

0. Technical Reference - Q&A

1. **Q: My SATA HD is WD 800JD. But the HDD cannot be detected by VIA 8237/8237R based motherboards. How do I solve it?**

A: Please refer the following picture to install a jumper shunt on pins 5 and 6. It will enable HDD SATA 150MB/s only operation. Then the HDD will be detected by VIA SATA motherboards.



For further detail information, please refer WD Web Site.

http://wdc.custhelp.com/cgi-bin/wdc.cfg/php/enduser/std_adp.php?p_faqid=1337&p_created=1112379341&p_sid=8iB39lKh&p_lva=&p_sp=cF9zcmNoPTEmcF9zb3J0X2J5PSZwX2dyaWRzb3J0PSZwX3Jvd19jbnQ9MTAmcF9wcm9kcz05NSZwX2NhdHM9MTgzJnBfcHY9MS45NTsyLnUwJnBfY3Y9MS4xOD

http://wdc.custhelp.com/cgi-bin/wdc.cfg/php/enduser/std_adp.php?p_faqid=1228&p_created=1090517232&p_sid=vbCxCUJh&p_lva=&p_sp=cF9zcmNoPTEmcF9zb3J0X2J5PSZwX2dyaWRzb3J0PSZwX3Jvd19jbnQ9MiZwX3Byb2RzPSZwX2NhdHM9JnBfcHY9JnBfY3Y9JnBfc2VhemNoX3R5cGU9c2Vhem

2. **Q: I would like to install Red Hat Linux 9.0 on my VIA 8237/8237R based motherboards. But after I finished the installation of Red Hat Linux 9.0, it hung with kernel panic during boot-up. The error message is shown as below:**

```
VP_IDE: Unknown VIA SouthBridge, disabling DMA.
Unable to handle kernel NULL pointer dereference at virtual address 00000010
Printing eip:
c010ab2c
*pde = 00000000
oops: 0000

CPU: 0
EIP: 0060:[<c010ab2c>] Not tainted
EFLAGS: 00010002

EIP is at disable_irq [kernel] 0x4c (2.4.20-8)
eax: 00000000 ebx: ffffffff ecx: ffffffff edx: c036ef90
esi: 00000293 edi: 00000000 ebp: ffffffff esp: c3fb9f48
ds: 0068 es: 0068 ss:0068
Process swapper (pid: 1, stackpage=c3gb9000)
Stack: ffffffff 00000000 c03c9e80 c01bd1fc ffffffff 00000000 c031da20 00000000
       c03c9e80 00000000 00000000 c01bdcd8 c03c9e80 00000000 00000028 00000001
       00000001 00000001 00000001 00000001 00000001 00000001 00000001 00000001
Call Trace: [<c01bd1fc>] probe_hwif [kernel] 0x27c (0xc3fb9f54)

[<c01bdcd8>] ideprobe_init [kernel] 0xb8 (0xc3fb9f74)
[<c0105053>] init [kernel] 0x13 (0xc3fb9ff8)
[<c0105040>] init [kernel] 0x0 (0xc3fb9fe0)
[<c010742d>] kernel_thread_helper [kernel] 0x5 (0xc3fb9ff0)

Code: ff 50 10 eb d0 eb 0d 90 90 90 90 90 90 90 90 90 90 90 90 90
<0>kernel panic: Attempted to kill init
```

How do I fix this problem?

A: Please add VIA vmlinuz-2.4.20-8-IDE patch to Linux kernel by following steps.

First, copy the patched kernel (vmlinuz-2.4.20-8-ide) into **floppy** disk. Then, select one of the cases applies to your situation below.

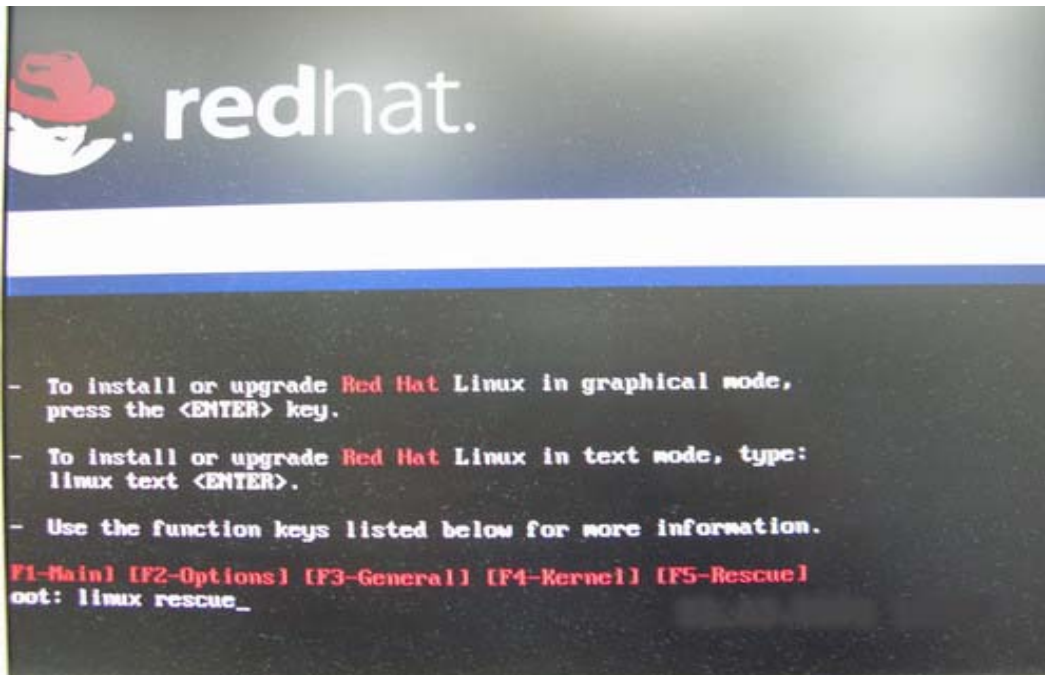
(a) Clean install the Red Hat Linux 9.0.

Before exiting the installation of Red Hat Linux 9.0, press <Ctrl>+<Alt>+<F2> to enter console mode. Then skip the case (b) to proceed.

(b) Use the kernel in existing Red Hat Linux 9.0 system.

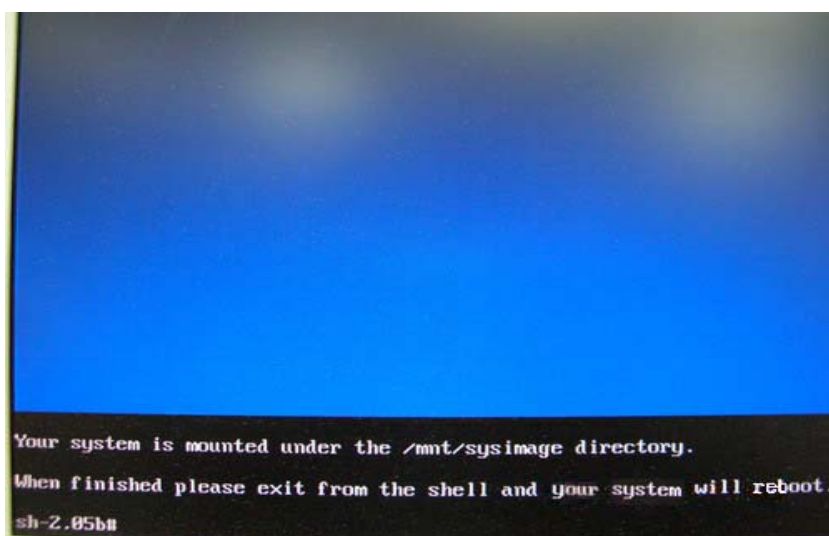
Make sure the first boot device is CD_ROM in your system BIOS, then put the installation CD 1 into CD-ROM. When booting the installation CD, type the following command when the “boot:” message appears on the screen.

linux rescue /* press enter */



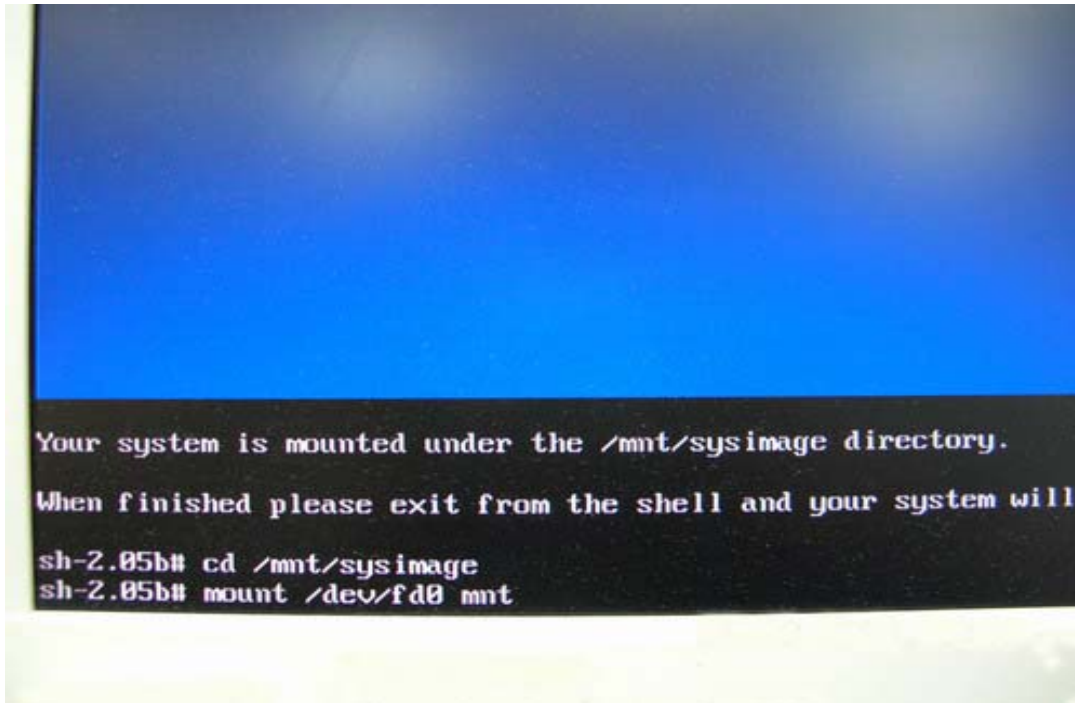
Then follow the instructions, and select the partition that the existing Red Hat Linux 9.0 is located in the “system to rescue” window. Then it will enter the console mode after a while.

Console mode:

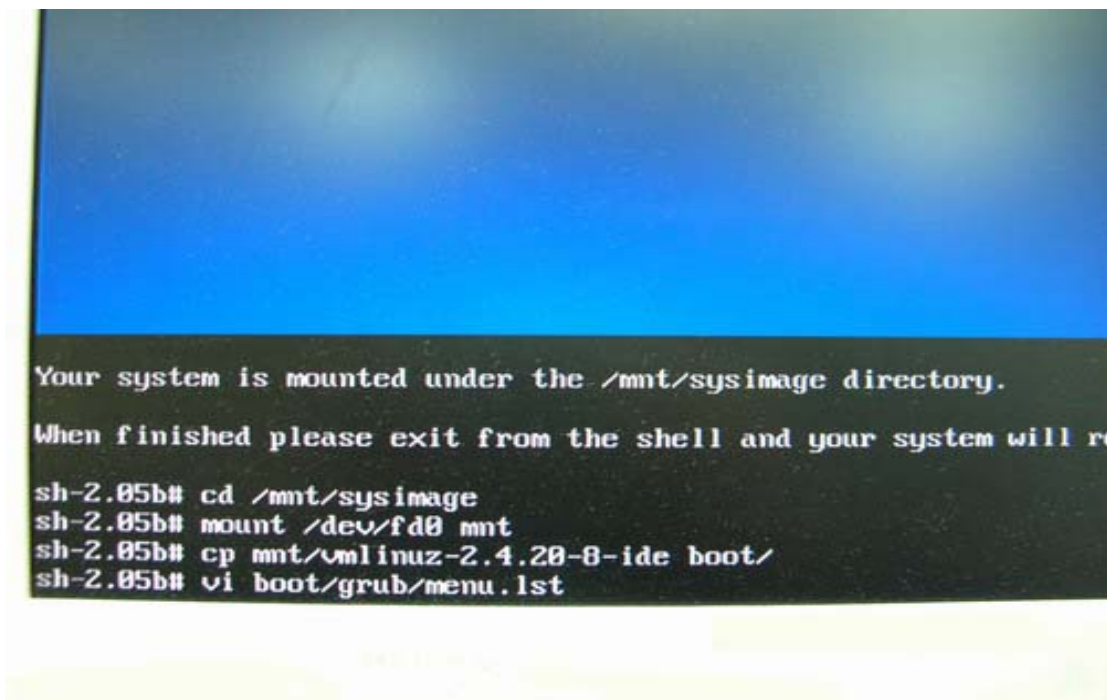


After entering the console mode, run the following commands.

```
# cd /mnt/sysimage      /* press enter */
# mount /dev/fd0 mnt    /* after type this command, insert the floppy and press
                        "enter"*/
```



```
# cp mnt/vmlinuz-2.4.20-8-ide boot/ /* reading the floppy for a while */
# vi boot/grub/menu.lst           /* press enter and it will enter
                                  /mnt/sysimage/boot/grub/menu.lst file */
```



Under `/mnt/sysimage/boot/grub/menu.lst` file press “A” to enter insert mode.

```
# Note that you do not have to rerun grub after making changes to this file
# NOTICE: You have a /boot partition. This means that
#           all kernel and initrd paths are relative to /boot/, eg.
#           root (hd0,0)
#           kernel /vmlinuz-version ro root=/dev/hda2
#           initrd /initrd-version.img
#boot=/dev/hda
default=0
timeout=10
splashimage=(hd0,0)/grub/splash.xpm.gz
title Red Hat Linux (2.4.20-8smp)
    root (hd0,0)
    kernel /vmlinuz-2.4.20-8smp ro root=LABEL=/
    initrd /initrd-2.4.20-8smp.img
title Red Hat Linux-up (2.4.20-8)
    root (hd0,0)
    kernel /vmlinuz-2.4.20-8 ro root=LABEL=/
    initrd /initrd-2.4.20-8.img
-
-
-
-
-
-
-
-
-
-
-- Insert --
```

Add the following lines into `/mnt/sysimage/boot/grub/menu.lst` file.

```
title Red Hat Linux (2.4.20-8) IDE-patched      /* press enter */
root (hd0,0)                                  /* press enter */
kernel /vmlinuz-2.4.20-8-ide ro root=LABEL=/   /* press enter */
initrd /initrd-2.4.20-8.img                   /* press Esc to leave insert mode */
```

```
# Note that you do not have to rerun grub after making changes to this file
# NOTICE: You have a /boot partition. This means that
#           all kernel and initrd paths are relative to /boot/, eg.
#           root (hd0,0)
#           kernel /vmlinuz-version ro root=/dev/hda2
#           initrd /initrd-version.img
#boot=/dev/hda
default=0
timeout=10
splashimage=(hd0,0)/grub/splash.xpm.gz
title Red Hat Linux (2.4.20-8smp)
    root (hd0,0)
    kernel /vmlinuz-2.4.20-8smp ro root=LABEL=/
    initrd /initrd-2.4.20-8smp.img
title Red Hat Linux-up (2.4.20-8)
    root (hd0,0)
    kernel /vmlinuz-2.4.20-8 ro root=LABEL=/
    initrd /initrd-2.4.20-8.img
title Red Hat Linux (2.4.20-8) IDE-patched
    root (hd0,0)
    kernel /vmlinuz-2.4.20-8-ide ro root=LABEL=/
    initrd /initrd-2.4.20-8.img
-
-
-
-
-
-
-
-
-
-
-- Insert --
```

Press Esc to leave insert mode and type the command below.

`:w!` `/* press enter to save file */`

```
splashimage (hd0,0)/grub/splash.xpm.gz
title Red Hat Linux (2.4.20-8smp)
  root (hd0,0)
  kernel /vmlinuz-2.4.20-8smp ro root=LABEL=/
  initrd /initrd-2.4.20-8smp.img
title Red Hat Linux-up (2.4.20-8)
  root (hd0,0)
  kernel /vmlinuz-2.4.20-8 ro root=LABEL=/
  initrd /initrd-2.4.20-8.img
title Red Hat Linux (2.4.20-8) IDE-patched
  root (hd0,0)
  kernel /vmlinuz-2.4.20-8-ide ro root=LABEL=/
  initrd /initrd-2.4.20-8.img
~
~
~
~
~
:w!
```

It will appear the message **“boot/grub/menu.lst” 24L, 802C**

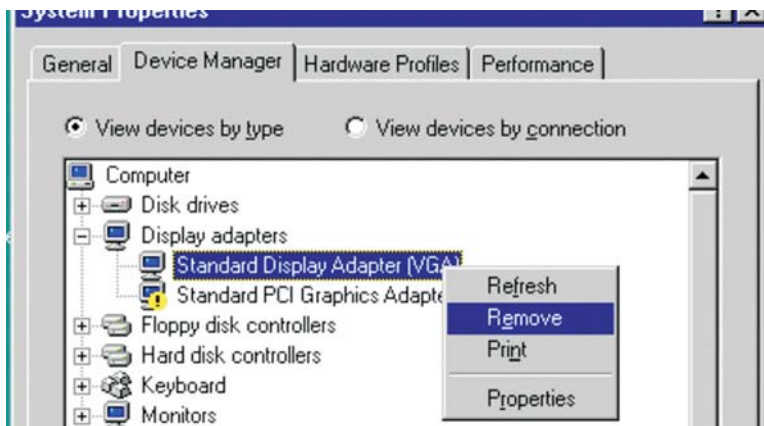
```
default 0
timeout 10
splashimage (hd0,0)/grub/splash.xpm.gz
title Red Hat Linux (2.4.20-8smp)
  root (hd0,0)
  kernel /vmlinuz-2.4.20-8smp ro root=LABEL=/
  initrd /initrd-2.4.20-8smp.img
title Red Hat Linux-up (2.4.20-8)
  root (hd0,0)
  kernel /vmlinuz-2.4.20-8 ro root=LABEL=/
  initrd /initrd-2.4.20-8.img
title Red Hat Linux (2.4.20-8) IDE-patched
  root (hd0,0)
  kernel /vmlinuz-2.4.20-8-ide ro root=LABEL=/
  initrd /initrd-2.4.20-8.img
~
~
~
~
~
“boot/grub/menu.lst” 24L, 802C
```

Then, reboot system and enter the **“Red Hat Linux (2.4.20-8) IDE-patched”** kernel. The problem would not happen again.

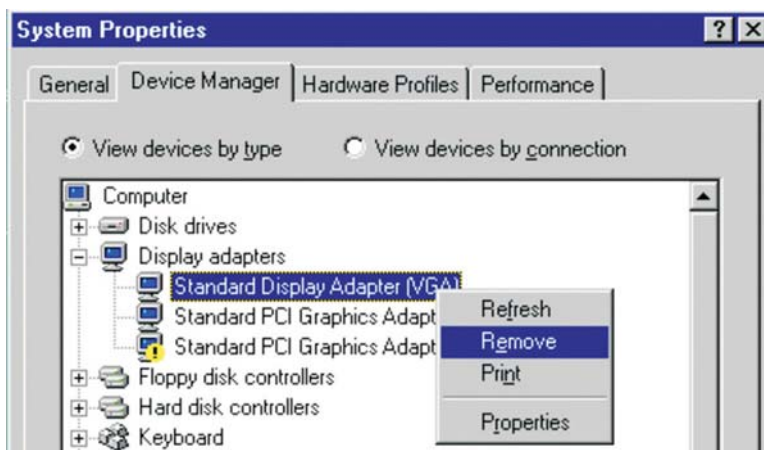
3. **Q: I use PCI Express VGA card on my ASRock motherboard. My operation system is Windows 98SE / ME. In “Device Manager”, there are two “Display Adapter Controllers” in “Display Adapters” option. What should I do?**

A: Please follow the below steps to install PCIE VGA card driver.

- a. Please enter “Device Manager” and you will see “Standard Display Adapter (VGA)” and “Standard PCI Graphics Adapter (VGA)” in the “Display Adapters” option.
- b. Please Choose “Standard Display Adapter (VGA)” and right-click “Remove”.
<using with nVidia PCIE VGA card>



<using with ATi PCIE VGA card>



- c. After removing the device, please reboot your system. Then, you will only see “Standard Display Adapter (VGA)” in “Display Adapter” option.
- d. Please start to install your PCIE VGA card driver.