windows NT 4.0 driver.