

Table of Contents

Configuring SATA Hard Drive(s) (Controller: Intel ICH7R)	2
(1) Installing SATA hard drive(s) in your computer	2
(2) Configuring SATA controller mode and boot sequence in BIOS Setup	3
(3) Configuring RAID set in RAID BIOS	5
(4) Making a SATA Driver Disk	9
(5) Installing SATA controller driver during OS installation	11

Configuring SATA Hard Drive(s) (Controller: Intel ICH7R)

To configure SATA hard drive(s), follow the steps below:

- (1) Install SATA hard drive(s) in your system.
- (2) Configure SATA controller mode and boot sequence in BIOS Setup.
- (3)* Configure RAID set in RAID BIOS.
- (4) Make a floppy disk containing the SATA controller driver.
- (5) Install the SATA controller driver during OS installation.

Before you begin

Please prepare:

- (a) Two SATA hard drives (to ensure optimal performance, it is recommended that you use two hard drives with identical model and capacity). If you do not want to create RAID with the SATA controller, you may prepare only one hard drive.
- (b) An empty formatted floppy disk.
- (c) Windows XP/2000 setup disk.
- (d) Driver CD for your motherboard.

(1) Installing SATA hard drive(s) in your computer

Attach one end of the SATA signal cable to the rear of the SATA hard drive and the other end to available SATA 3Gb/s port(s) on the motherboard. Then connect the power connector from your power supply to the hard drive.

*** Skip this step if you do not want to create RAID array on the SATA controller

(2) Configuring SATA controller mode and boot sequence in BIOS Setup

You have to make sure whether the SATA controller is configured correctly in system BIOS Setup and set BIOS boot sequence for the SATA hard drive(s).

Step 1:

Turn on your computer and press Del to enter BIOS Setup during POST (Power-On Self Test). If you want to create RAID, set **SATA RAID/AHCI Mode** under the **Integrated Peripherals** menu to **RAID (Disabled by default)**. Then, set **On-Chip SATA Mode** to **Manual** or **Auto** (default) based on your own requirements.

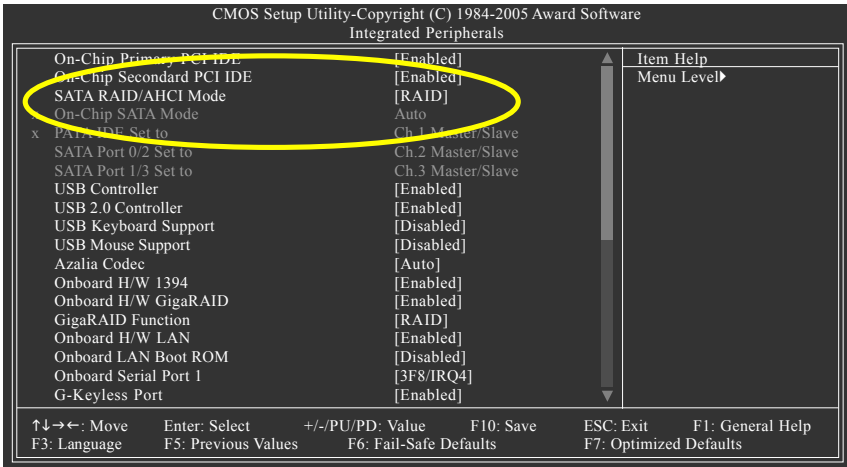


Figure 1



The BIOS Setup menus described in this section may not show the exact settings for your motherboard. The actual BIOS Setup menu options you will see shall depend on the motherboard you have and the BIOS version.

Step 2:

Later, select **Hard Disk Boot Priority** under the **Advanced BIOS Features** menu. In the **Hard Disk Boot Priority** submenu, select the model of the SATA hard drive onto which you intent to install Microsoft Windows 2000/XP (Figure 2).

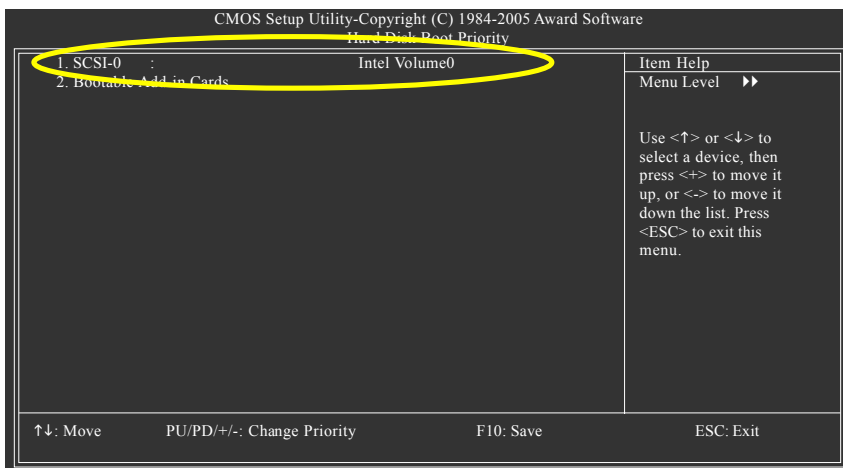


Figure 2

Step 3:

Set **First Boot Device** under the **Advanced BIOS Features** menu to **CD-ROM** to boot from CD-ROM after system restarts (Figure 3).

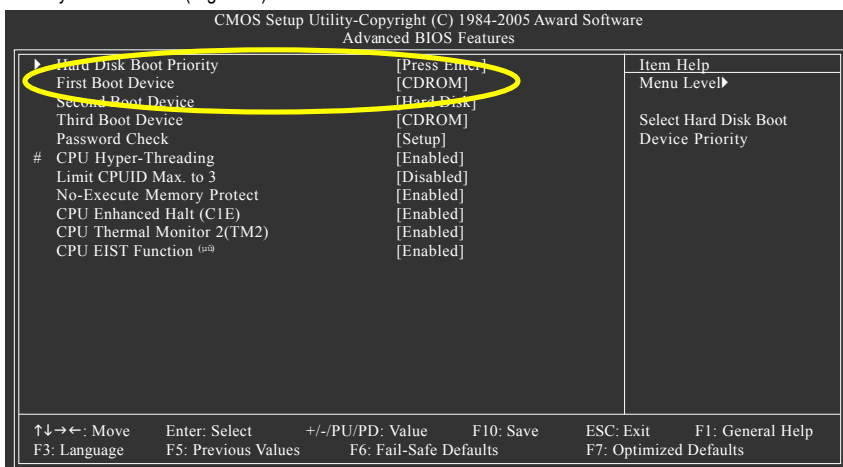


Figure 3

Step 4:

Save and exit BIOS Setup.

(3) Configuring RAID set in RAID BIOS

Enter the RAID BIOS setup utility to configure a RAID array. Skip this step and proceed to Section 4 if you do not want to create RAID.

Step 1:

After the POST memory test begins and before the operating system boot begins, look for a message which says "Press <Ctrl-I> to enter Configuration utility" (Figure 4). Press CTRL+ I to enter the RAID BIOS setup utility.

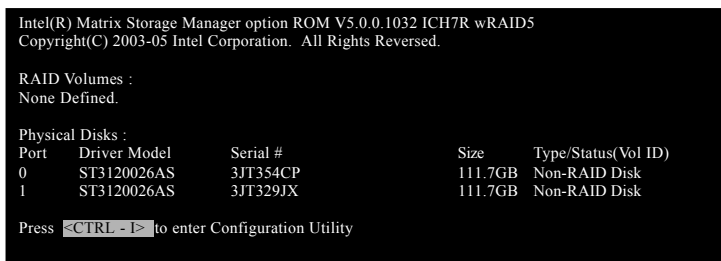


Figure 4

Step 2:

After you press CTRL+ I, the **Create RAID Volume** screen will appear (Figure 5).

Create RAID Volume ¶G

If you want to create RAID array, select **Create RAID Volume** in Main Menu and press ENTER.

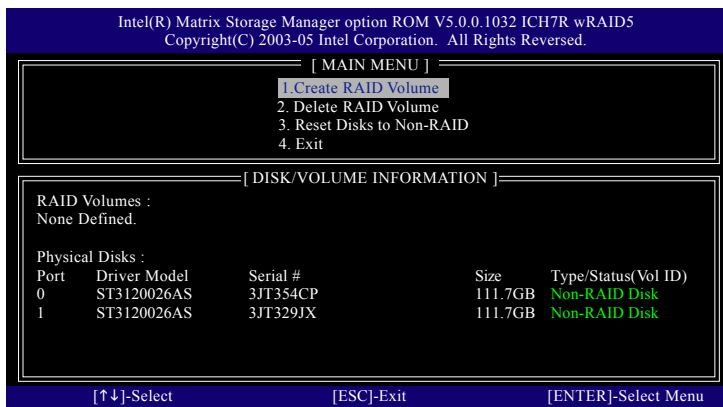


Figure 5

Step 3:

After entering the Create Volume Menu screen, name the disk array with 1-16 letters (letters cannot be special characters) under the Name item. When finished, press ENTER to select a RAID level (Figure 6). There are four RAID levels: RAID0, RAID1, RAID10 and RAID5. Select a RAID level and press ENTER.

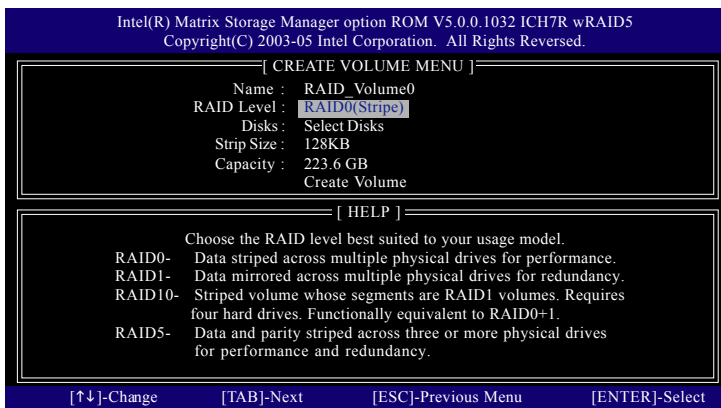


Figure 6

Step 4:

Set the stripe block size (Figure 7). The KB is the standard unit of stripe block size. The stripe block size can be set from 4KB to 128KB. After the setting, press ENTER to set array capacity.

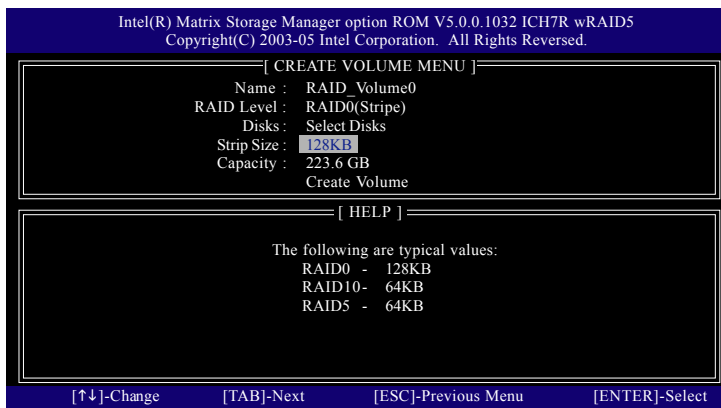


Figure 7

Step 5:

After setting all the items above, select Create Volume and press ENTER (Figure 8) to begin the creation of the RAID array.

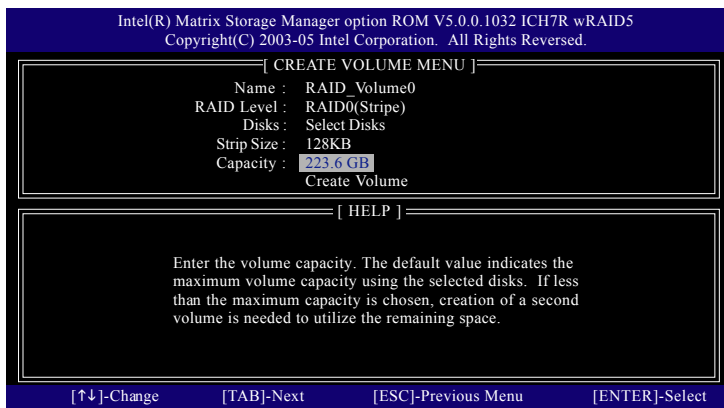


Figure 8

Step 6:

When prompted to confirm whether to create this volume, press Y to create or N to cancel.

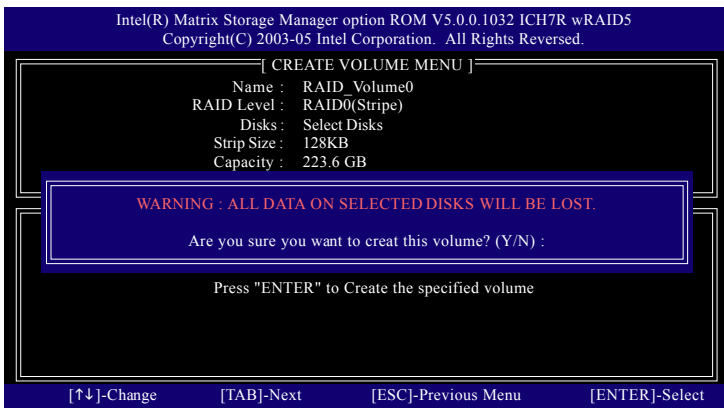


Figure 9

After the creation is completed, you can see detailed information about the RAID Array in the DISK/ VOLUME INFORMATION section, including RAID mode, disk block size, disk name, and disk capacity, etc.

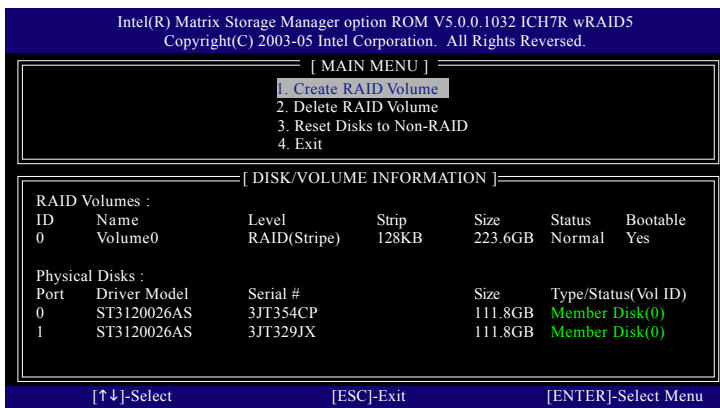
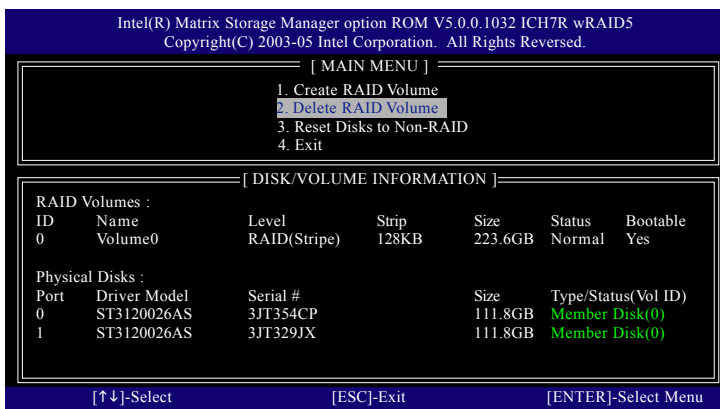


Figure 10

Delete RAID Volume

If you want to delete a RAID volume, select the Delete RAID Volume option in Main Menu. Press ENTER and follow on-screen instructions.



To exit the ICH7R RAID BIOS utility, press ESC in Main Menu.

Now, you can proceed to the installation of the SATA driver and operating system.

(4) Making a SATA Driver Disk

To install Windows 2000/XP onto a SATA hard drives on the ICH6R controller successfully, you need to install required driver for the SATA controller during OS installation. Without the driver, the hard drives may not be recognized during the Windows setup process.

First of all, you need to copy the driver for the SATA controller from the motherboard driver CD to a floppy disk. The instructions below explain how to copy the driver.

Step 1: Find an available system and insert the motherboard driver CD into the CD-ROM drive. The installation utility will appear automatically. Quit the installation utility first.

Step 2: Go to **My Computer** and right-click the CD-ROM drive icon and select **Open** (Figure 11).

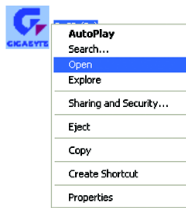


Figure 11

Step 3: Go to the **BootDrv** folder and look for an executable program named **MENU.exe** (Figure 12).

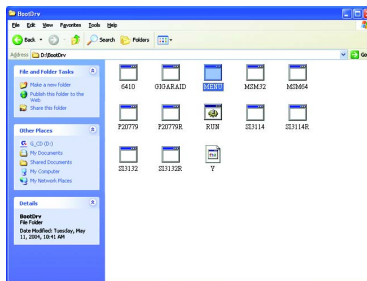
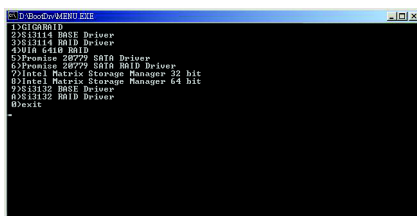


Figure 12

Step 4:

Double-click MENU.exe. An MS-DOS prompt screen similar to Figure 13 below will appear.



```
C:\D:\Boot\Menu\MENU.exe
1)GIGABYTE
2)ASUS BIOS Driver
3)ASUS BIOS Driver
4)ASUS BIOS Driver
5)Promise 28779 SATA Driver
6)Promise 28779 SATA RAID Driver
7)Intel Matrix Storage Manager 32 bit
8)Intel Matrix Storage Manager 64 bit
9)ASUS BIOS Driver
0)ASUS BIOS Driver
0)exit
```

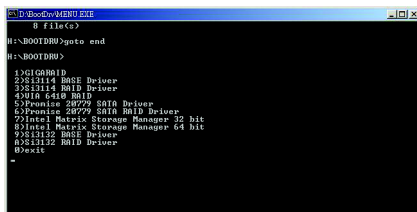
Figure 13

Step 5:

Insert an empty floppy disk and press 1 to select 7) **Intel(R) Matrix Storage Manager 32bit**. Then it will take about one minute to copy the SATA driver from the motherboard driver CD to the floppy disk.

Step 6:

Press 0 to exit when the procedure is complete (Figure 14). You have copied the SATA driver successfully.



```
C:\D:\Boot\Menu\MENU.exe
8 Files(s)
H:\>BOOTDRV>goto end
H:\>BOOTDRV>
1)GIGABYTE
2)ASUS BIOS Driver
3)ASUS BIOS Driver
4)ASUS BIOS Driver
5)Promise 28779 SATA Driver
6)Promise 28779 SATA RAID Driver
7)Intel Matrix Storage Manager 32 bit
8)Intel Matrix Storage Manager 64 bit
9)ASUS BIOS Driver
0)ASUS BIOS Driver
0)exit
```

Figure 14



If you wish to install 64-bit Windows Operating System, select 8) **Intel(R) Matrix Storage Manager 64bit**.

(5) Installing SATA controller driver during OS installation

Now that you have prepared the SATA driver disk and configured BIOS settings, you are ready to install Windows 2000/XP onto your SATA hard drive with the SATA driver. The following is an example of Windows XP installation.

Step 1: Restart your system to boot from the Windows 2000/XP Setup disk and press F6 as soon as you see the "Press F6 if you need to install a 3rd party SCSI or RAID driver" message (Figure 15). After pressing F6, there will be a few moments of some files being loaded before you see the next screen.

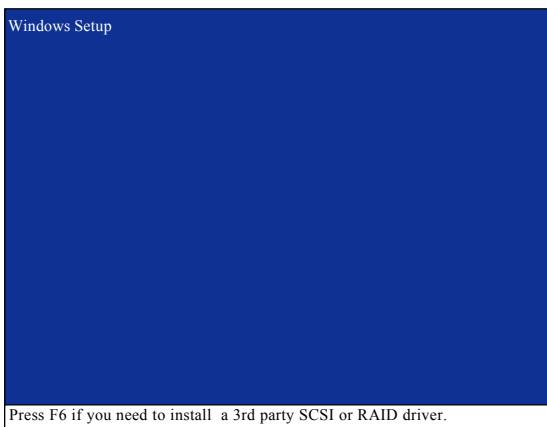


Figure 15

Step 2:

When a screen similar to that below appears, insert the floppy disk containing the SATA driver and press S (Figure 16).

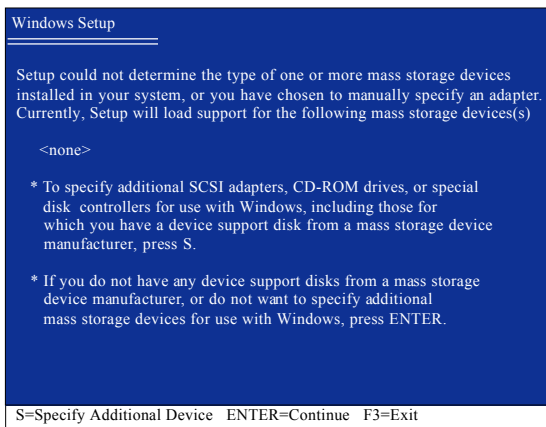


Figure 16

Step 3:

If Setup correctly recognizes the driver in the floppy disk, a controller menu similar to Figure 20 below will appear. Use the ARROW keys to select **Intel(R) 82801 GR/GH SATA RAID Controller (Desktop ICH7R/DH)*** and press ENTER. Then it will begin to load the SATA driver from the floppy disk.

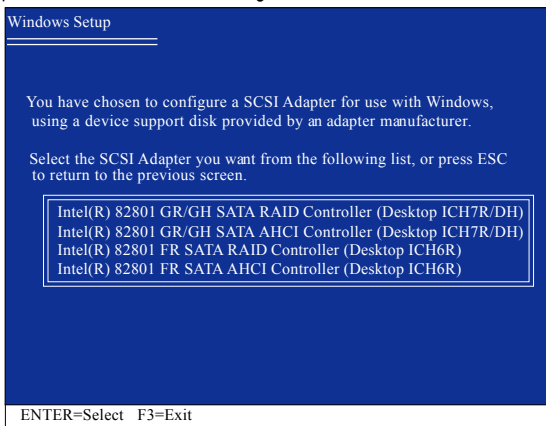


Figure 17



If a message appears saying one or some file(s) cannot be found, please check the floppy disk or copy the correct SATA driver again from the motherboard driver CD.

Step 4:

When the screen as shown below appears, press ENTER to continue the SATA driver installation from the floppy disk. The driver installation will be finished in about one minute.

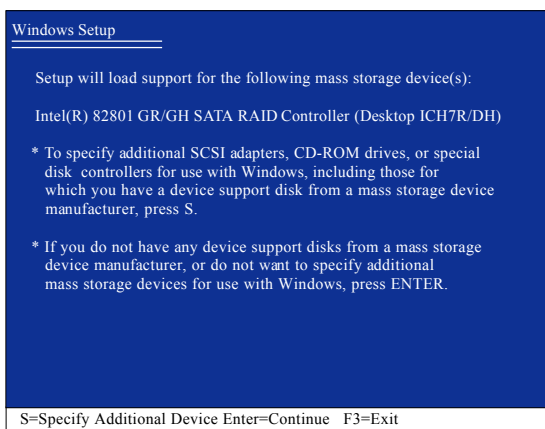


Figure 18

*** If you wish to install 64-bit Windows Operating System, select **Intel(R) 82801 GR/GH SATA AHCI Controller (Desktop ICH7R/DH)**.

After the SATA controller driver installation is completed, you should see a screen as below. It indicates that you have installed the SATA controller driver successfully. You can proceed with the Windows 2000/XP installation.

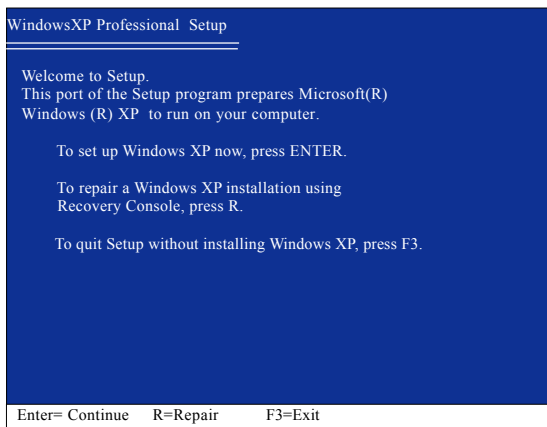


Figure 19

(Note: Each time you add a new hard drive to a RAID array, the RAID driver will have to be installed under Windows once for that hard drive. After that, the driver will not have to be installed.)