Chapter
6

Software Specifications

Get to know more about the A7Sv series Notebook with a detailed look at the software specifications.

The information contained in the chapter can be quite useful when you are troubleshooting the system's hardware. Each item has its individual usage for you to Understand the software side of the notebook's architecture.

1. BIOS Version Naming Rule

BIOS Version Format : **RNN**

Table 1   BIOS Revision Code Format

CHARACTER	DEFINITION	DESCRIPTION
R	Major version	0 = SR (sample run) phase, 1 = ER (engineer run) phase, 2 = PR (pilot-run) and MP (mass-production) phases T = Test Version, which is for unofficial verification. The test BIOS will not be released officially and uploaded to BIOS folder of NB sever. 9 = Test Version, used in case of test BIOS over xxxxxxxx.T99, The next version of test BIOS will be xxxxxxxx.900 Note: minor version of test BIOS is counting sequentially. 9 – Test Version, used in case of test BIOS over xxxxxxxx.T99, The next version of test BIOS will be xxxxxxxx.900。
NN	Minor version	00~99

2. BIOS Schedule

Table 2   BIOS Development Schedule

| Stage	BIOS Revision	Release date
Bring UP	000	2007/04/26
SR	001	2007/05/04
	002	2007/05/17
PR	200	2007/05/25
	201	2007/06/28
	202	2007/07/09

3.   Documentation

1.   BIOS Engineering Specification, and update should be provided in the beginning of each stage.

2.   BIOS Validation Items should be provided in the end of S/R stage.

3.   BIOS Implementation Checklist should be provided before S/R stage and should be updated on each S/R bios release.

4. POST

4.1 ASUS Logo

4.1.2 With ASUS BIOS

The ASUS animation logo should be displayed during POST like below.
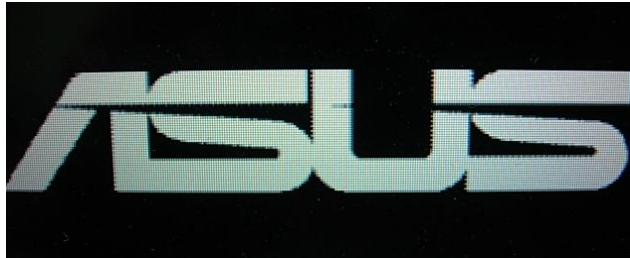
4.1.2 With General BIOS

If there is no OEM logo like ASUS/Hitachi/Epson/Haier displayed during POST. The intel OSB should be displayed on the center of screen.

4.2 ASUS Instant On Logo

Boot from Instant ON button or CIR, and the ASUS instant on logo should be displayed during POST like below.

4.3 intel OSB

intel OSB (On-Screen Branding) should follow the intel spec.

If there is an OEM logo like ASUS/Hitachi/Epson/Haier displayed during POST. The intel OSB should be displayed on the right-bottom of screen.

4.2 Prompt Message

During 'Quiet Boot', the prompt string like "<F2> : Enter Setup, <ESC> : Popup Menu" should be displayed on the left-bottom of screen.

4.3 Hotkey Functions during BIOS POST

Table 4   Hotkey List

Button	Description
Esc	Press Esc Key during post stage, the system will pop up a boot menu.
Tab	Press Tab key during post stage, the normal post will become Text Mode POST
F2	Press F2 key during post stage, the system will enter into BIOS Setup Menu.
F4	Press F4 key during post stage, the system will open the easy flash utility. The generic version of bios doesn't support this function.
F9	Press F9 during post stage, the system will start the Recovery Capability up.
F12	Press F12 key during post stage, the system will boot from network if the Onboard LAN Boot ROM function under BIOS setup menu is enabled.
Fn + F5	Press Fn+F5 to decrease the brightness of LCD backlight.
Fn + F6	Press Fn+F6 to increase the brightness of LCD backlight.

4.4 Beep Sound

There is no warning beep sound allowed during POST.

4.5 POST Wave

POST Wave sound should be played during POST, and the sound volume could be adjusted in the setup menu.

4.6 Text Mode POST (Diagnostic Mode)

The following items should be displayed during text mode POST.

- **BIOS Date, Version**

  EX : BIOS Date: 07/09/2007   Ver: 202

- **CPU Information, speed, type**

  EX : CPU : Intel® Core™ 2 DUO CPU T5250 @ 1.50GHz

  Current Speed : 1.50GHz

- **Memory size & Information (Not include VGA shared memory)**

  The MCH is operating with DDR2 667/CL5 in Single-Channel Mode

  EX : 1024MB

- **USB Devices (Detected by BIOS during POST.)**

  EX : USB Device(S) : 1 Keyboard, 1 Hub

- **Hard drive information**

  The IDE Device will be detected automatically.

  EX : Auto-Detecting Pri Master .. IDE Hard Disk

  Auto-Detecting 3rd Master ... ATAPI CDROM

  Pri Master : HTS541616J9SA00   SB40C7OP

  Ultra DMA Mode-5, S.M.A.R.T. Capable and Status OK

  3rd Master : MATSHITADVD-RAM UJ-850S   120

  Ultra DMA Mode-2

- **USB mass storage devices detection**

  EX : Auto-detecting USB Mass Storage Devices ..

  00 USB mass storage devices found and configured.

- **Other information.**

  Hotkey prompt :

  EX : Press F2 to run Setup

  Press F12 if you want to boot from the network

  (The "Onboard LAN Boot ROM" function under BIOS setup menu should be enabled.)

  Press Esc for BBS POPUP

5. SETUP Menu

Refer to the *A7Sv_BIOS_Setup_Menu_Specification_Draft.DOC*

6.   Boot Devices Support

The system supports the following bootable devices,

- HDD
- ODD (CD-ROM/ DVD-ROM …)
- LAN (PXE server)
- USB Mass Storage (USB CDROM/ Floppy/ Flash Disk…)

6.1   Boot Device Selection by Recovery CD Command

Refer to the **Boot Device Selection 0.3.*doc.***

7. Audio

7.1 PCBEEP

A7Sv supports PCBEEP sound and the volume of audio sound is 40 db under DOS mode.

There is no sound allowed while plug in/out USB devices.

There is no sound during POST.

7.2 POSTWAVE

During the POST the A7Sv supports the POSTWAVE, and the user can enable, disable or modify the volume under BIOS setup menu.

8.   EXTF/*BBSS* Interface & Utilities

The bios should support EXTF and *BBSS* interfaces for the following functions.

8.1   AFLASH2
- **Automatic :** The BIOS ROM will be flashed automatically without any prompt.

  Usage :

        Aflash2.exe /auto:filename
- **Manual**

  Usage :

        Aflash2.exe

8.2   EasyFlash
Refer to the ***A7Sv_BIOS_Setup_Menu_Specification_Draft.DOC*** *- Chapter 2-2 Start Easy Flash*

8.3   ROMWRT
A7Sv supports Rom Write function, there are some spaces reserved for factory using. But product engineer (PE) needs to use different utility to write data into those areas by different customer's requirement.

8.4   WDMI
A7Sv supports WDMI utility, the DMI information can be accessed under windows.

8.5   WINFlash
A7Sv support winflash function. The user can update bios under ACPI-OS.

The system needs to reboot after the bios is updated.

9. BIOS Crisis Recovery

9.1 Auto Crisis Recovery (Generic Version does not support this feature)

If bios checksum is not correct, the bios crisis recovery will be invoked automatically. However, there should be one bios image existed in the hard disk and named as 'A7Sv.BIN'.

9.2 Manual Crisis Recovery

Before invoking the bios crisis recovery, there should be one bios image existed in the hard disk and named as "A7Sv.BIN". The combination hotkey "CTRL+HOME" is used to invoke the bios crisis recovery during bootblock and POST. If the hotkey is pressed in bootblock, the bios crisis recovery will be invoked during POST. If the hotkey is pressed during POST, the system will reboot automatically and the bios crisis recovery will be invoked on the next time of POST.

10. ATK Interface & Functions

BIOS should support ATK interface which defined by driver team for the following functions.

10.1 ASUS OSD (On-Screen Display)

While pressing the following combination hotkey, the system will pop up an illustration on the left-top corner of the screen to indicate the function is invoked.

Table 10   ASUS OSD List

Button	Description
Fn+F2	The OSD for wireless console display and wireless device will be displayed.
Fn+F5	The OSD for brightness up will be displayed.
Fn+F6	The OSD for brightness down will be displayed.
Fn+F7	The OSD for LCD back light ON/OFF will be displayed.
Fn+F8	The OSD for display switch will be displayed. The last OSD displayed will decide the final state which display should be switched to.
Fn+F9	The OSD for Touch Pad ON/OFF will be displayed.
Fn+F10	The OSD for volume mute will be displayed.
Fn+F11	The OSD for volume down will be displayed.
Fn+F12	The OSD for volume up will be displayed.
Fn+Space	The OSD for Power4Gear mode will be displayed.
TouchPad On/Off	The OSD for Touch Pad ON/OFF will be displayed.
Splendid	The OSD for Color Enhancement will be displayed
Power4Phone	The OSD for Power4Phone will be displayed.
Power4Gear	The OSD for Power4Gear mode will be displayed.

10.2 ASUS Power4Gear

BIOS should support ASUS Power4Gear by pressing the Power4Gear button.

10.3 ASUS Power4Phone

BIOS should support ASUS Power4Phone by pressing Power4Phone button or Fn+Space..

10.4 ASUS Color Enhancement

BIOS should support Color Enhancement by pressing Splendid button.

10.5 ASUS TouchPad

BIOS should support TouchPad On/Off by pressing TouchPad On/Off button or Fn+F9.

10.6 ASUS Key Define

A7Sv doesn't support this feature.

10.7 ASUS Mail LED

A7Sv doesn't support this feature.

10.8 ASUS TouchPad LED

A7Sv doesn't support this feature.

11. ACPI Tables

RSDP		OEMID	ACPIAM
RSDT		OEMID	_ASUS_
		OEM Table ID	Notebook
		OEM Revision	0x05000710
		Creator ID	"MSFT" (0x5446534d)
		Creator Revision	00000097
	FACP	OEMID	"A M I" (0x2049204d2041)
		OEM Table ID	"OEMFACP" (0x20504341464d454f)
		OEM Revision	0x05000710
		Creator ID	"MSFT" (0x5446534d)
		Creator Revision	00000097
	APIC	OEMID	"A M I" (0x2049204d2041)
		OEM Table ID	"OEMAPIC" (0x20434950414d454f)
		OEM Revision	0x05000710
		Creator ID	"MSFT" (0x5446534d)
		Creator Revision	00000097
	MCFG	OEMID	"A M I" (0x2049204d2041)
		OEM Table ID	"OEMMCFG" (0x204746434d4d454f)
		OEM Revision	0x05000710
		Creator ID	"MSFT" (0x5446534d)
		Creator Revision	00000097
	BOOT	OEMID	"A M I" (0x2049204d2041)
		OEM Table ID	"OEMBOOT" (0x2049204d2041)
		OEM Revision	0x05000710
		Creator ID	"MSFT" (0x5446534d)
		Creator Revision	00000097
	OEMB	OEMID	"A M I" (0x2049204d2041)
		OEM Table ID	"AMI_OEM" (0x204d454f5f494d41)
		OEM Revision	0x05000710
		Creator ID	"MSFT" (0x5446534d)
		Creator Revision	00000097
DSDT		OEMID	"A7Sv00" (0x003030533741)
		OEM Table ID	"A7Sv00000" (0x3030303030533741)

	OEM Revision	0x00000000
	Creator ID	"INTL" (0x4c544e49)
	Creator Revision	20051117

12. Power Management

12.1 Sleep States

BIOS supports S3, S4 and S5 states.

12.2 Wake Up Events

BIOS supports the following wake-up events.

- Wake up by pressing Power Button.(S3, S4, S5)
- Wake up by pressing any key.(S3)
- Wake up form USB keyboard/mouse.(S3)
- Wake up from LAN.(S3, (S4 – AC mode))
- Wake up from modem ring.(S3)
- RTC.(S3, (S4, S5 – AC mode))
- Wake up by Instant Button.(S3, S4, S5)
- Wake up by CIR Power Button.(S3, S4, S5)

12.3 Auto Brightness Control

A7Sv supports Auto Brightness Control. No matter which brightness level is set under AC mode, when AC adapter is removed, the brightness value should be automatically reduced 20% of AC mode brightness.

For example,

If AC mode brightness value is 100, then DC mode brightness should be reduced to 80.

12.4 C-States

The system supports C2, C3 and C4 states.

Note : The C3 and C4 states are supported only under DC mode.

12.5 intel (Geyserville)
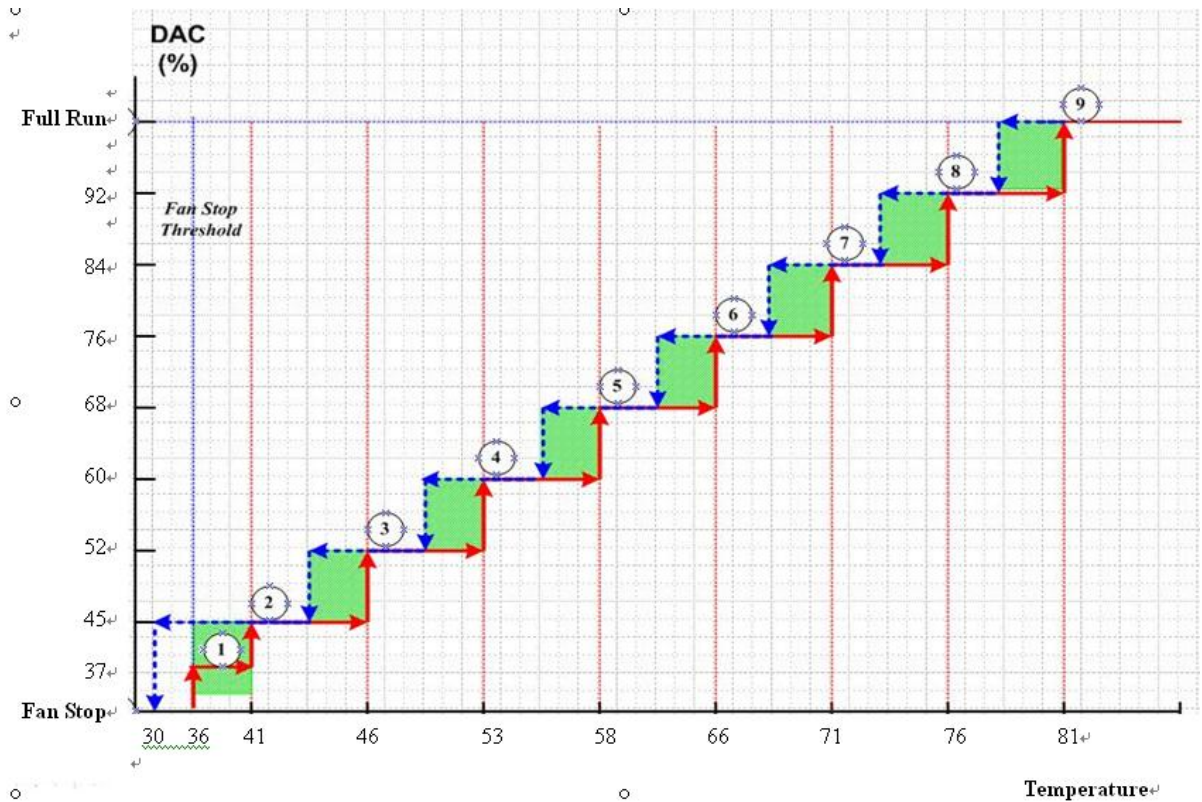
BIOS supports intel Geyserville III.

The CPU performance is dynamically adjusted based on the system loading (demand).

12.6 AMD (PowerNow)

A7Sv doesn't support AMD CPU.

13. Thermal Management

13.1 Thermal Policy

13.2 Thermal Protect Function

For prevent the platform overheated, the bios will make the system into S4 automatically.

While the below status are true, the system will into S4.

(1) The Lid is close.

(2) The temperature is over 100'C.

(3) Both (1) and (2) keep 10 minutes.

14. Hotkeys & Instant Keys

BIOS should support the following Hotkeys and Instant keys functions.

Table 14-1   Hotkeys/Instant Keys Table

Hotkeys/Instant Keys	Function	Non ACPI	ACPI
Fn+F1	Functions as sleep button	No	Yes
Fn+F2	Bluetooth / Wireless switch on / off	No	Yes
Fn+F3	Trigger off email	No	Yes
Fn+F4	Trigger off internet	No	Yes
Fn+F5	Brightness Up	Yes	Yes
Fn+F6	Brightness Down	Yes	Yes
Fn+F7	LCD backlight ON/OFF	Yes	Yes
Fn+F8	Display Switch	Yes	Yes
Fn+F10	Volume on/off toggling	No	Yes
Fn+F11	Adjust Volume	No	Yes
Fn+F12	Adjust Volume	No	Yes
Power4Gear Fn+Space	Switch the modes of Power4Gear	No	Yes
Power4Phone Fn+T	Trigger off the Power4Phone	No	Yes
Splendid Fn+C	Trigger off the Color Enhancement	No	Yes
Touch Pad Fn+F9	Touch Pad ON/OFF	No	Yes
Fn+↑	Stop	No	Yes
Fn+↓	Play/Pause	No	Yes
Fn+←	Previous section Previous Track	No	Yes
Fn+→	Next section Next Track	No	Yes

15. Wireless LAN Control

Wireless On/Off is controlled by Wireless control button.

A7Sv supports Wireless console to control Wireless LAN and Bluetooth.

There are four checked boxes in the Wireless console.

If you select Wireless LAN, it means that only Wireless LAN is controlled by Wireless control button.

If you select Bluetooth, it means that only Bluetooth is controlled by Wireless control button.

If you select both, it means that Wireless LAN and Bluetooth are all controlled by Wireless control button.

When switch the button to left, the Wireless (Wireless LAN or Bluetooth or both) is On.

When switch the button to right, the Wireless (Wireless LAN or Bluetooth or both) is Off.

Under DOS mode, there is no effect on Wireless control when switching the button.

In the bios setup menu, if selecting the following items, the switch button is invalidated.

Security – I/O Interface Security – Wireless Network Interface – [LOCKED]

Security – I/O Interface Security – USB Interface – [LOCKED]

If one of them is [UNLOCKED], the switch button is valid.
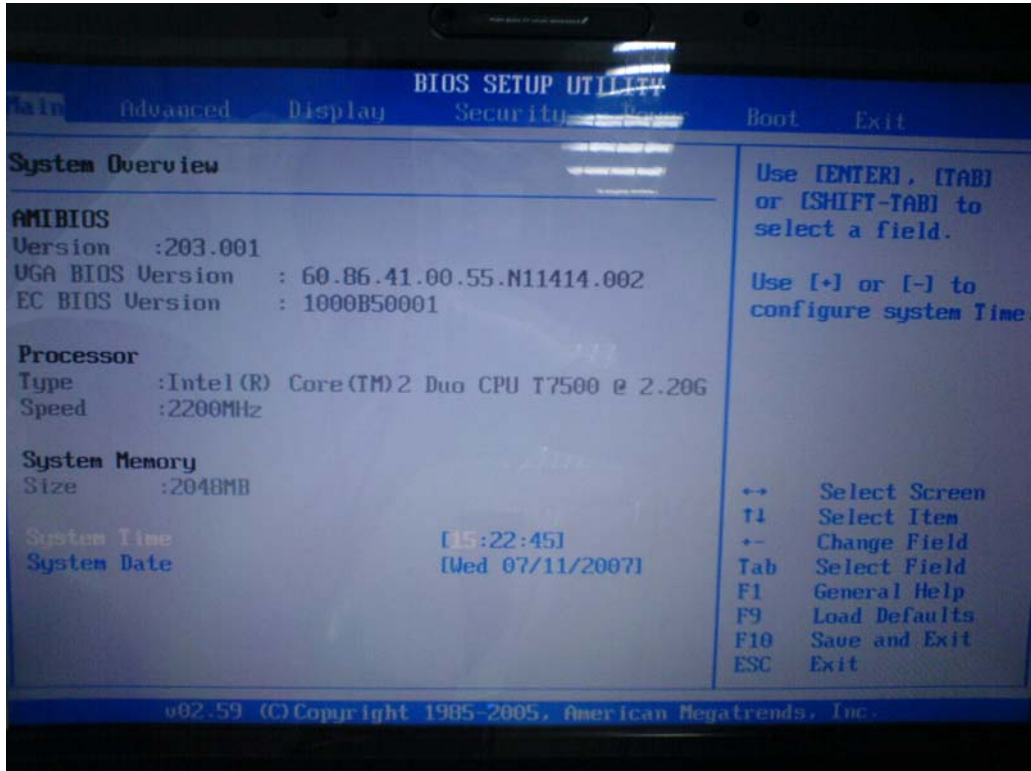
16. BIOS NV Data Auto Save / Restore

Refer to the ***ASUS BIOS NV Data Auto SaveRestore Requirement verification_v1r00.doc.***

17. Instant On (Direct Media)

Refer to the *DirectMediaEngineerSpecv0r01.pdf.*

18.Main menu

Main menu describes system overall information with some user changeable setting, it contains below items:

18.1 System Firmware

[Help string] **:** none

[System BIOS Version] : Display BIOS Version.

[VGA BIOS Version] :

Display VGA BIOS Version. Please check VGABIOSNamingRuleISO_v0r06.doc for more detail.

18.2 Processor

[Help string] **:** none

[Type] **:** Display CPU Type.

BIOS could get the CPU type from command "CPUID 80000002, CPUID 80000003, CPUID 80000004 ".

BIOS should skip all leading "Space" characters (20h) of the CPU type string which got from CPUID 8000002h, 80000003h and 80000004h.

[Speed] **:** Display CPU Current Speed.

18.3 System Memory

[Help string] **:** none

[Size] **:**

    Display the size of system memory which the VGA share memory should be decreased.

18.4 System Time

[Help string] **:**

    Use [ENTER], [TAB]

    Or [SHIFT-TAB] to

    Select a field.

    [Blank Line]

    Use [+] or [-] to

    Configure system Time.

[System Time] **:** [HH:MM:SS]

18.5 System Date

[Help string] **:**

    Use [ENTER], [TAB]

    Or [SHIFT-TAB] to

    Select a field.
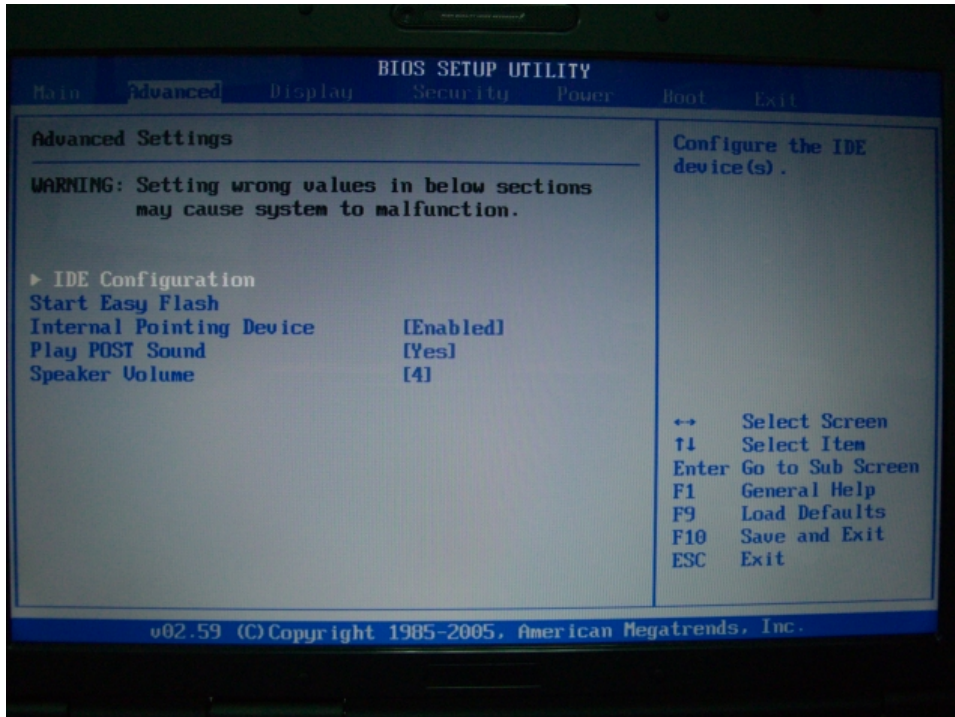

    Use [+] or [-] to

    Configure system Date.

[System Date] **:**

    [WD MM/DD/YYYY], WD means Week Day – Mon, Tue, Wed, Thu, Fri, Sat, Sun.

19. Advanced menu

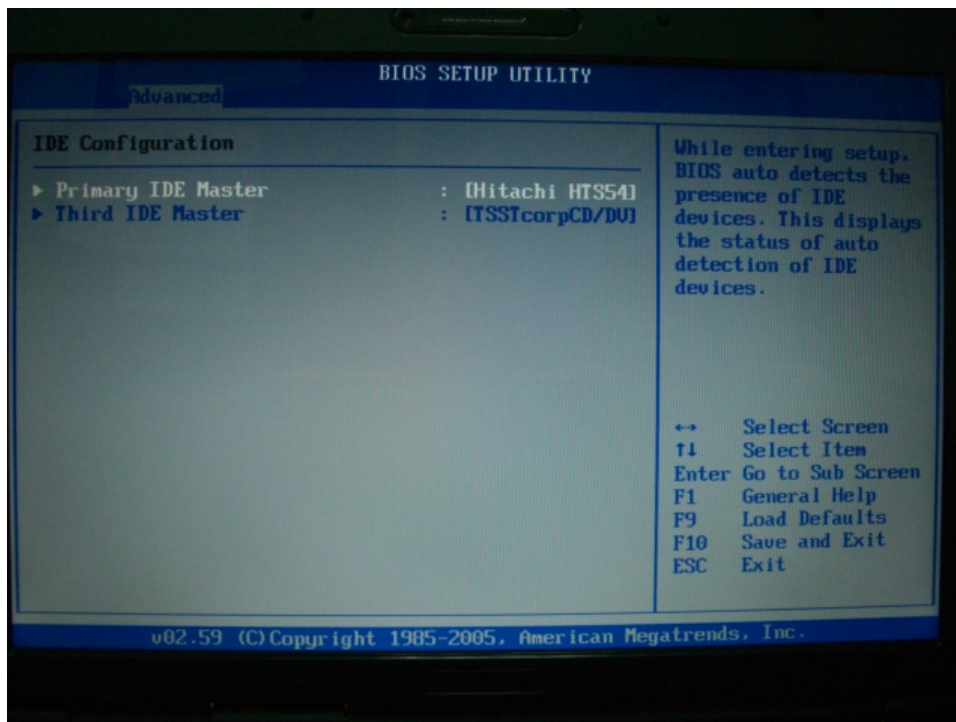## 19.1 IDE Configuration

[Help String] : Configure the IDE device(s).
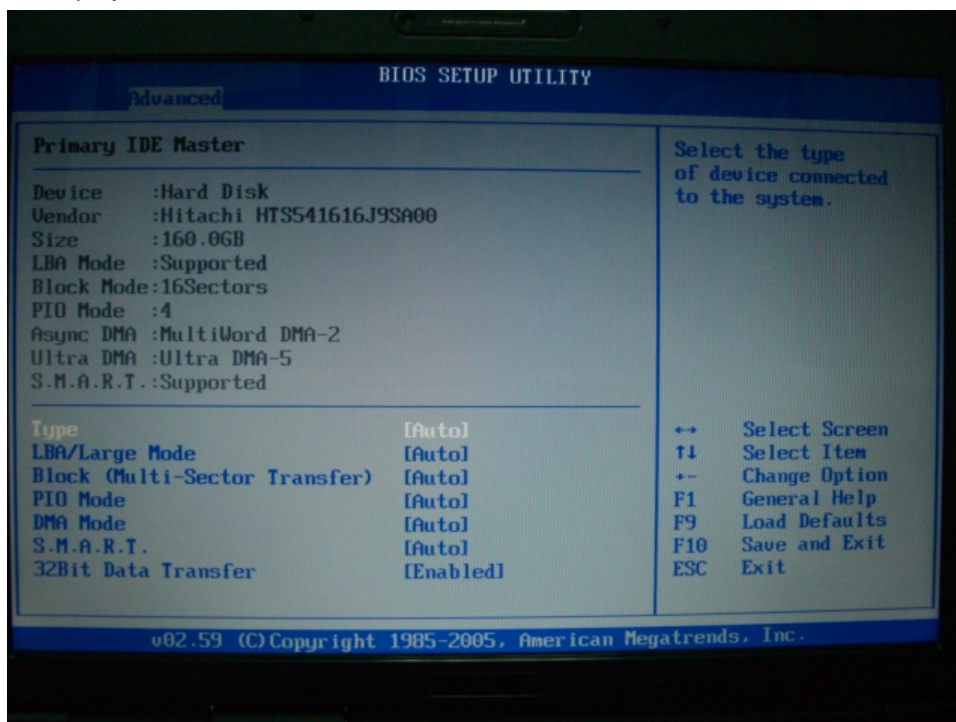

19.1.1 IDE Configuration – Sub Menu

[Help String] : While entering setup, BIOS auto detects the presence of IDE devices. This
displays the status of auto detection of IDE devices.

[Items] : If the device is a hard disk, the item should be 'Hard Disk'.
If the device is a CD/DVD – ROM, the item should be 'ATAPI CDROM'.

19.1.1.1 Primary IDE Master – Sub Menu

Display the information of IDE devices.

19.1.1.1.1 Type

[Help String] : Select the type of device connected to the system.

[Items] :

"Not Installed"

"Auto" : Default

"CD/DVD"

"ARMD"

19.1.1.1.2 LBA/Large Mode

[Help String] :

Disabled : Disables LBA Mode.

Auto : Enables LBA Mode if the device supports it and the device is not already

formatted with LBA Mode disable.

[Items] :

"Disabled"

"Auto" : Default

19.1.1.1.3 Block (Multi-Sector Transfer)

[Help String] :

Disabled : The Data transfer from and to the device occurs one sector at a time.

Auto : The data transfer from and to the device occurs multiple sectors at a time if

the device supports it.

[Items] :

"Disabled"

"Auto" : Default

19.1.1.1.3 PIO Mode

[Help String] :

Select PIO Mode.

[Items] :

"Auto" : Default

"0"

"1"

"2"

"3"

"4"

19.1.1.1.4 DMA Mode

[Help String] :

Select DMA Mode.

Auto : Auto Detected

SWDMAn : SingleWordDMAn

MWDMAn : MultiWordDMAn

UDMAn : UltraDMAn

[Items] :

"Auto" : Default

"SWDMA0"

"SWDMA1"

"SWDMA2"

"MWDMA0"

"MWDMA1"

"MWDMA2"

"UDMA0"

"UDMA1"

"UDMA2"

"UDMA3"

"UDMA4"

"UDMA5"

19.1.1.1.5 S.M.A.R.T.

[Help String] :

S.M.A.R.T. stands for Self-Monitoring, Analysis and Reporting Technology.

[Items] :

"Auto" : Default

"Disabled"

"Enabled"

19.1.1.1.6 32Bit Data Transfer

[Help String] :

Enable/Disable 32-bit Data Transfer.

[Items] :

"Enabled" : Default

"Disabled"

19.1.1.2 Primary IDE Slave – Sub Menu

Display the information of IDE devices.
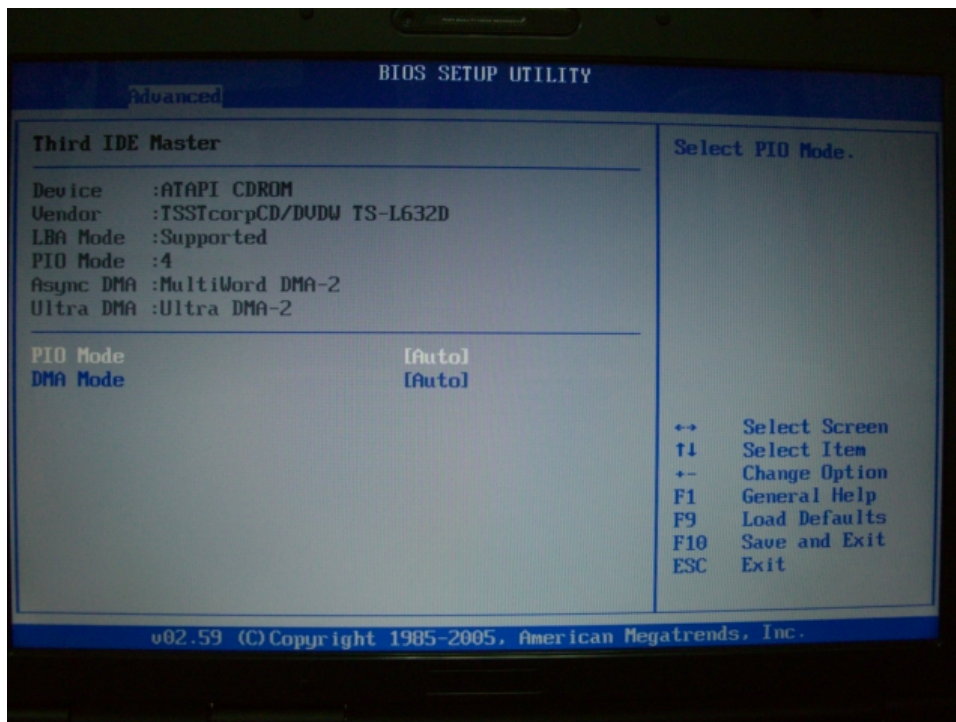
19.1.1.2.1 PIO Mode

[Help String] :

Select PIO Mode.

[Items] :

"Auto" : Default

"0"

"1"

"2"

"3"

"4"

19.1.1.2.2 DMA Mode

[Help String] :

Select DMA Mode.

Auto : Auto Detected

SWDMAn : SingleWordDMAn

MWDMAn : MultiWordDMAn

UDMAn : UltraDMAn

[Items] :

"Auto" : Default

"SWDMA0"

"SWDMA1"

"SWDMA2"

"MWDMA0"

"MWDMA1"

"MWDMA2"

"UDMA0"

"UDMA1"

"UDMA2"

"UDMA3"

"UDMA4"

"UDMA5"

19.2 Start Easy Flash

[Help String] :

Press ENTER to run the utility to select and update BIOS. Press F4 at POST to invoke the utility.
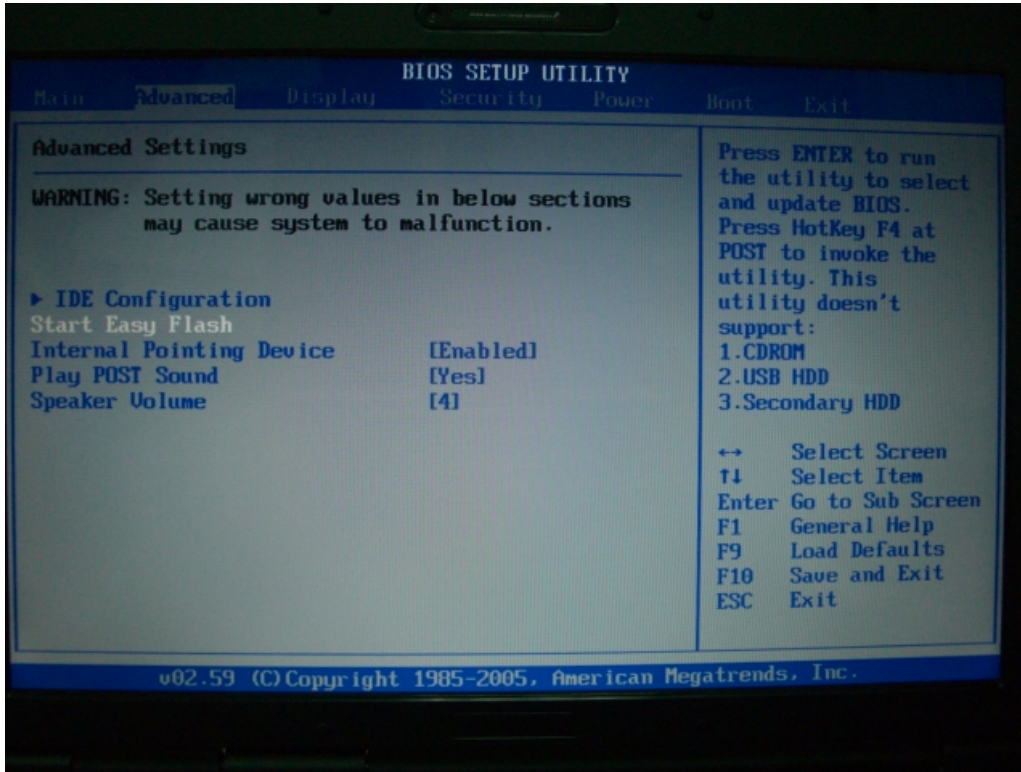
19.2.1 Start Easy Flash Utility

19.2.2 AsusTek BIOS ROM Easy Flash Utility V1.12

The utility is invoked.

19.2.3 AsusTek BIOS ROM Easy Flash Utility V1.12

Select the bios image file.
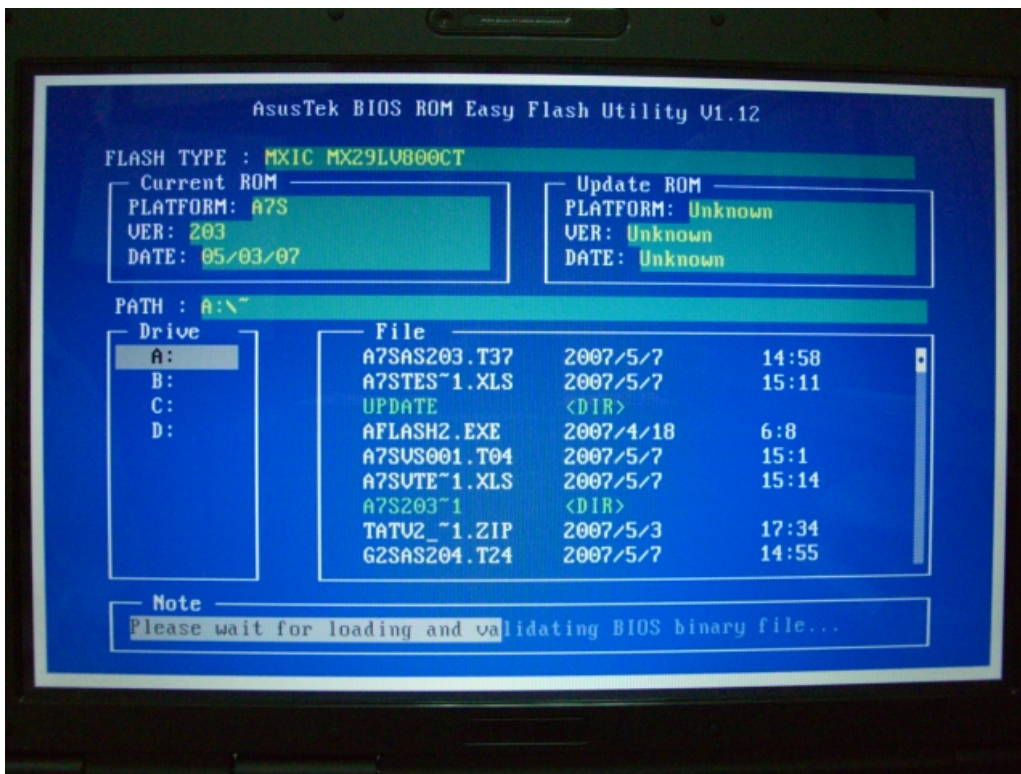
19.2.4 AsusTek BIOS ROM Easy Flash Utility V1.12

Confirm to update BIOS…
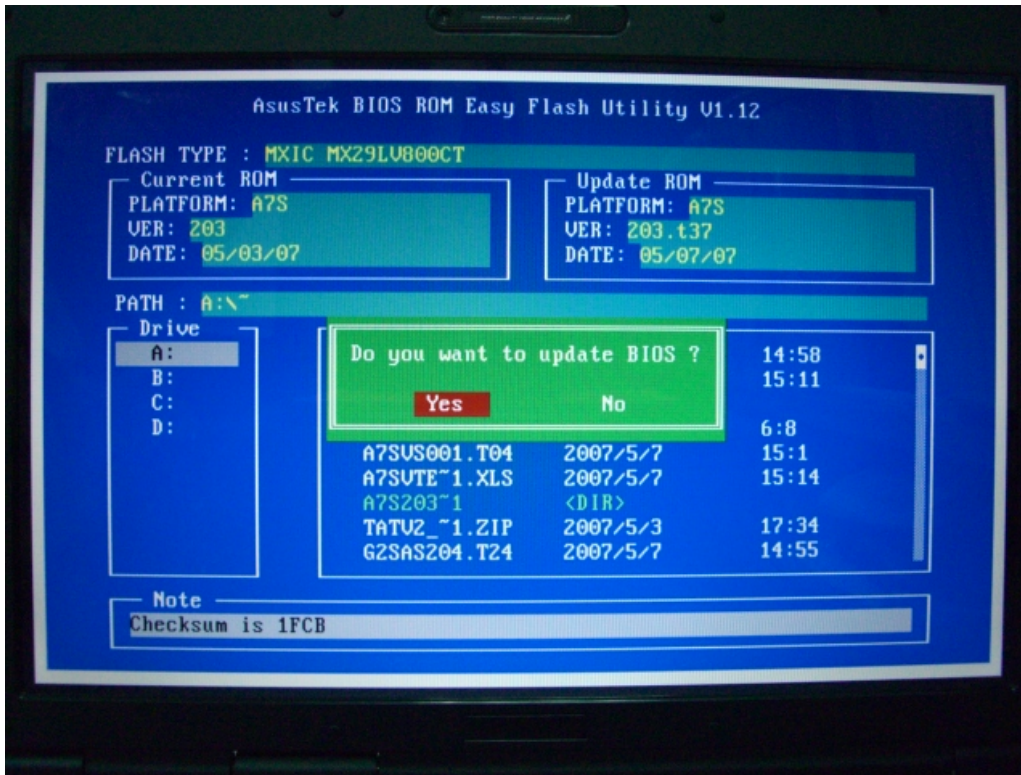
19.2.5 AsusTek BIOS ROM Easy Flash Utility V1.12

BIOS updated is in progress. The platform is A7S, the BIOS version is 203.t37 and the bios build date is 05/07/07.

19.2.6 AsusTek BIOS ROM Easy Flash Utility V1.04

The system will shut down automatically after BIOS is flashed successfully.

19.3 Internal Pointing Device

[Help String] : Enable/Disable internal touch pad.

[Items] :   "Enabled" : Default

"Disabled"
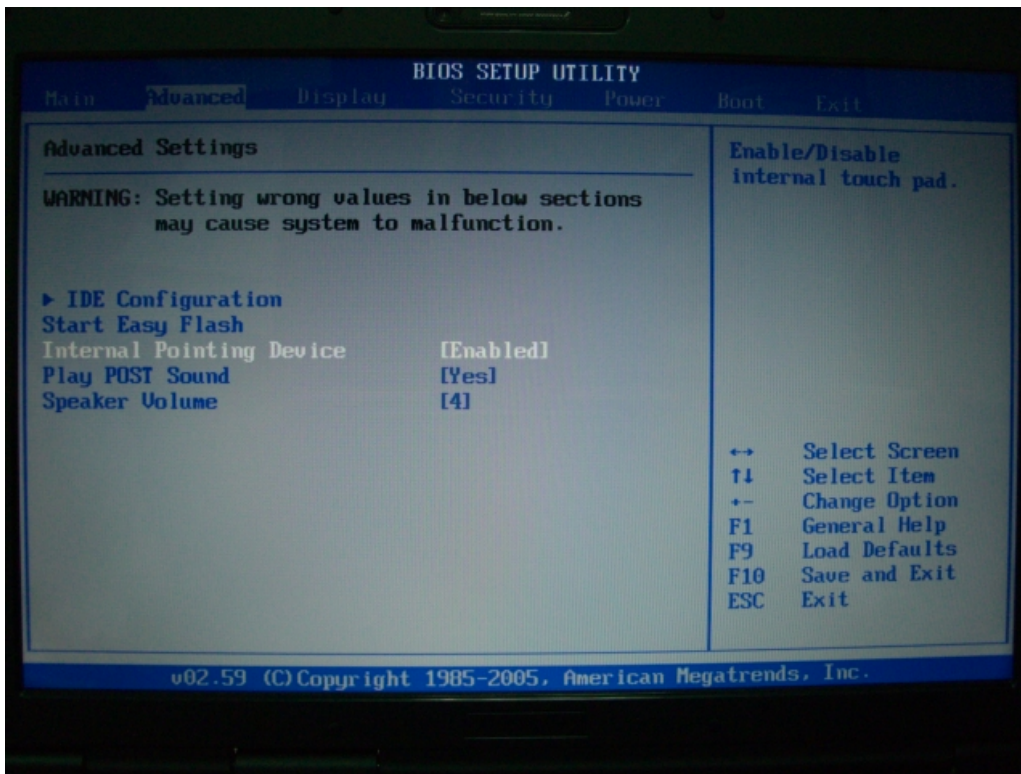
19.4 Play POST Sound

[Help String] : Select 'Yes' if you need to play POST sound on boot.

[Items] :   "Yes" : Default

"No"
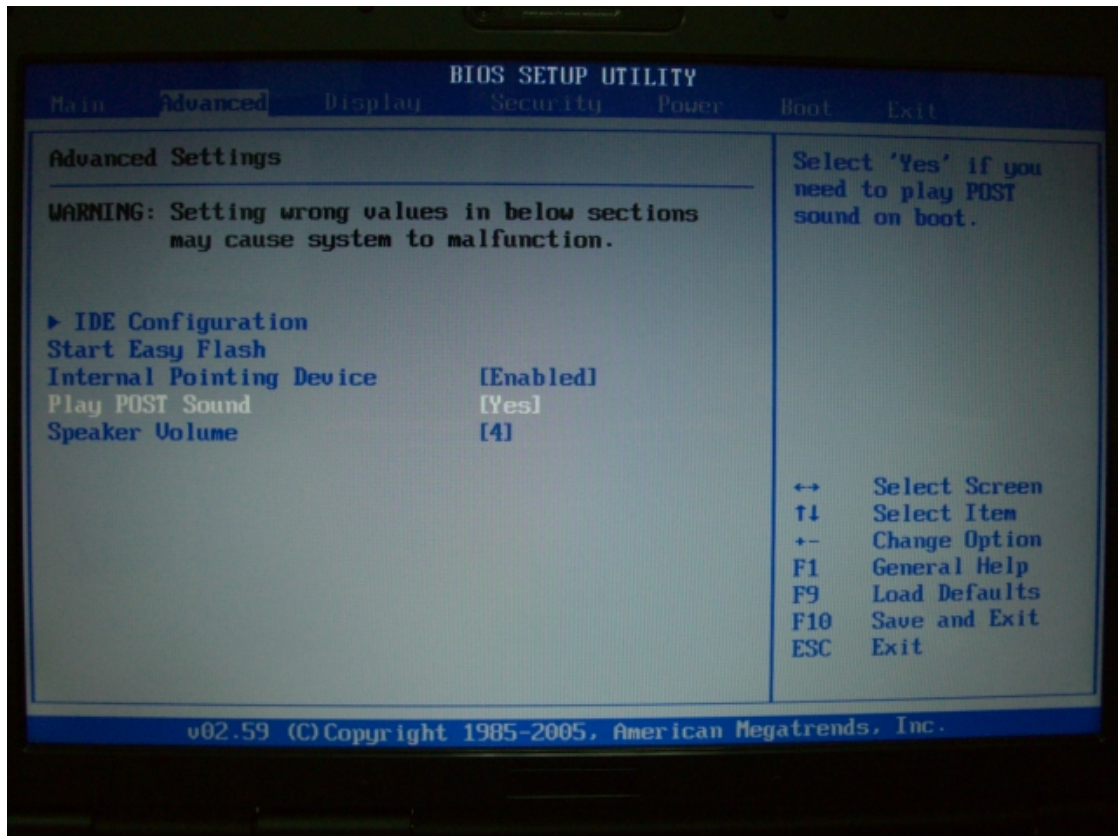
19.5 Speaker Volume

[Help String] :

Set speaker volume

[Items] :

"0"

"1"

"2"

"3"

"4" : Default

"5"

"6"

"7"

"8"
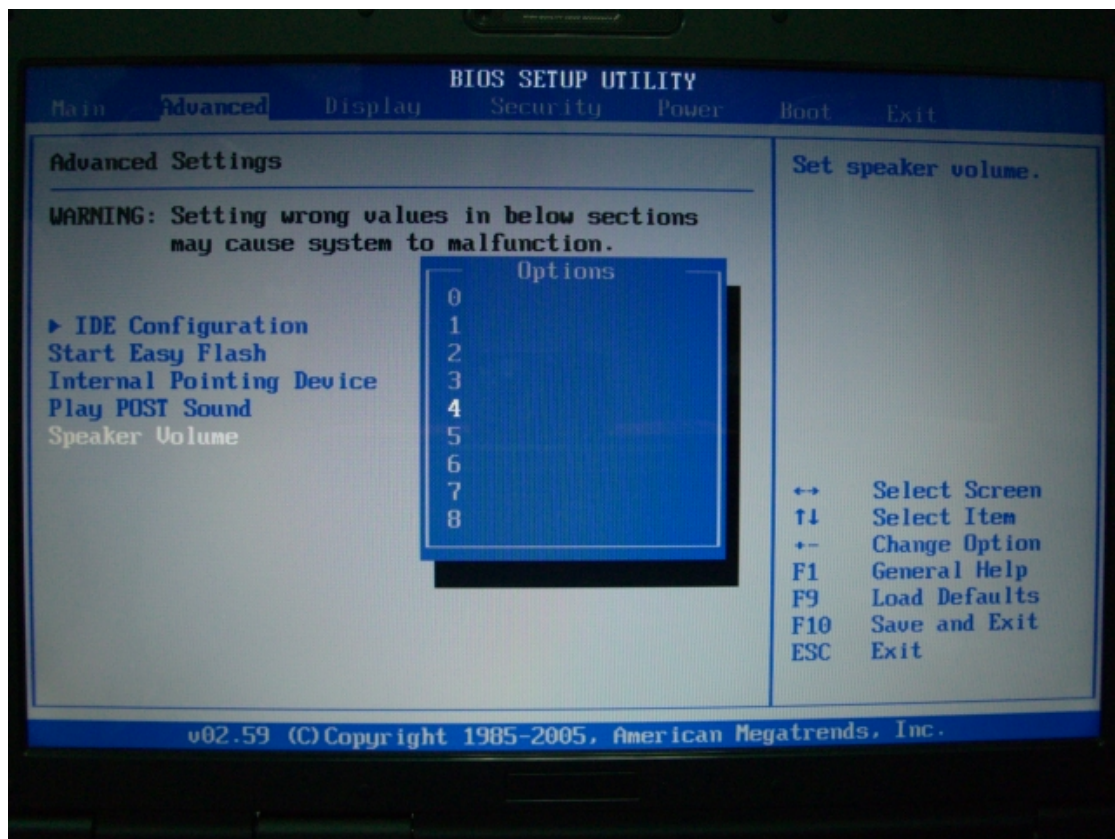
20. Display menu

20.1 TV Display Type

[Items] :

"NTSC" : Default

The Standard is for Japan, Taiwan, US …etc.

"PAL" :   The Standard is for China, Europe …etc.

Note : Make sure the TV setting is correct, or the TV output will be abnormally.

21. Security menu

21.1 Security Settings

[Description] : Display the status of Supervisor/User Passwords.

Supervisor Password   **:[Installed/Not Installed]**

User Password   **:[Installed/Not Installed]**

21.1.1 Change Supervisor Password

[Description] :

1. The supervisor password is limited to N characters and case sensitivity. Also, it does not support special characters like "!", "%", "^", "~"…

2. If the supervisor password is set or installed, the status should be changed to "Installed".

3. After the supervisor password is installed, the item "User Access Level" will be prompted for further setting. Please check the section 4.2 for more detail.

4. If the supervisor password is cleared or uninstalled, the status should be changed to "Not Installed". Also, the user password should be cleared automatically. And the item "User Access Level" should be hidden again.

5. After the supervisor password is installed, the password validation process will be invoked during system booting or entering into BIOS setup menu. If the user inputs wrong password over three times, the system bios must prompt a warning message that including the system date. And, if the warning message is pop-up when entering into setup menu, there should be an option to continue POST like below. ("F2")

    [Example]

        System Date: 07-20-2005

        Password check failed

        Press F2 to resume

    If the warning message is prompted during system booting, there is no option could be chose to continue POST.

[Help String] : Install or Change the password.
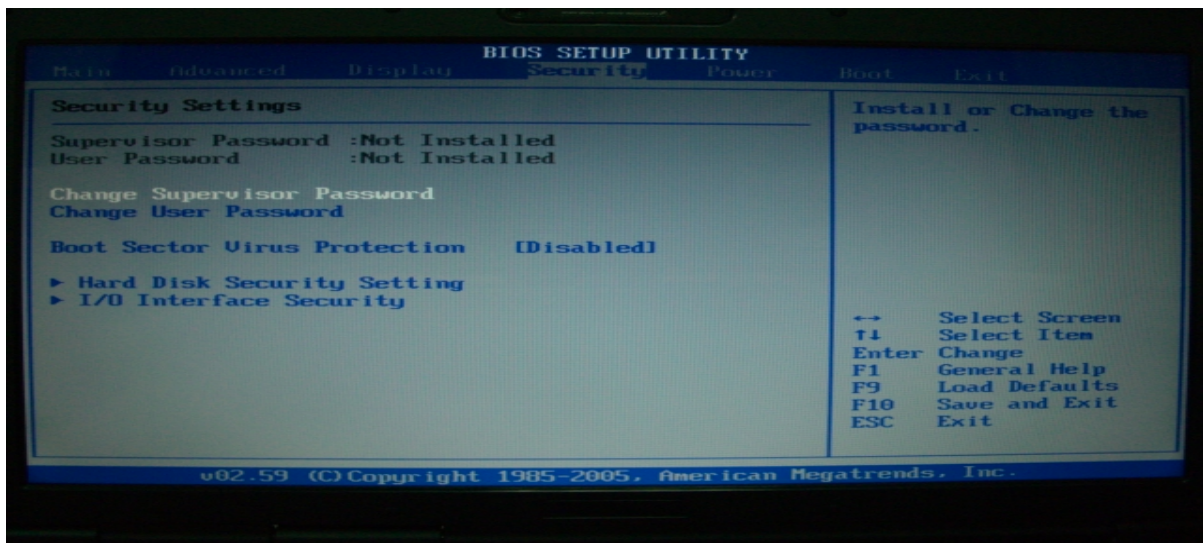
21.1.2 User Access Level

[Description] :

This item only could be activated when the supervisor password is installed. If the

supervisor is uninstalled, the item should be hidden again.

[Help String] :

LIMITED: allows only limited files to be changed such as Date and Time.

NO ACCESS: prevents User access to the Setup Utility.

VIEW ONLY: allows access to the Setup Utility but the fields can not be changed.

FULL ACCESS: allows User access to the Setup Utility and change the setting except

Easy flash, change supervisor password, change HDD password.

[Items] :

"No Access"

"View Only"

"Limited"

"Full Access" : Default
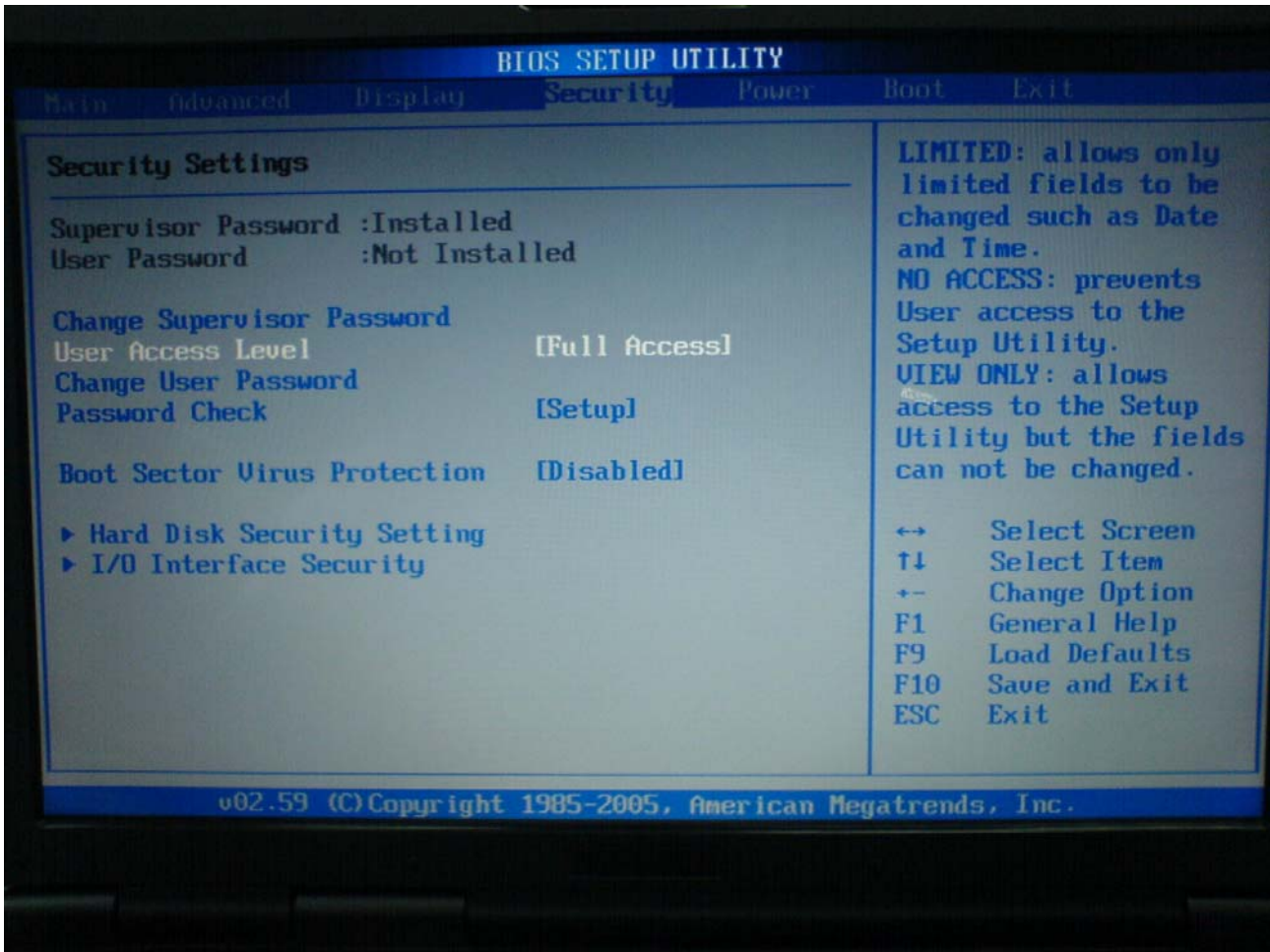
21.1.3 Change User Password

[Description] :

1. The user password is limited to N characters and case sensitivity. Also, it does not support special characters like "!", "%", "^", "~"…

2. If the user password is set or installed, the status should be changed to "Installed".

3. If the user password is cleared or uninstalled, the status should be changed to "Not Installed".

4. After the user password is installed, the password validation process will be invoked during system booting or entering into BIOS setup menu. If the user inputs wrong password over three times, the system bios must prompt a warning message that including the system date. And, if the warning message is pop-up when entering into setup menu, there should be an option to continue POST like below. ("F2")

    [Example]

       System Date: 07-20-2005

       Password check failed

       Press F2 to resume

    If the warning message is prompted during system booting, there is no option could be chose to continue POST.

[Help String] : Install or Change the password.
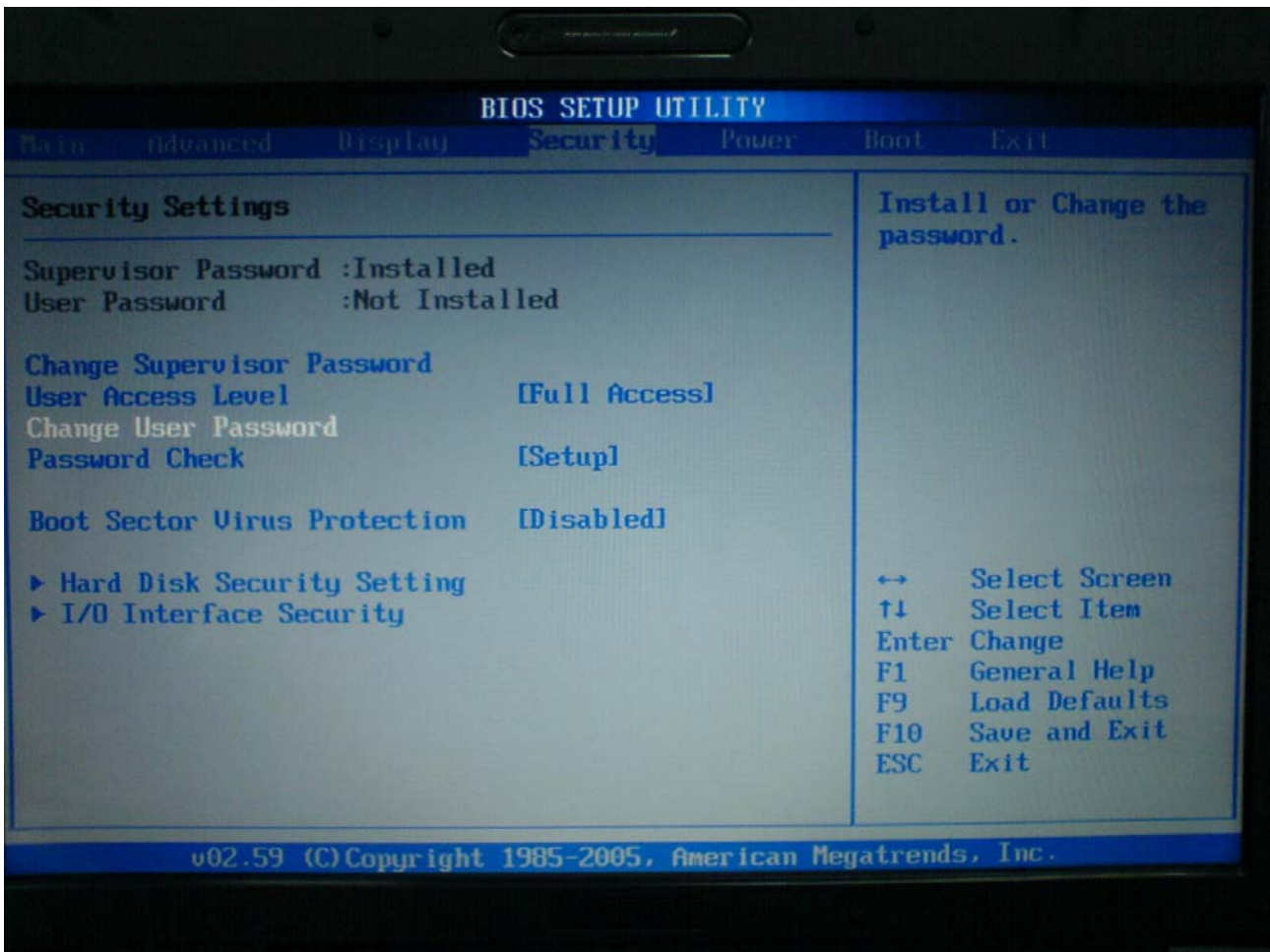
21.1.4 Password Check

[Help String] : Setup: Check Password while invoking setup.

Always: Check password while invoking setup as well as on each boot.

[Items] : "Setup" : Default

"Always"
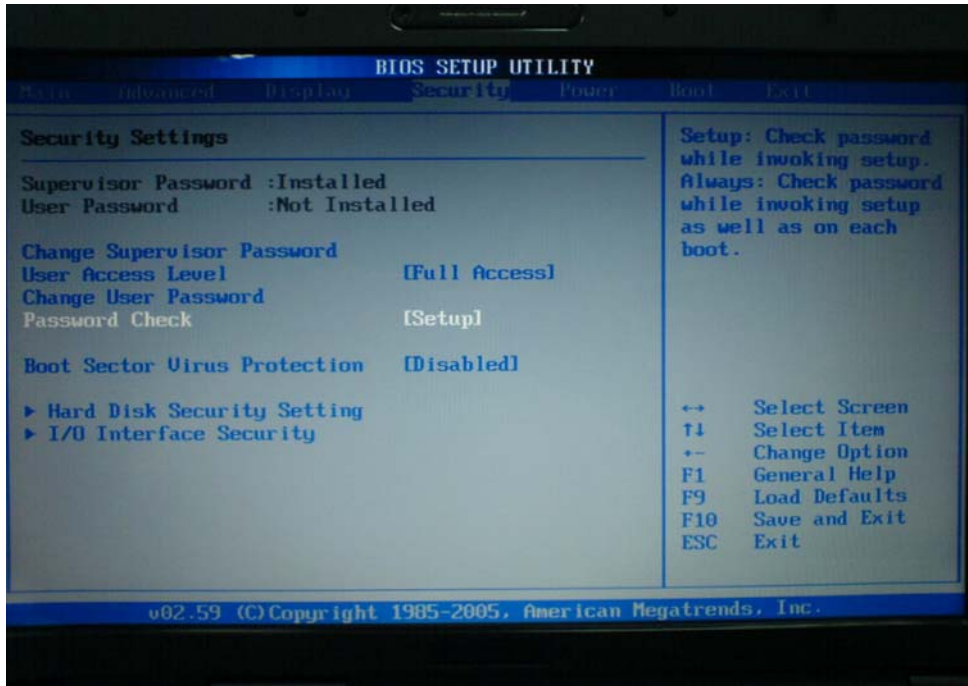
21.1.5 Boot Sector Virus Protection

[Help String] : Enable/Disable Boot Sector Virus Protection.

[Items] : "Disabled" : Default

"Enabled"
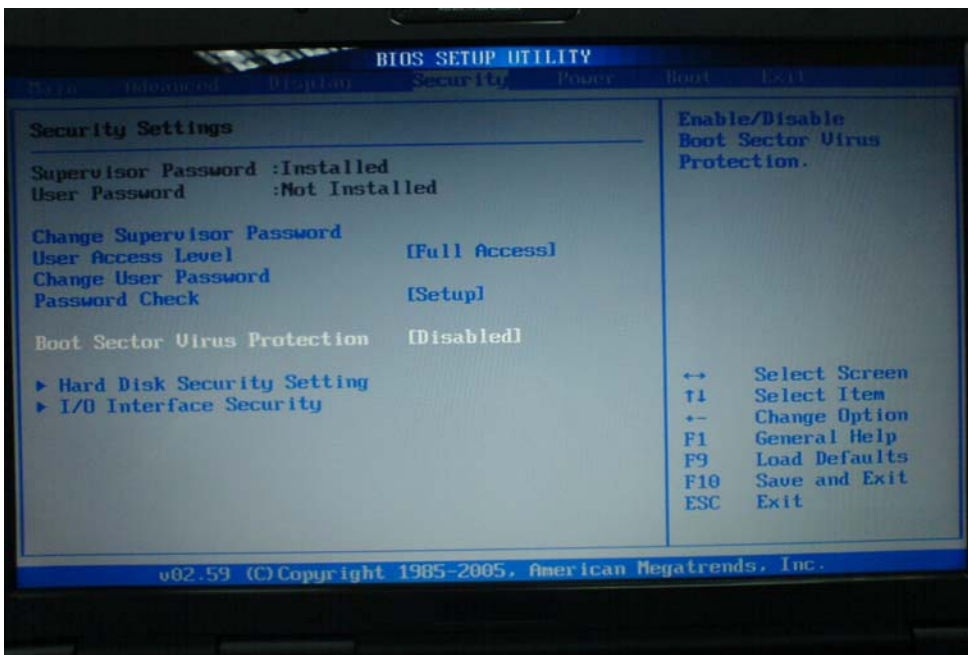
21.1.6 Hard Disk Security Setting

[Help String] :

Configure HD Security.

[Description] :

1. The Hard Disk Password is limited to N characters and case sensitivity. Also, it does not support special characters like "!", "%", "^", "~"…

2. If the Hard Disk Password is set or installed, the status should be changed to "Installed".

3. If the Hard Disk Password is cleared or uninstalled, the status should be changed to "Not Installed".

4. When the Hard Disk Password is set or installed, if the user inputs the wrong password over three times, the system must prompt an error message like below. The system date should be included in.

   [Example]

   System Date: 07-20-2005

   Failed to unlock Hard Drive!

   Fatal Error… System Halted.
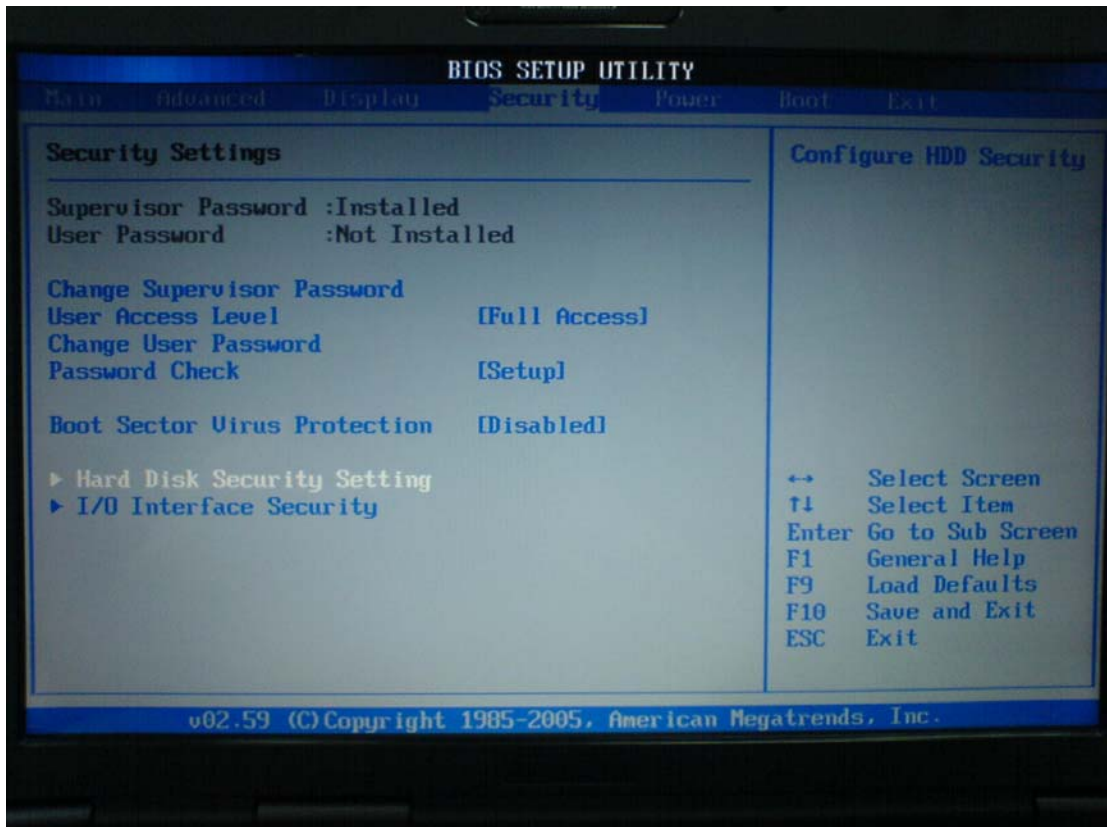
21.1.6.1 Change HDD Master Password

[Help String] :

The password for this Hard Disk can be set or cleared here. Power must be cycled for the Disk to lock.

21.1.6.2 Change HDD User Password

[Help String] :

The password for this Hard Disk can be set or cleared here. Power must be cycled for the Disk to lock.
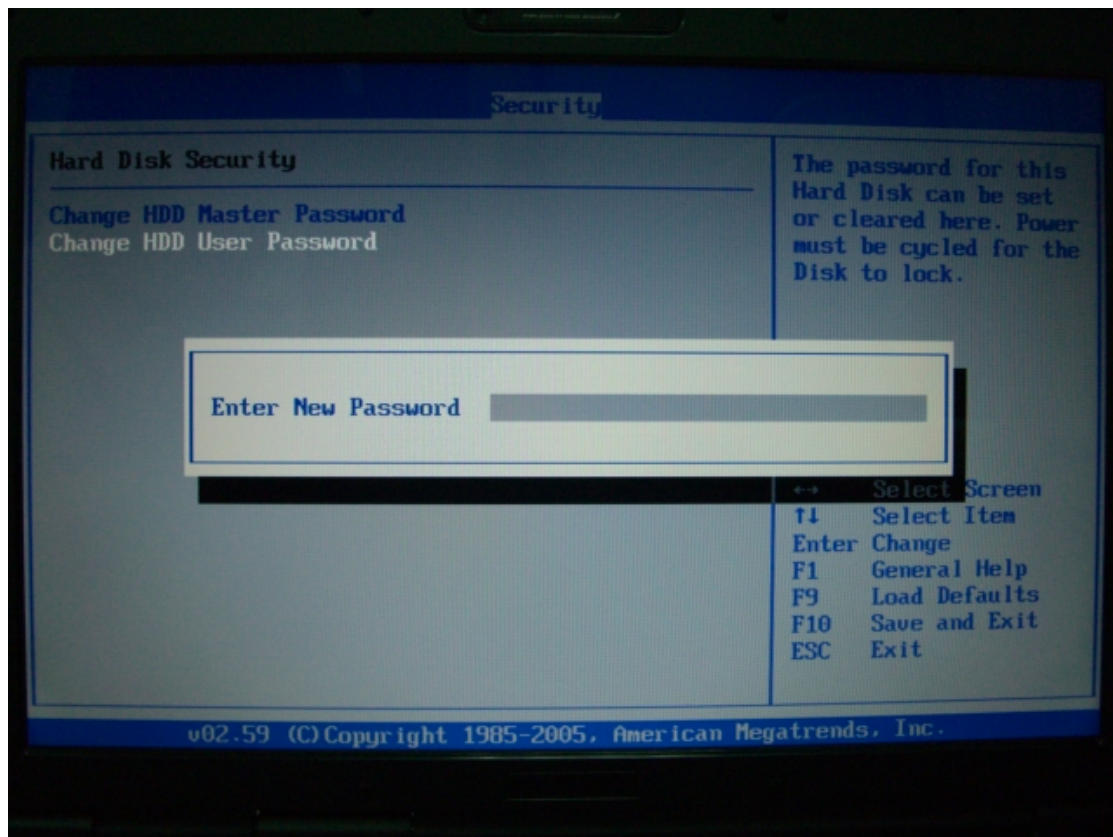
21.1.7 I/O Interface Security

[Description] : Lock/Unlock the interface of some I/O devices.

[Help String] : Disable input/output interfaces to prevent from stealing system data.

```
                        BIOS SETUP UTILITY
 Main    Advanced    Display    Security    Power    Boot    Exit

 Security Settings                                   Disable input/output
                                                     interfaces to prevent
 Supervisor Password :Installed                      from stealing system
 User Password       :Not Installed                  data.

 Change Supervisor Password
 User Access Level            [Full Access]
 Change User Password
 Password Check               [Setup]

 Boot Sector Virus Protection [Disabled]

 ▶ Hard Disk Security Setting                        ←→    Select Screen
 ▶ I/O Interface Security                            ↑↓    Select Item
                                                     Enter Go to Sub Screen
                                                     F1    General Help
                                                     F9    Load Defaults
                                                     F10   Save and Exit
                                                     ESC   Exit

          v02.59 (C)Copyright 1985-2005, American Megatrends, Inc.
```

21.1.7.1 AUDIO/MODEM Interface

[Help String] : If LOCKED, the High Definition Audio controller will be disabled.

[Items] :   **"UNLOCKED" : Default.**

"LOCKED"

21.1.7.2 LAN Network Interface

[Help String] :

If LOCKED, the LAN controller will be disabled.

[Items] :

"UNLOCKED" : Default.

"LOCKED"

21.1.7.3 Wireless Network Interface

[Help String] :

If LOCKED, the wireless LAN will be disabled.

[Items] :

"UNLOCKED" : Default.

"LOCKED"

21.1.7.4 Secondary IDE Interface

[Help String] :

If LOCKED, the 2nd IDE Channel will be disable to avoid the system data being

copied to a hard disk and/or burned into a CDROM diskette.

[Items] :

"UNLOCKED" : Default.

"LOCKED"

21.1.7.5 Cardbus/1394 Interfaces

[Help String] :

If LOCKED, all Cardbus and 1394 controllers will be disabled.

[Items] :

"UNLOCKED" : Default.

"LOCKED"

21.1.7.6 USB Interface

[Help String] :

If LOCKED, all USB controllers will be disabled.

[Items] :

"UNLOCKED" : Default.

"LOCKED"

21.1.7.7 eSATA Interface

[Help String] :

If LOCKED, the eSATA controller will be disable

[Items] :

"UNLOCKED" : Default.

"LOCKED"

22. Power menu

22.1 LCD Power Saving

[Help String] : Enabled to dim LCD brightness when powered by a battery.

[Items] : "Enabled" : Default.

When system is powered by DC, the LCD brightness will be reduced

80% of its original setting in AC mode.

"Disabled" : The brightness of AC and DC mode is same.
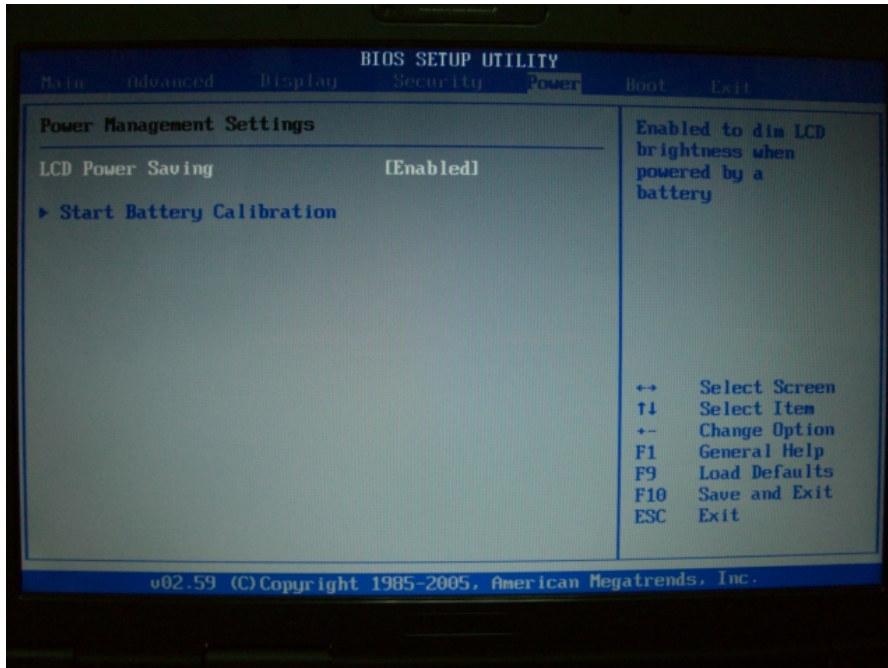
22.2 Start Battery Calibration

[Help String] :

Press Enter to start calibrating a battery. The calibration should charge the battery to full and

then discharge it to empty.
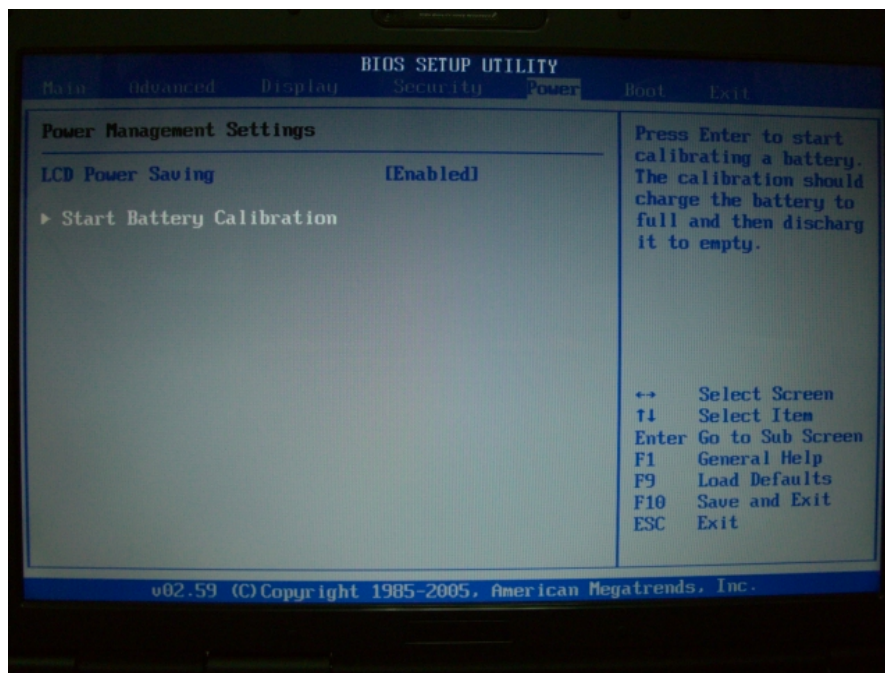
After long time incomplete charge/discharge cycles, the battery meter becomes less and less accurate (the total power capacity is not significantly affected, however). Battery gauge needs to "*learn*", this item helps users to recalibrate the battery gauge. In the learning process, users need to follow system BIOS instruction to Insert/remove the AC adapter so that a complete reset and learning cycle may start.

22.3.1 Start Battery Calibration
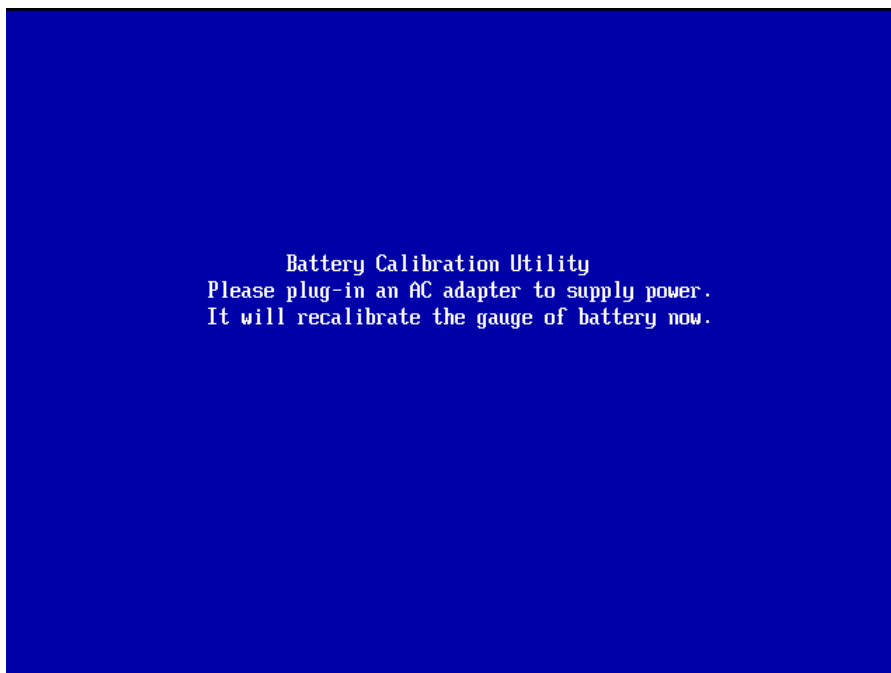
22.3.2 Start Battery Calibration

Start charging the battery.

```
                                    6-53


                        Battery Calibration Utility
              Please plug-in an AC adapter to supply power.
              It will recalibrate the gauge of battery now.
              Initialize battery and adjust LCD brightness.
              It is charging the battery, please wait
              ..
```
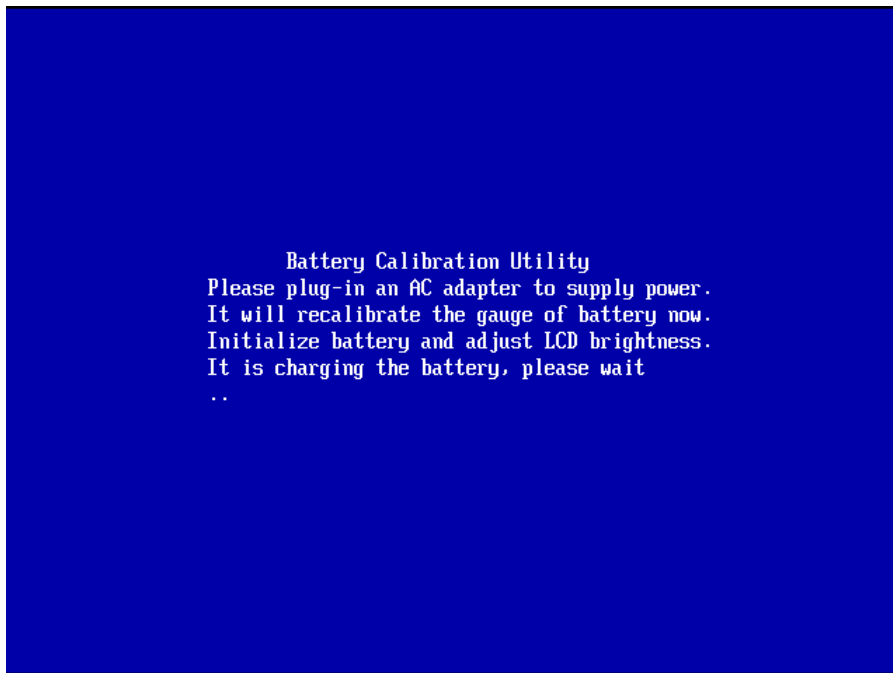
22.3.3 Start Battery Calibration

Remove AC adapter.

```
                        Battery Calibration Utility
              Please plug-in an AC adapter to supply power.
              It will recalibrate the gauge of battery now.
              Initialize battery and adjust LCD brightness.
              It is charging the battery, please wait
              Please remove AC adapter.
```
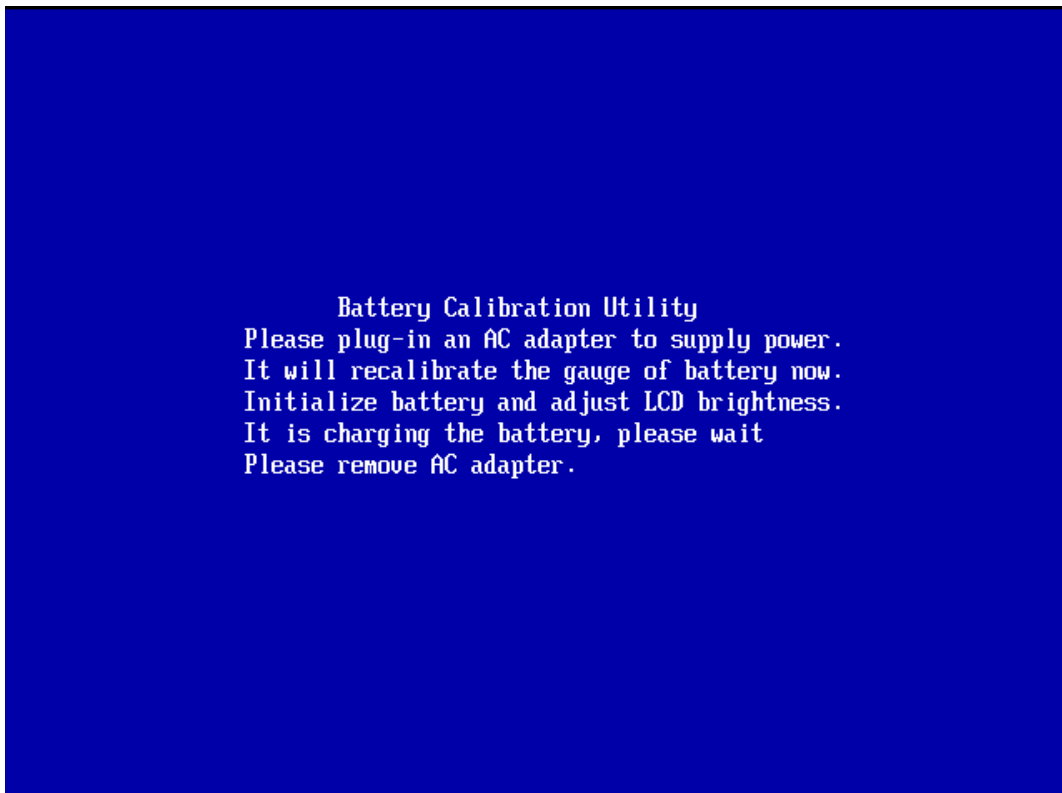
22.3.4 Start Battery Calibration

Battery Discharging…
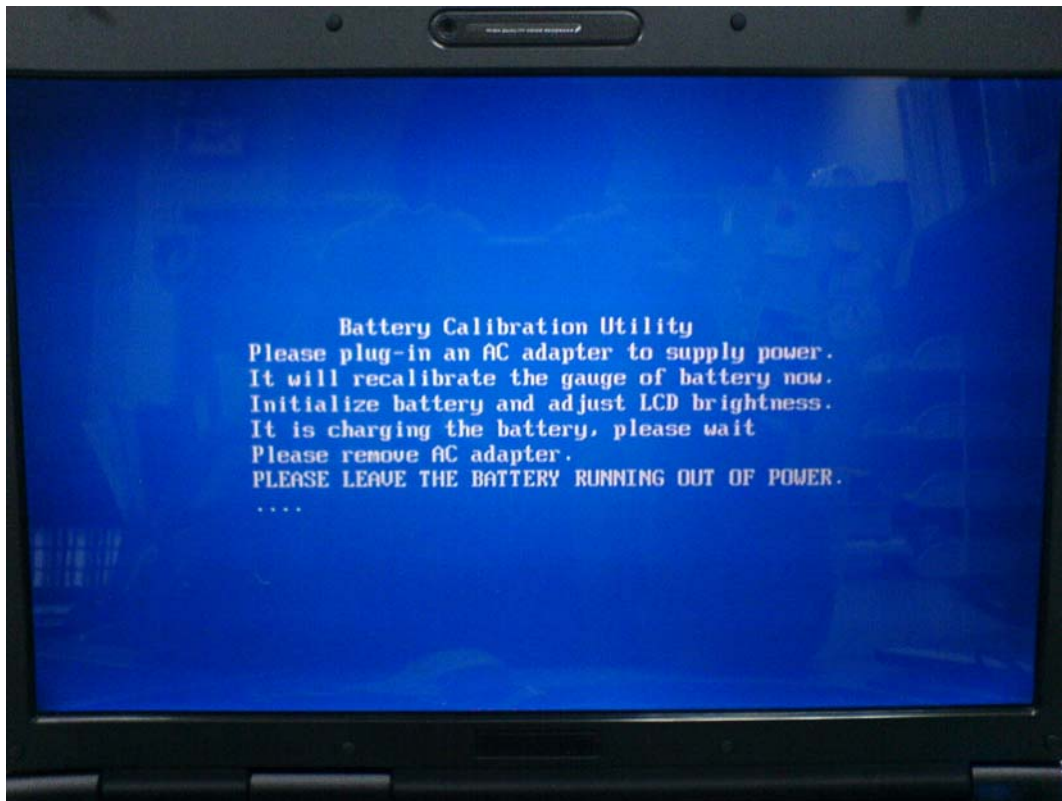
23. Boot menu

23.1 Boot Setting Configuration

[Help String] : Configure Settings during system Boot.
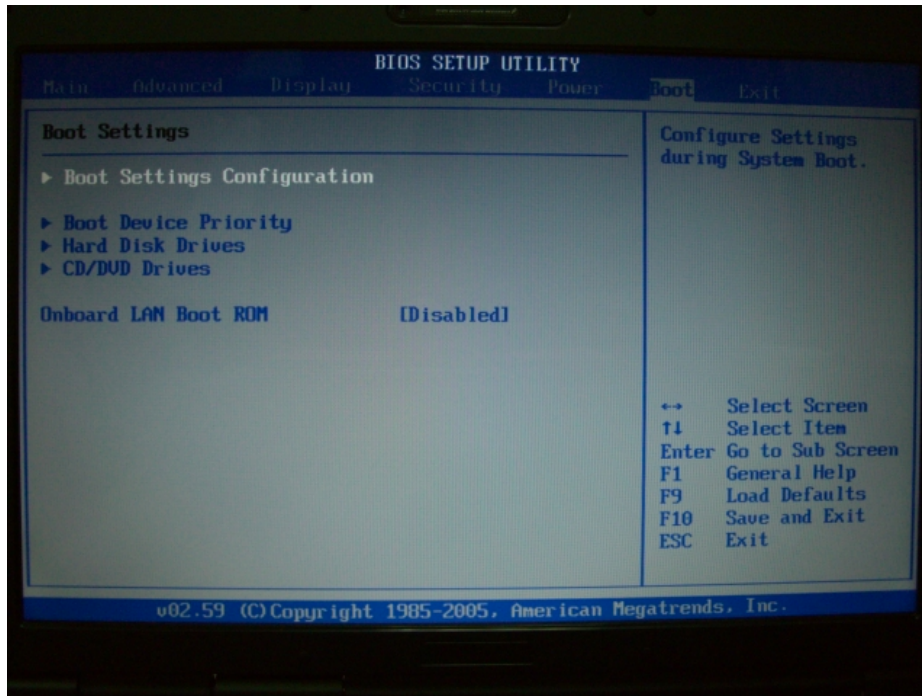
23.1.1 Quiet Boot – Sub Menu

[Help String] : Disabled: Displays normal POST message.

Enabled: Displays OEM Logo instead of POST message.

[Items] : "Disabled" : Displays POST message.

"Enabled": Default

Displays OEM logo instead of POST message.
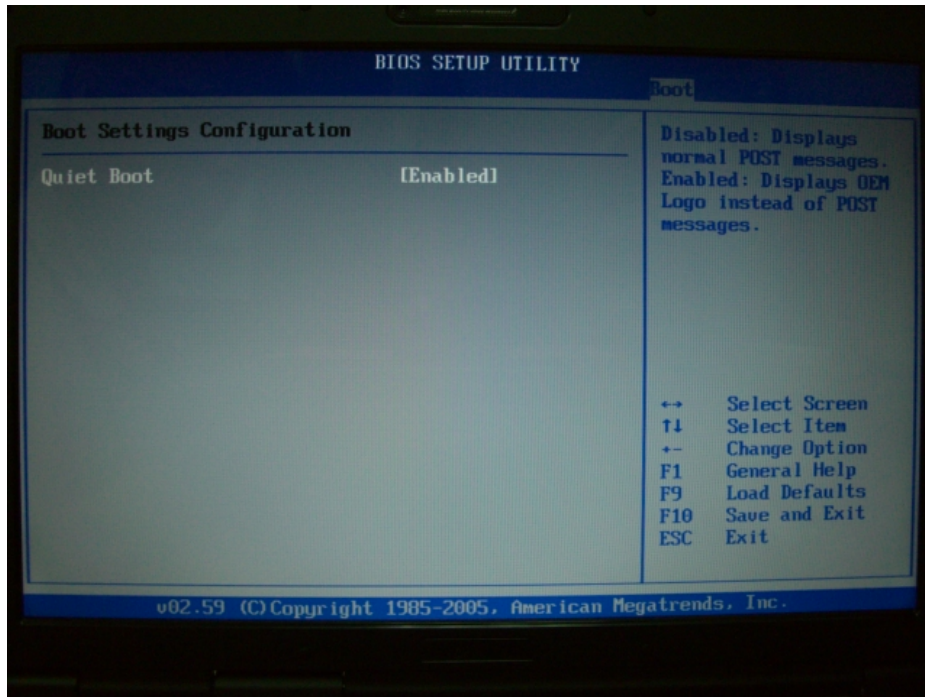
23.2 Boot Device Priority

[Help String] : Specifies the Boot Device Priority sequence.
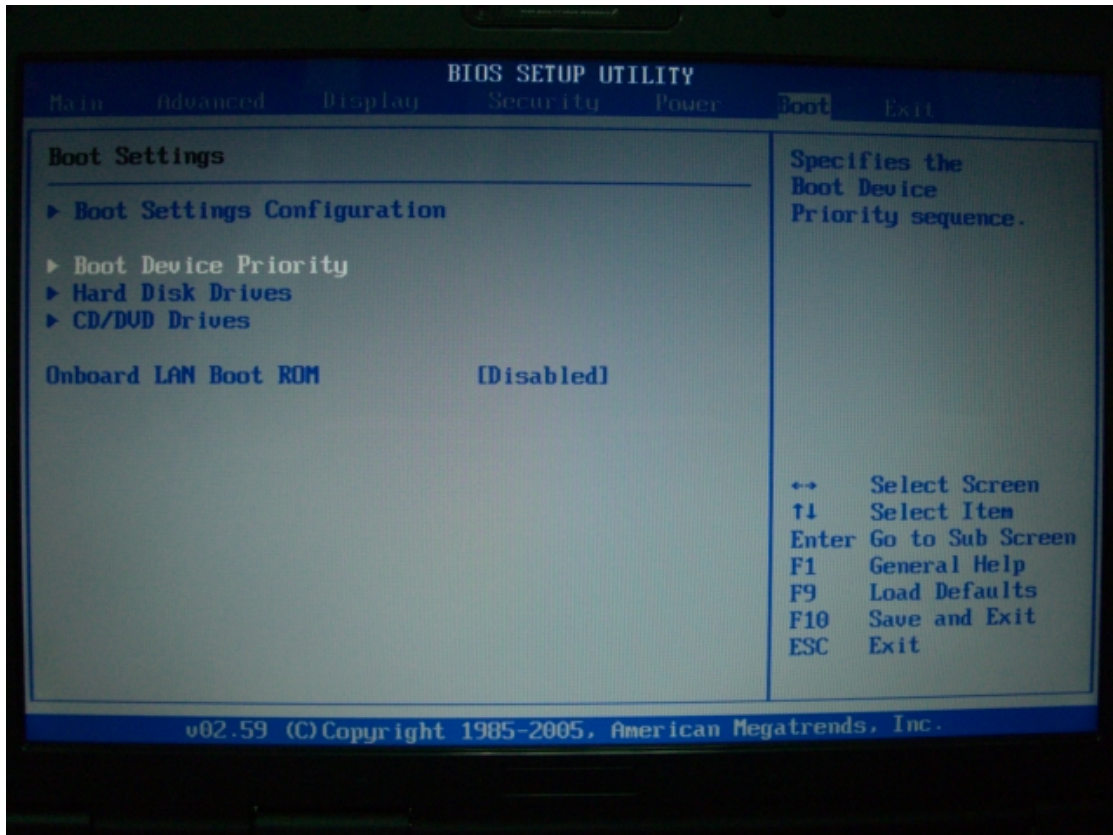
23.2.1 Boot Device Priority

[Description] :

There are four selections for boot devices.

"1st Boot Device"

"2nd Boot Device"

"3rd Boot Device"

"4th Boot Device"

[Help String] :

Specifies the boot sequence from the available devices.

[blank line]

A device enclosed in parenthesis has been disabled in the corresponding type menu.

[Items] :

There are five selections for each boot device. The selection is exclusive to each other.

Simply said, the selection could not appear in two boot devices at the same time.

"Removable Device" : Like USB mass-storage devices.

"Hard Drive"

"CD/DVD"

"Removable Device"

"Network" : On board LAN.

"Disabled" : Disable the boot device.
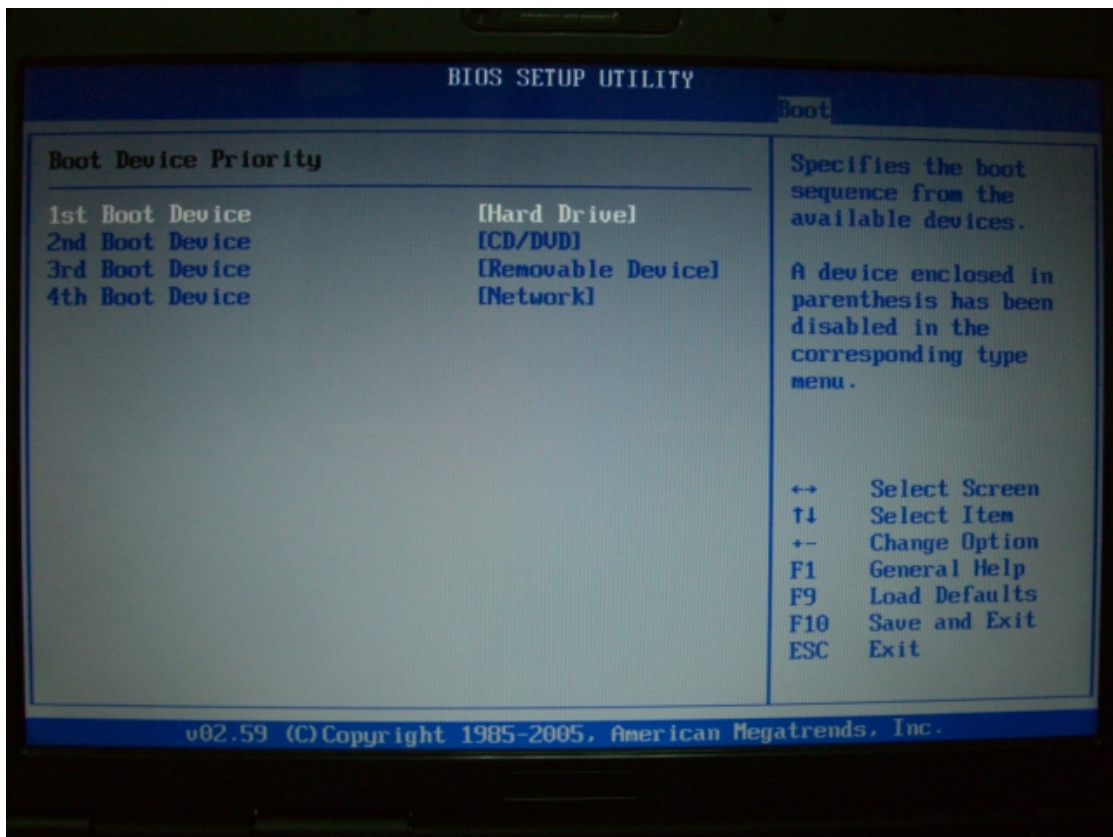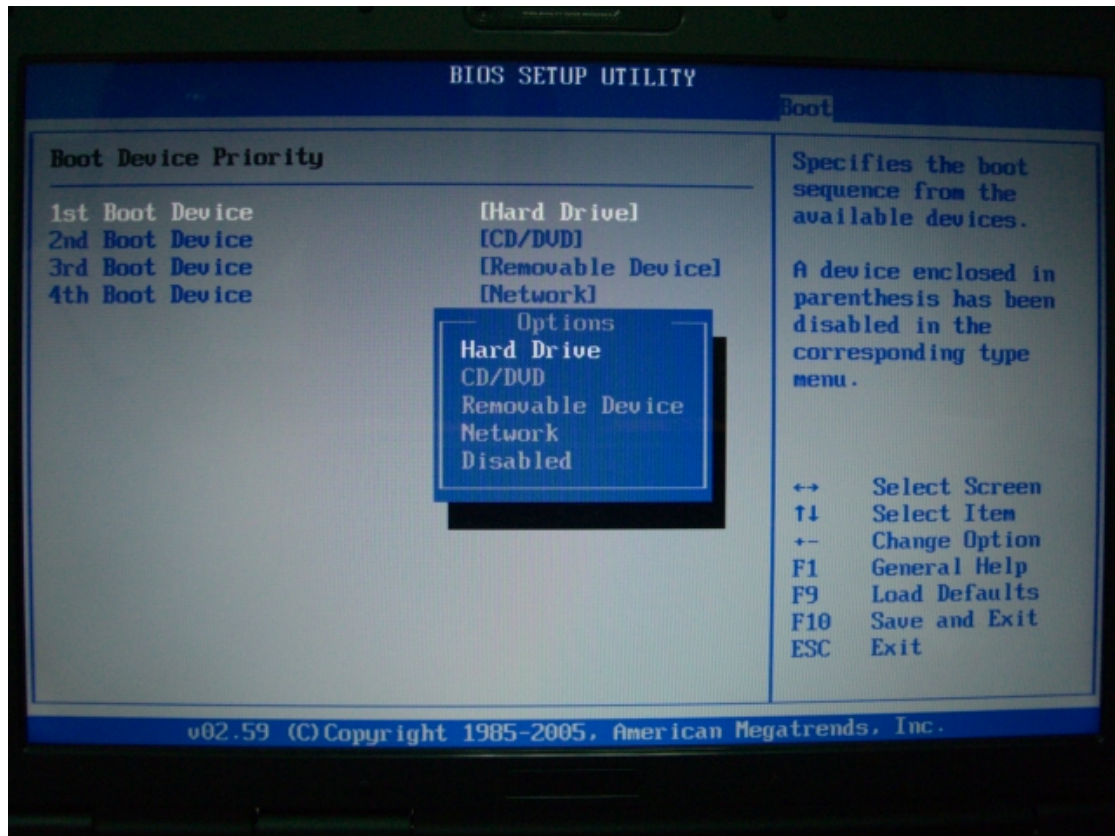
23.3 Hard Disk Drives

[Help String] : Specifies the Boot Device Priority sequence from available Hard Drives.
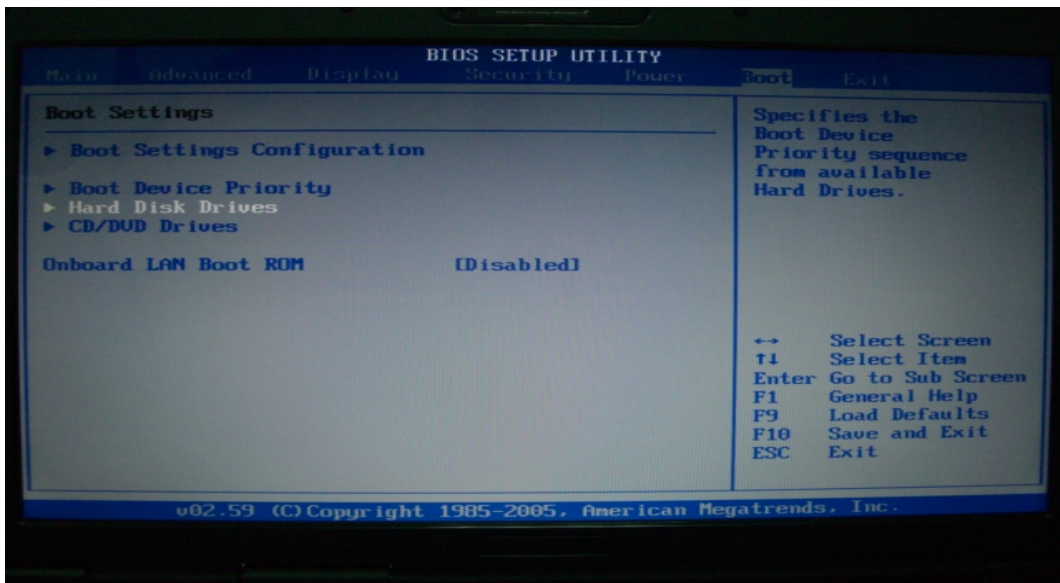
6.3.1 Hard Disk Drives

[Description] :

If there are more than one Hard Drives in the system. It will display the list as following.

"1st Drive"

"2nd Drive"

"3rd Drive"

…

Each drive will display the model name behind of it.

[Help String] : Specifies the boot sequence from the available device.

[Items] :

It will list all of Hard Drives' model name for selection.

23.4 CD/DVD Drives

[Description] :

If there are 1 or more CD/DVD Drives, the user could select one drive that will be used as

boot device. It is the "CD/DVD" described in the section 6.2.1

[Help String] : Specifies the Boot Device Priority sequence from available CD/DVD Drives.
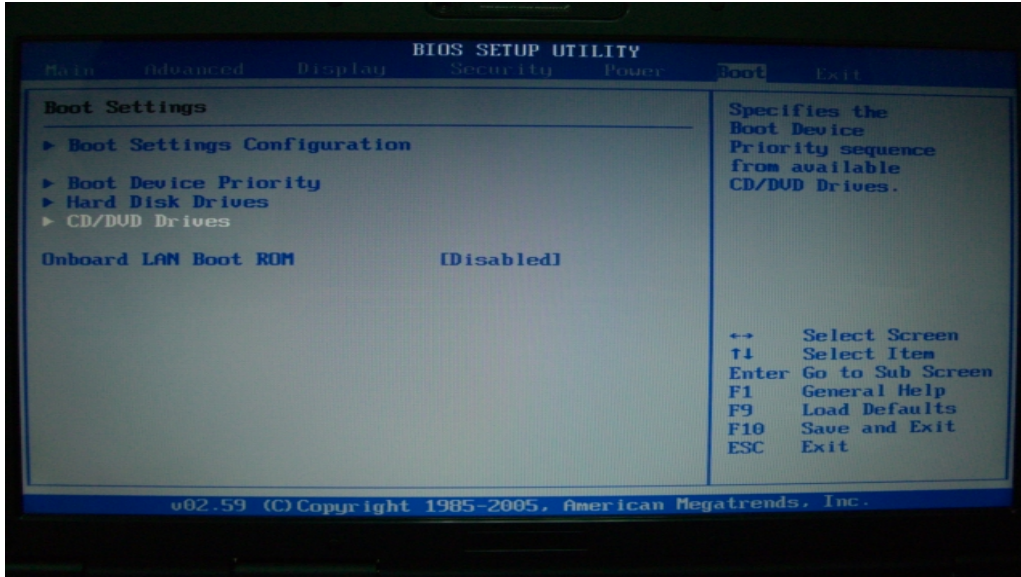
23.4.1 CD/DVD Drives

[Description] : If there are more than one CD/DVD Drives in the system. It will display the list as

following.

"1st Drive"

"2nd Drive" ……

Each drive will display the model name behind of it.

[Help String] : Specifies the boot sequence from the available device.
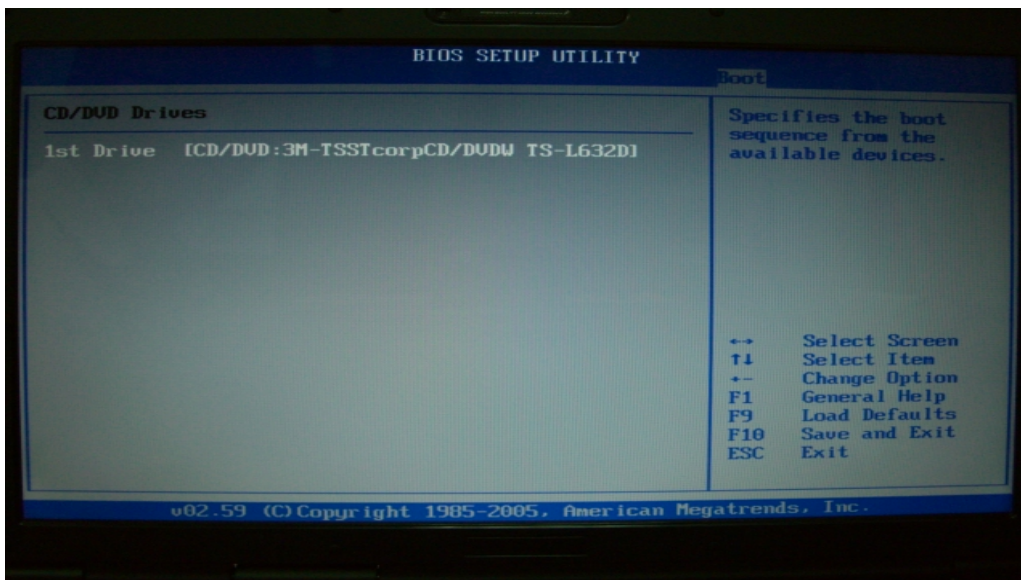
23.5 Onboard LAN Boot ROM

[Help String] :

Enable to load PXE Boot ROM of LAN.

[Items] :

"Disabled" :   **Default.**

Disable to load PXE Boot ROM of LAN.

"Enabled" :   Enable to load PXE Boot ROM of LAN.
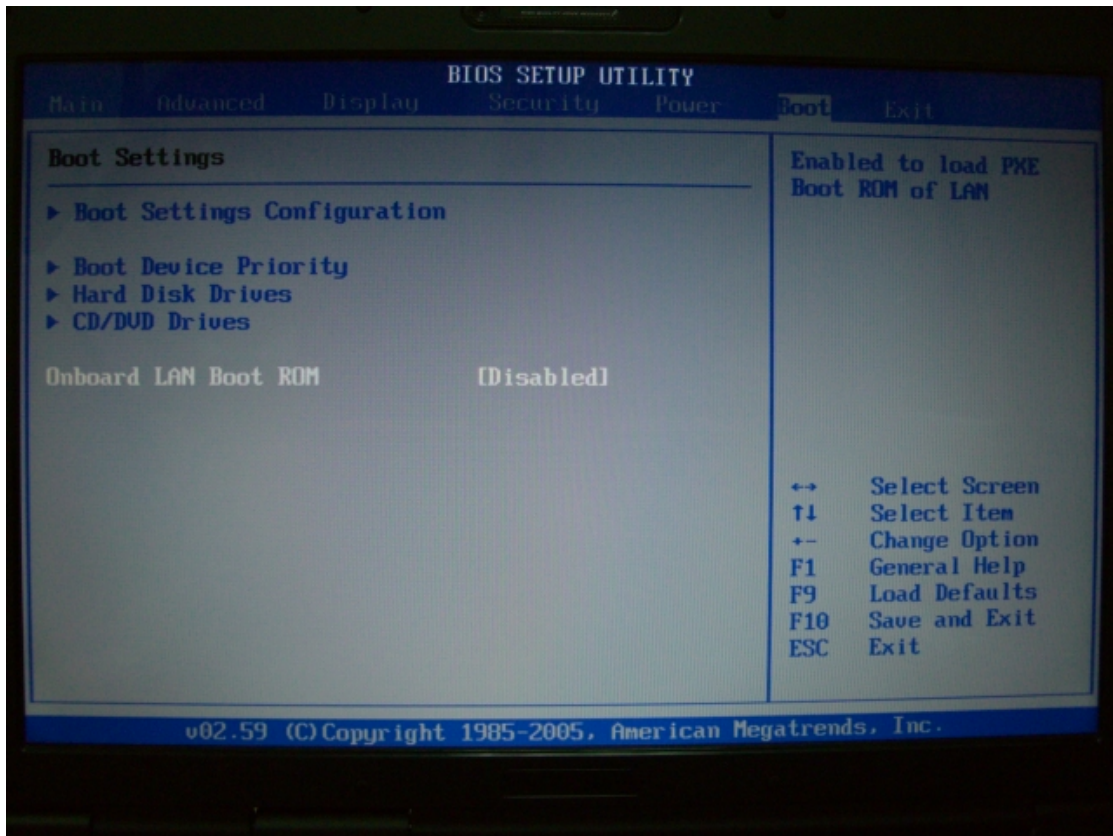
24. Exit menu

24.1 Save Changes and Exit

[Help String] :   Exit system setup after saving the change.

[blank line]

F10 key can be used for this operation.

```
                        BIOS SETUP UTILITY
  Main    Advanced    Display    Security    Power    Boot    Exit

  Exit Options                                        Exit system setup
  _____                 after saving the
                                                       changes.
  Save Changes and Exit
  Discard Changes and Exit                            F10 key can be used
  Discard Changes                                     for this operation.

  Load User Defaults
  Load Manufacture Defaults




                                                  ←→    Select Screen
                                                  ↑↓    Select Item
                                                  Enter Go to Sub Screen
                                                  F1    General Help
                                                  F9    Load Defaults
                                                  F10   Save and Exit
                                                  ESC   Exit


         v02.59 (C)Copyright 1985-2005, American Megatrends, Inc.
```

24.2 Discard Changes and Exit

[Help String] :   Exit system setup without saving any change.

[blank line]

ESC key can be used for this operation.

```
                        BIOS SETUP UTILITY
  Main    Advanced    Display    Security    Power    Boot    Exit

  Exit Options                                  Exit system setup
  ─────────────────────                         without saving any
  Save Changes and Exit                         changes.
  Discard Changes and Exit
  Discard Changes                               ESC key can be used
                                                for this operation.
  Load User Defaults
  Load Manufacture Defaults


                                                ↔     Select Screen
                                                ↑↓    Select Item
                                                Enter Go to Sub Screen
                                                F1    General Help
                                                F9    Load Defaults
                                                F10   Save and Exit
                                                ESC   Exit


         v02.59 (C)Copyright 1985-2005, American Megatrends, Inc.
```

24.3 Discard Changes

[Help String] :   Discards changes done so far to any of the setup questions.

[blank line]

F7 key can be used for this operation.

```
                           BIOS SETUP UTILITY
 Main    Advanced    Display    Security    Power    Boot    Exit

 Exit Options                                    Discards changes
 ─────────────────────────────                  done so far to any of
 Save Changes and Exit                          the setup questions.
 Discard Changes and Exit
 Discard Changes                                F7 key can be used
                                                for this operation.
 Load User Defaults
 Load Manufacture Defaults




                                                ↔     Select Screen
                                                ↑↓    Select Item
                                                Enter Go to Sub Screen
                                                F1    General Help
                                                F9    Load Defaults
                                                F10   Save and Exit
                                                ESC   Exit


            v02.59 (C)Copyright 1985-2005, American Megatrends, Inc.
```

24.4 Load user Defaults

[Help String] :   Load user Default values for all the setup questions.

[blank line]

F9 key can be used for this operation.

```
                    BIOS SETUP UTILITY
 Main   Advanced   Display   Security   Power   Boot   Exit

  Exit Options                              Load User Default
                                            values for all the
  Save Changes and Exit                     setup questions.
  Discard Changes and Exit
  Discard Changes                           F9 key can be used
                                            for this operation.
  Load User Defaults
  Load Manufacture Defaults



                                            ↔     Select Screen
                                            ↑↓    Select Item
                                            Enter Go to Sub Screen
                                            F1    General Help
                                            F9    Load Defaults
                                            F10   Save and Exit
                                            ESC   Exit

        v02.59 (C)Copyright 1985-2005, American Megatrends, Inc.
```

24.5 Load Manufacture Defaults

[Help String] :

Load Manufacture Default values for all the setup questions.

[blank line]

F8 key can be used for this operation.
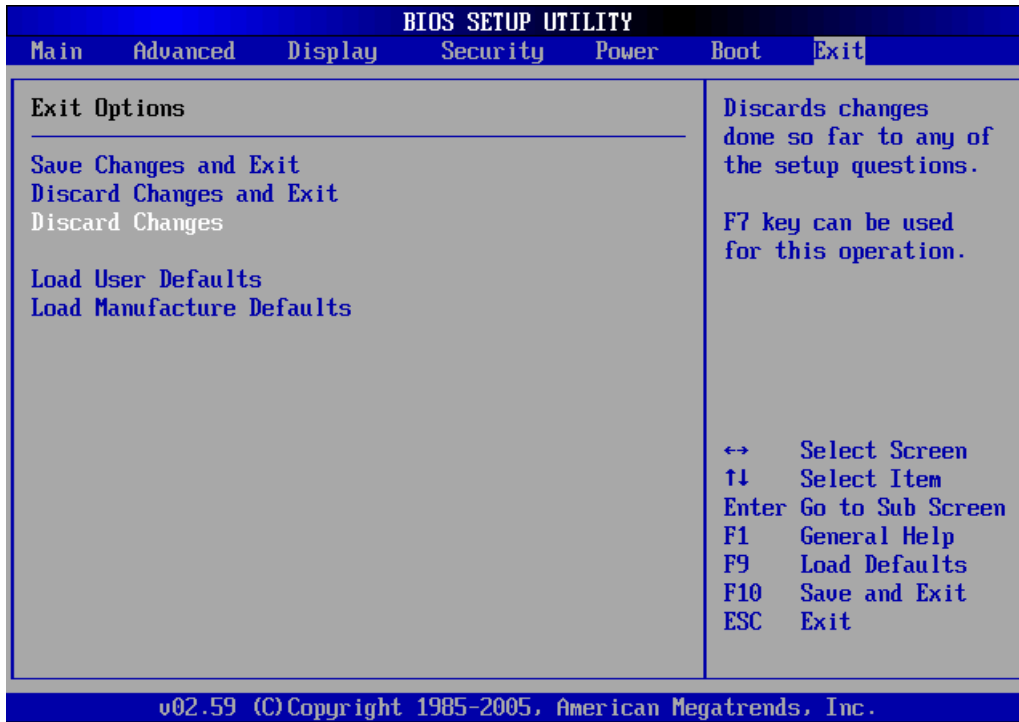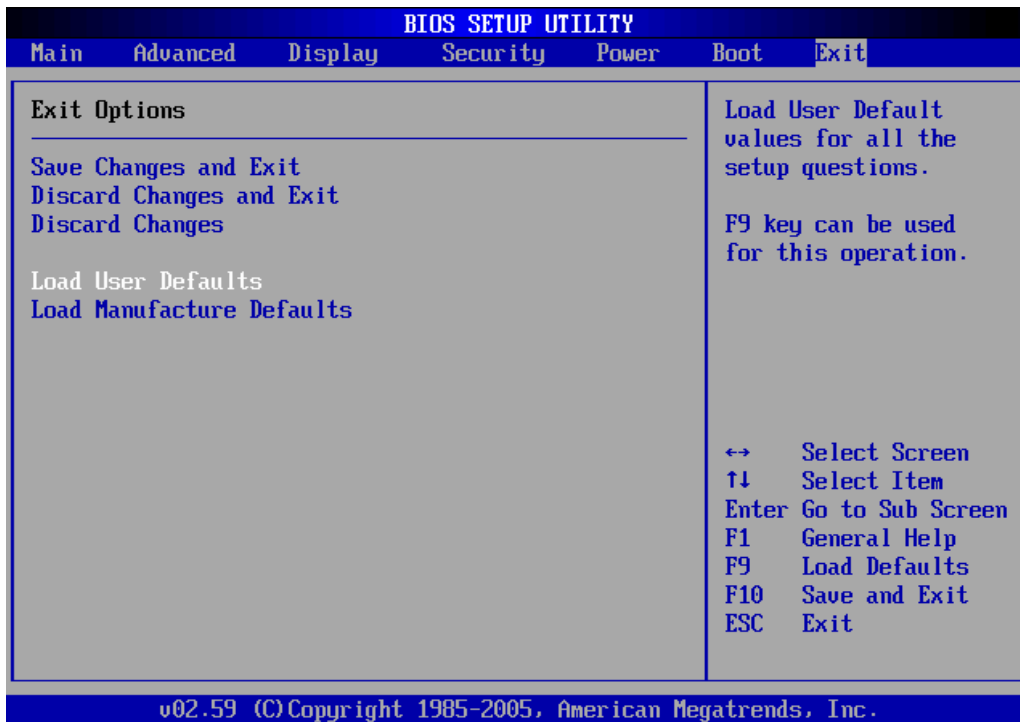
```
                    BIOS SETUP UTILITY
 Main   Advanced   Display   Security   Power   Boot   Exit

  Exit Options                              Load Manufacture
                                            Default values for
  Save Changes and Exit                     all the setup
  Discard Changes and Exit                  questions.
  Discard Changes
                                            F8 key can be used
  Load User Defaults                        for this operation.
  Load Manufacture Defaults



                                            ↔     Select Screen
                                            ↑↓    Select Item
                                            Enter Go to Sub Screen
                                            F1    General Help
                                            F9    Load Defaults
                                            F10   Save and Exit
                                            ESC   Exit

        v02.59 (C)Copyright 1985-2005, American Megatrends, Inc.
```