Ultra Wide SCSI (FAST-40)

CardBus PC Card

CB32U

User's Guide

April 2002

Rev. 3.0

RATOC Systems, Inc.

CB32U

1. Introduction

This User's Guide describes how to install, use, and troubleshoot the RATOC CB32U Ultra Wide SCSI CardBus PC Card(called CB32U in this User's Guide). The information in the README.TXT file on the floppy disk may include the latest information. Be sure to read the README.TXT file as well.

1-1. Package Confirmation

Check package contents:
- CB32 Ultra Wide SCSI CardBus PC Card
- CB32 setup floppy disk (3pcs)
- CB32U User's Guide (This document)
- High-Density 50-pin cable
- High-Density 68-pin cable

NOTE

If any of these items are missing from the CB32U retail package, contact your supplier immediately.

1-2. System Requirements

- PC with a CardBus slot
- Windows 95B/Windows 95C/Windows 98/Windows 98 SE(Second Edition)
  Wsindows NT4.0/Windows 2000/Windows Me(Millennium Edition)/Windows XP

NOTE

If the version of your Windows 95 is 4.00.950 or 4.00.950 A, you can not use the CB32U.

2. Setup

When you use Windows 95, proceed to Chapter 2-1.

When you use Windows 98, proceed to Chapter 2-2.

When you use Windows Me, proceed to Chapter 2-3.

When you use Windows NT4.0, proceed to Chapter 2-4.

When you use Windows 2000, proceed to Chapter 2-5.

When you use Windows XP, proceed to Chapter 2-6.

Restrictions

- At least one SCSI device must supply termination power to the SCSI bus. Read your SCSI device manual if you are not sure whether the SCSI device provides termination power. But, there is an exception. You can connect Iomega Zip drive to the CB32U, though the Zip drive can not provide termination power.
- You can not boot up system from a SCSI device connected to the CB32U. Do not install Operating System into a SCSI device connected to the CB32U because you can not boot up system from it.
- You can not format a HDD, Jaz, Zip drive connected to the CB32U with FDISK command. And you can not use software using DISK-BIOS(INT 13h). If you want to format and create partition, use our SCSI utility. **Refer to Chapter 4-1**.
- Do not enable virtual memory setting for a HDD, Jaz, Zip drive connected to the CB32U.
- The CB32U does not support DOS mode of Windows 98/95.
- The total length of cabling on the SCSI bus shoud not exceed 5ft(1.5m).
- It is not recommended that you connect more than two SCSI devices in daisy-chain.
- If your PC has only one PC card slot which is connected to a floppy disk drive, you have to copy the files in the floppy disk supplied from us onto your HDD before you set up the CB32U.
- Do not turn off your SCSI device connected to the CB32U when you have the PC in stanby/suspend. If you want to have the PC in standby/suspend mode, remove the CB32U from the PC.
- You can not connect a narrow SCSI device to a wide SCSI device connected to the CB32U. You can not connect a wide SCSI device to a narrow SCSI device connected to the CB32U.
- CardWizard software is required to use the CB32U on Windows NT4.0. The CardWizard software is available through www.systemsoft.com. You have to purchase it from the web site and install it before you use it on Windows NT4.0.

2-1. Windows 95 Setup

Here's how to get started with the CB32U and SCSI devices on Windows 95:

1. Read the restrictions before you install the CB32U.

2. Install the CB32U into the PC. Refer to Chapter 2-1-1.

3. Confirm the installation. Refer to Chapter 2-1-2.

4. Remove the CB32U from the PC. Refer to Chapter 2-1-3.

5. Connect a SCSI device. Refer to Chapter 3-1.

6. Confirm the SCSI connection. Refer to Chapter 3-2.

2-1-1. Installing the CB32U on Windows 95

1. Check your Version of Windows 95.

    a. Right-click on **My Computer**.

    b. Select **Properties**. You will see the **System Properties** window below.

    c. Click the **General** tab.

    d. If you can find **4.00.950 B** or **4.00.950 C**, you can use the CB32U.
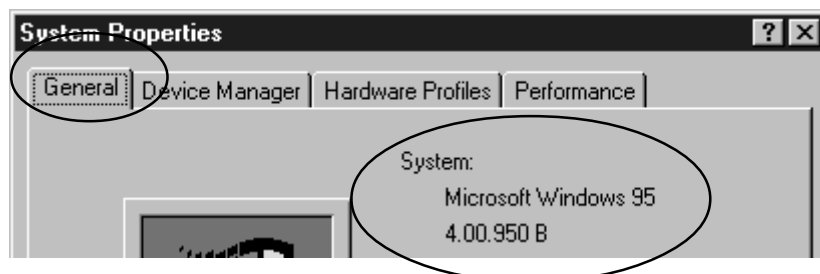
NOTE

If the version of your Windows 95 is 4.00.950 or 4.00.950 A, you can not use the CB32U.

Windows95

2. Check to see if your PCMCIA Controller supports CardBus PC Cards.

a. In the **System Properties** window shown below, click the **Device Manager** tab.

b. Double-click **PCMCIA socket** and make sure there is a CardBus controller name string without
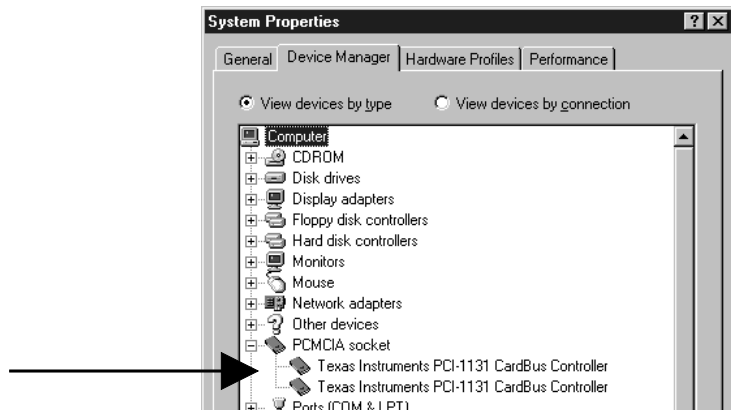
"**!**" or "**X**" marks.

NOTE

If a CardBus controller name string does not appear, or if it appears with a "!" or "X" mark next

to it, enable the CardBus controller with PC Card (PCMCIA) Wizard. For more information,

please contact your PC manufacturer.

If you find a **PCIC or compatible PCMCIA controller** string under the **PCMCIA socket**, your PC

Card slot may not support CardBus PC Cards or CardBus setting may be set disable in the

BIOS of your PC. If CardBus setting is set disable in the BIOS, select **CardBus** from **Disable/PCIC**

Compatible/CardBus option in the BIOS to set CardBus setting enable.

c. Double-click the CardBus controller name string to show the property window. If **This device is**

working properly appears under the **Device status**, you can use the CB32U.
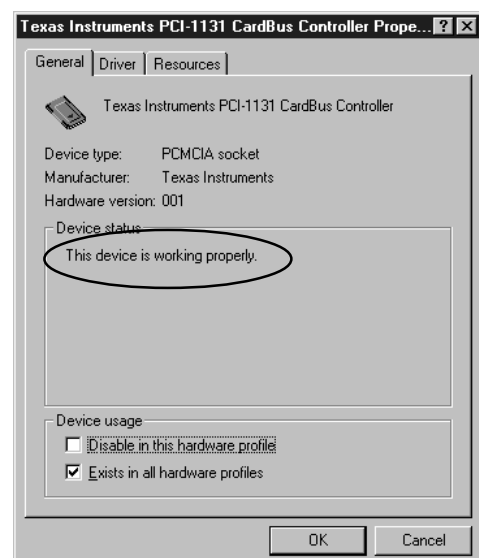
3. Grasp the CB32U by the edges with the label facing upward. Insert the CB32U into the slot and push it in until it is firmly seated. If the CB32U can not be firmly seated, check to see if the PC Card slot supports CardBus PC Cards. If the following window as shown at step 4 does not appear, the PC may not support CardBus PC Cards. For more information, contact your PC manufacturer.
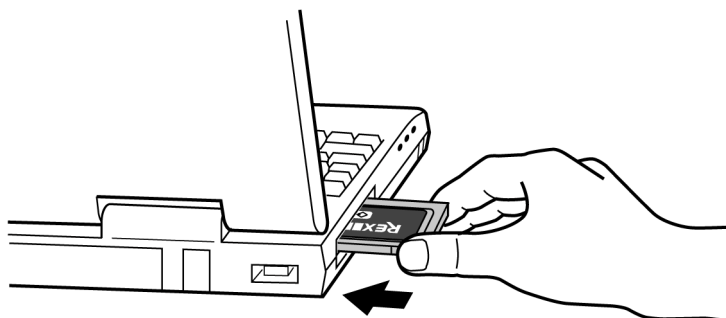
4. When the **Update Device Driver Wizard** Window Appears

    a. When the **Update Device Driver Wizard** window appears, insert the CB32U floppy disk for Windows 98/95 and click **Next**.

    b. When **SCSI CardBus PC Card REX CB32** appears in the window, click **Finish**.

c. If a message requesting insertion of a floppy disk appears, click **OK**.

d. The **Copying Files...** dialog appears. Type **a:** for the source of files and click **OK**.
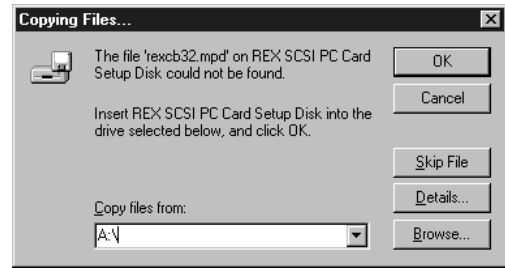
e. Wait until the **PC Card (PCMCIA)** icon appears on the Windows taskbar. This icon indicates that the CB32U is recognized.

f. Remove the floppy disk from the PC.

2-1-2. Confirming the Installation

1. Right-click on **My Computer**.

2. Select **Properties**. You will see the **System Properties** window below.

3. Click the **Device Manager** tab.
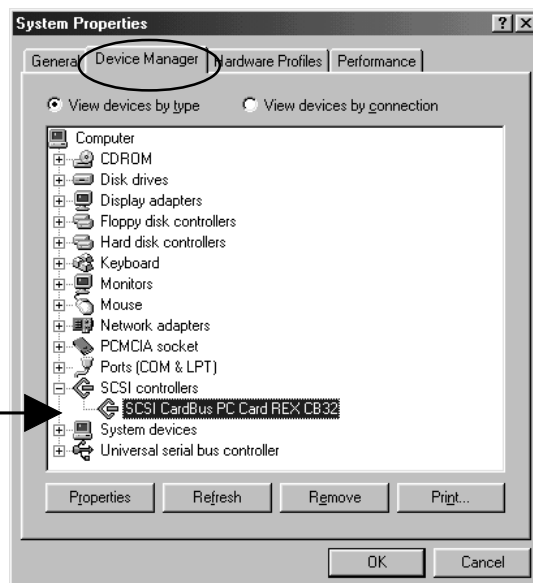
4. Double-click **SCSI Controllers** in the list.

5. Make sure there is a **SCSI CardBus PC Card REX CB32** string without "**!**" or "**X**" marks.

6. Double-click the **SCSI CardBus PC Card REX CB32** string to show the property window.

7. Click the **General** tab. If **This device is working properly** appears under **Device status**, you
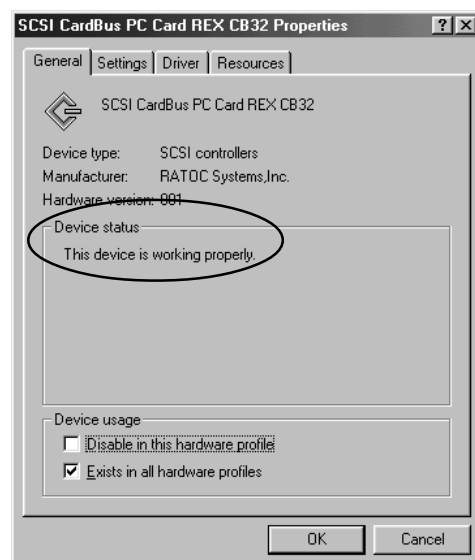
have installed the CB32U driver correctly.

Windows95

2-1-3. Removing the CB32U

When you want to remove the CB32U from the PC, you have to follow these steps through:

1. Click the **PC Card** icon on the Windows taskbar.

Stop SCSI CardBus PC Card REX CB32   3:31 PM

2. Select **Stop SCSI CardBus PC Card REX CB32**.

3. When the window saying **You may safely remove this device** appears, you can remove the CB32U from the PC.

4. Press an eject button of the PC Card slot (1). Grasp the CB32U by the edge and pull it straight out of the PC Card slot (2).
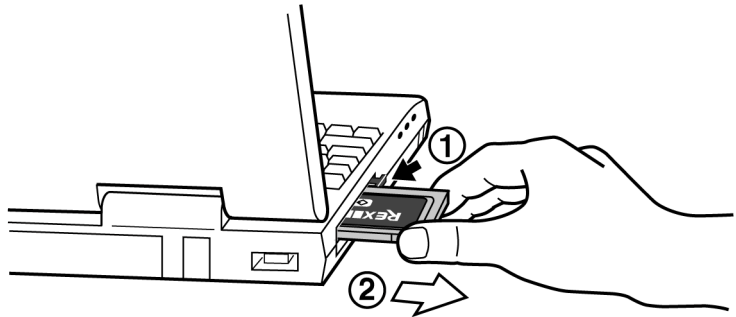
2-2. Windows 98 Setup

Here's how to get started with the CB32U and SCSI devices on Windows 98:

1. Read the restrictions before you install the CB32U.

2. Install the CB32U into the PC. Refer to Chapter 2-2-1.

3. Confirm the installation. Refer to Chapter 2-1-2.

4. Remove the CB32U from the PC. Refer to Chapter 2-2-2.

5. Connect a SCSI device. Refer to Chapter 3-1.

6. Confirm the SCSI connection. Refer to Chapter 3-2.

2-2-1. Installing the CB32U on Windows 98

1. Check to see if your PCMCIA Controller supports CardBus PC Cards.

   a. Right-click on **My Computer**.

   b. Select **Properties**. You will see the **System Properties** window below.

   c. Click the **Device Manager** tab.

   d. Double-click **PCMCIA socket** and make sure there is a CardBus controller name string without "**!**" or "**X**" marks.

NOTE

If a CardBus controller name string does not appear, or if it appears with a "!" or "X" mark next to it, enable the CardBus controller with <u>PC Card (PCMCIA) Wizard</u>. For more information, please contact your PC manufacturer.

Windows98

If you find a **PCIC or compatible PCMCIA controller** string under the **PCMCIA socket**, your PC Card slot may not support CardBus PC Cards or CardBus setting may be set disable in the BIOS of your PC. If CardBus setting is set disable in the BIOS, select **CardBus** from **Disable/PCIC Compatible/CardBus** option in the BIOS to set CardBus setting enable.

e. Double-click the CardBus controller name string to show the property window. If **This device is working properly** appears under the **Device status**, you can use the CB32U.

2. Grasp the CB32U by the edges with the label facing upward. Insert the CB32U into the slot and push it in until it is firmly seated. If the CB32U can not be firmly seated, check to see if the PC Card slot supports CardBus PC Cards. If the following window as shown at step 3 does not appear, the PC may not support CardBus PC Cards. Check to see if the PC Card slot supports CardBus PC Cards. For more information, contact your PC manufacturer.

3. When the **Add New Hardware Wizard** Window Appears

    a. When the **Add New Hardware Wizard** window appears, insert the CB32U floppy disk for Windows 98/95 and click **Next**.

    b. When the following window appears, select the **Search for the best driver for your device (Recommended)** option and click **Next**.

    c. When the following window appears, select the **Floppy disk drives** option and click **Next**.

d. When the following window appears, select the **The updated driver (Recommended)**

SCSI CardBus PC Card REX CB32 option and click **Next**.

e. When the following window appears, click **Next**.

f. When the following window appears, click **Finish**.

g. Wait until the **PC Card (PCMCIA)** icon appears on the Windows taskbar. This icon indicates that the CB32U is recognized.

h. Remove the floppy disk from the PC.

To confirm the installation of the driver, refer to Chapter 2-1-2.

2-2-2. Removing the CB32U

When you want to remove the CB32U from the PC, you have to follow these steps through:

1. Click the **PC Card** icon on the Windows taskbar.

> Stop SCSI CardBus PC Card REX CB32
>
> 3:31 PM
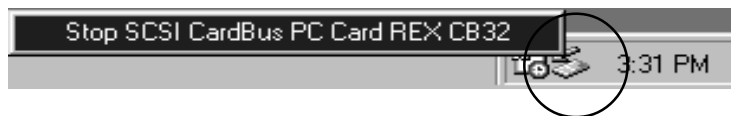
2. Select **Stop SCSI CardBus PC Card REX CB32**.

3. When the window saying **You may safely remove this device** appears, you can remove the CB32U from the PC.

4. Press an eject button of the PC Card slot (1). Grasp the CB32U by the edge and pull it straight out of the PC Card slot (2).
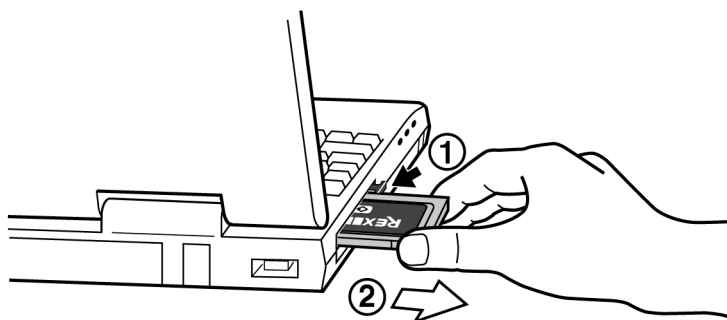
2-3. Windows Me Setup

Here's how to get started with the CB32U and SCSI devices on Windows Me:

1. Read the restrictions before you install the CB32U.

2. Install the CB32U into the PC. Refer to Chapter 2-3-1.

3. Confirm the installation. Refer to Chapter 2-1-2.

4. Remove the CB32U from the PC. Refer to Chapter 2-3-2.

5. Connect a SCSI device. Refer to Chapter 3-1.

6. Confirm the SCSI connection. Refer to Chapter 3-2.

2-3-1. Installing the CB32U on Windows Me

1. Check to see if your PCMCIA Controller supports CardBus PC Cards.

    a. Right-click on **My Computer**.

    b. Select **Properties**. You will see the **System Properties** window below.

    c. Click the **Device Manager** tab.

    d. Double-click **PCMCIA socket** and make sure there is a CardBus controller name string without "**!**" or "**X**" marks.

If you find a **PCIC or compatible PCMCIA controller** string under the **PCMCIA socket**, your PC Card slot may not support CardBus PC Cards or CardBus setting may be set disable in the BIOS of your PC. If CardBus setting is set disable in the BIOS, select **CardBus** from **Disable/PCIC Compatible/CardBus** option in the BIOS to set CardBus setting enable.

e. Double-click the CardBus controller name string to show the property window. If **This device is working properly** appears under the **Device status**, you can use the CB32U.

2. Grasp the CB32U by the edges with the label facing upward. Insert the CB32U into the slot and push it in until it is firmly seated. If the CB32U can not be firmly seated, check to see if the PC Card slot supports CardBus PC Cards. If the following window as shown at step 3 does not appear, the PC may not support CardBus PC Cards. Check to see if the PC Card slot supports CardBus PC Cards. For more information, contact your PC manufacturer.

Windows Me

3. When the **Add New Hardware Wizard** Window Appears

  a. When the **Add New Hardware Wizard** window appears, insert the CB32U floppy disk for

    Windows 98/95 and select the **Automatic search for a better driver(Recommended)** option.

    Click **Next**.

  b. When the following window appears, click **Finish**.

 **c.** Wait until the **PC Card (PCMCIA)** icon appears on the Windows taskbar. This icon indicates that

    the CB32U is recognized.

  d. Remove the floppy disk from the PC.

   **To confirm the installation of the driver, refer to Chapter 2-1-2.**

2-3-2. Removing the CB32U

When you want to remove the CB32U from the PC, you have to follow these steps through:

1. Click the **PC Card** icon on the Windows taskbar.

Stop SCSI CardBus PC Card REX CB32

3:31 PM
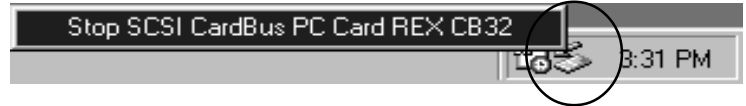
2. Select **Stop SCSI CardBus PC Card REX CB32**.

3. When the window saying **You may safely remove this device** appears, you can remove the CB32U from the PC.

4. Press an eject button of the PC Card slot (1). Grasp the CB32U by the edge and pull it straight out of the PC Card slot (2).
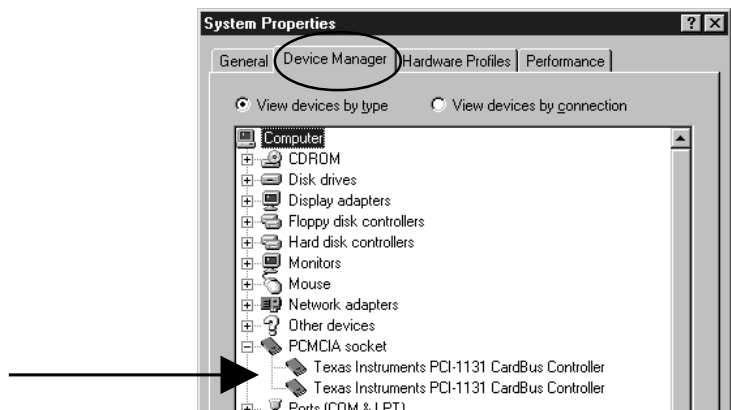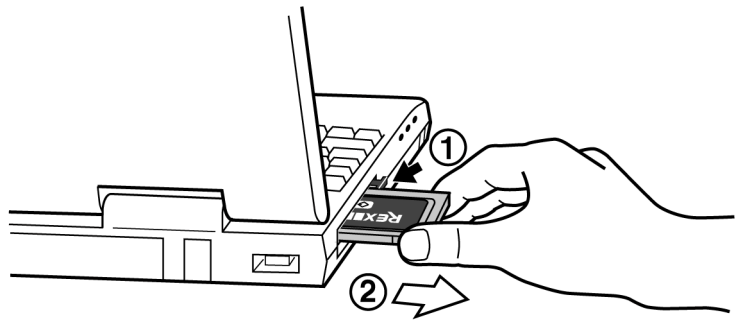
2-4. Windows NT4.0 Setup

Here's how to get started with the CB32U and SCSI devices on Windows NT4.0:

1. Read the restrictions before you install the CB32U.

2. Install the CB32U driver. Refer to Chapter 2-4-1.

5. Confirm the installation. Refer to Chapter 2-4-2.

6. Remove the CB32U from the PC. Refer to Chapter 2-4-3.

7. Connect a SCSI device. Refer to Chapter 3-1.

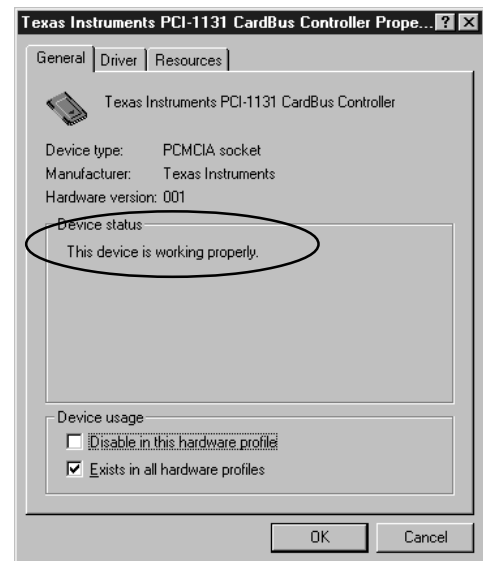**8.** Confirm the SCSI connection. Refer to Chapter 3-2.

Windows NT4.0

*You must be logged on as Administrator or have administrator privileges to install the CB32 driver.

*CardWizard software is required to use the CB32U on Windows NT4.0.
The CardWizard software is available through www.systemsoft.com.
You have to purchase it from the web site and install it before you use it on Windows NT4.0.
After installing it, proceed to 2-4-1.

2-4-1. Installing the CB32U driver

1. Turn off your PC and grasp the CB32U by the edges with the label facing upward. Insert the CB32U into the slot and push it in until it is firmly seated. If the CB32U can not be firmly seated, check to see if the PC Card slot supports CardBus PC Cards. If the following window as shown at step 2 does not appear, the PC may not support CardBus PC Cards. For more information, contact your PC manufacturer.
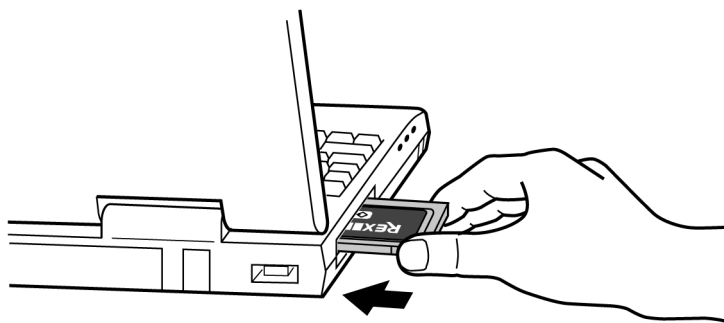
2. Turn on the PC. You will see the screen below. Insert the CB32U floppy disk for Windows NT4.0 and click **correct**.
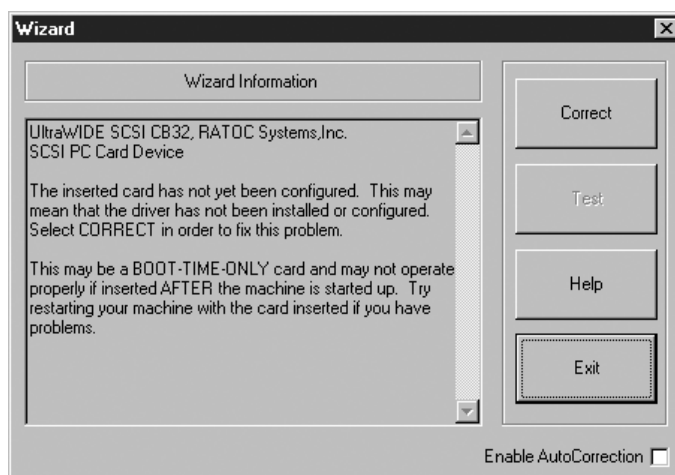
3. You will see the screen below. Click **OK**.
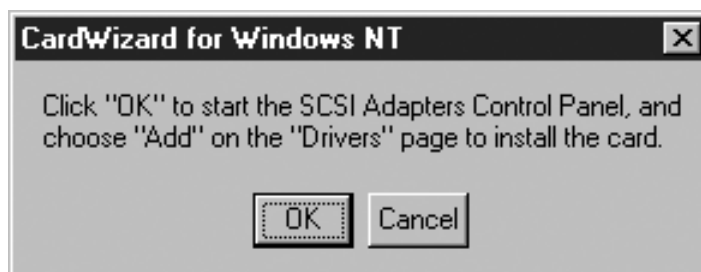
4. Click the **Drivers** tab and click **Add**.
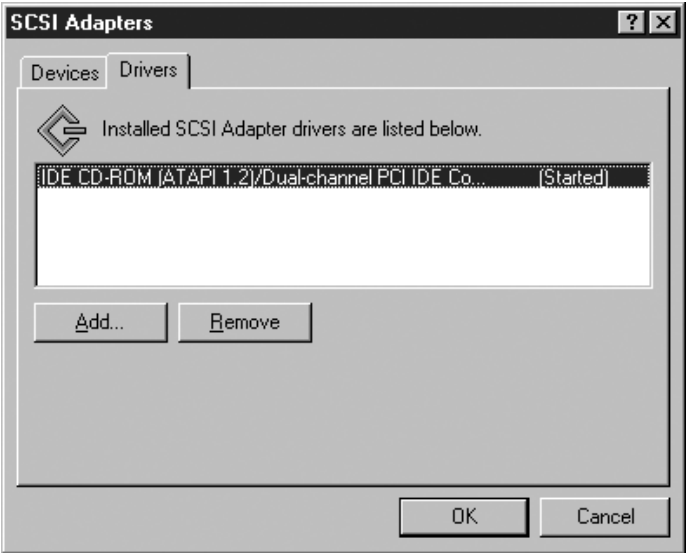
5. You will see the screen below. Click **Have Disk**.
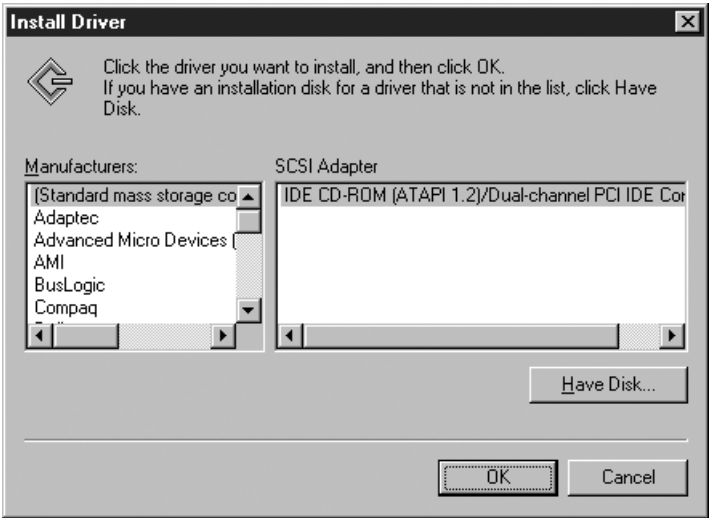
6. You will see the screen below. Type **A:** at Copy manufacturer's files from and click **OK**.
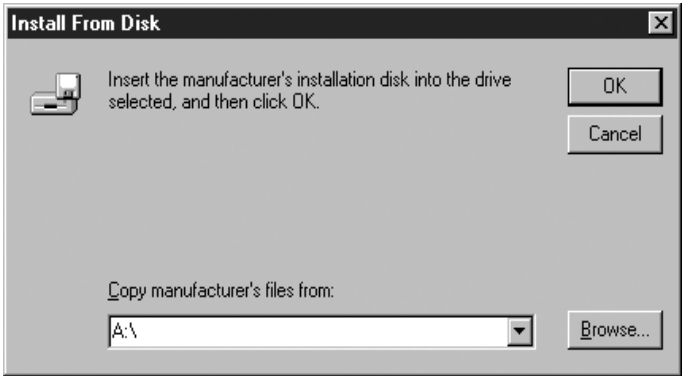
7. You will see the screen below. Click **OK**.
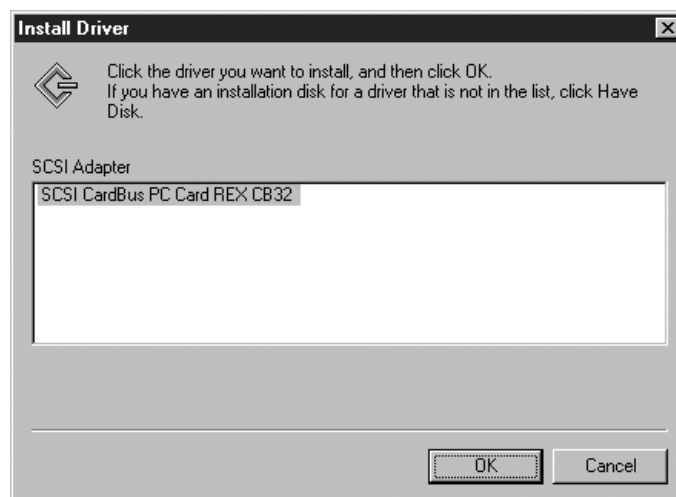
8. You will see the screen below. Click **Yes**.
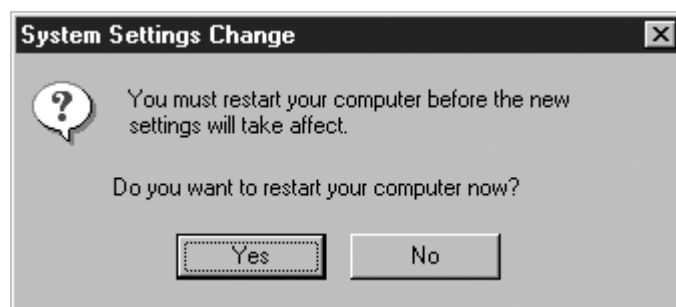
2-4-2. Confirming the installation of the CB32U driver

Follow the steps through to confirm the installation of the CB32U driver.

1. Double-click on the icon on the Windows taskbar.

2. Confirm the **UltraWIDE SCSI CB32** string is shown. Then, click the property button.
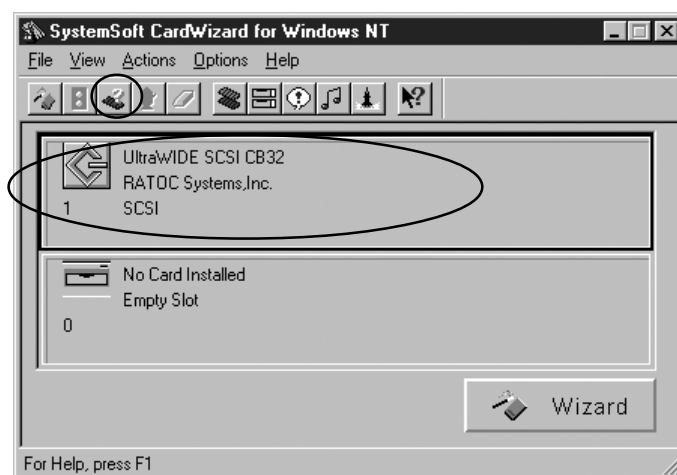

3. You will see the screen below. You can know the resources of the CB32U.
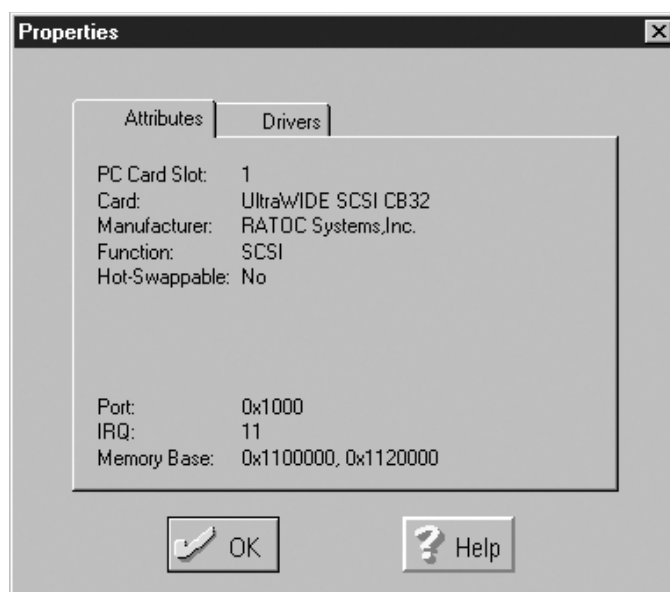
2-4-3. Removing the CB32U

When you want to remove the CB32U from the PC, you have to follow these steps through:

1. Shut down Windows NT4.0.

2. Turn off the PC and remove the CB32U.

2-5. Windows 2000 Setup

Here's how to get started with the CB32U and SCSI devices on Windows 2000:

1. Read the restrictions before you install the CB32U.

2. Install the CB32U into the PC. Refer to Chapter 2-5-1.

3. Confirm the installation. Refer to Chapter 2-5-2.

4. Remove the CB32U from the PC. Refer to Chapter 2-5-3.

5. Connect a SCSI device. Refer to Chapter 3-1.

6. Confirm the SCSI connection. Refer to Chapter 3-2.

*You must be logged on as Administrator or have administrator privileges to install the CB32 driver.

2-5-1. Installing the CB32U on Windows 2000

1. Check to see if your PCMCIA Controller supports CardBus PC Cards.

   a. Right-click on **My Computer**.

   b. Select **Properties**. You will see the **System Properties** window below.

   c. Click the **Hardware** tab.

d. Click the **Device Manager** button.

e. Double-click **PCMCIA adapters** and make sure there is a CardBus controller name string without "**!**" or "**X**" marks.

If you find a **Intel PCIC compatible PCMCIA controller** string under the **PCMCIA adapters**, your PC Card slot may not support CardBus PC Cards or CardBus setting may be set disable in the BIOS of your PC. If CardBus setting is set disable in the BIOS, select **CardBus** from **Disable/ PCIC Compatible/CardBus** option in the BIOS to set CardBus setting enable.

f. Double-click the CardBus controller name string to show the property window. If **This device is working properly** appears under the **Device status**, you can use the CB32U.


2. Grasp the CB32U by the edges with the label facing upward. Insert the CB32U into the slot and push it in until it is firmly seated. If the CB32U can not be firmly seated, check to see if the PC Card slot supports CardBus PC Cards. If the following window as shown at step 3 does not appear, the PC may not support CardBus PC Cards. Check to see if the PC Card slot supports CardBus PC Cards. For more information, contact your PC manufacturer.

Windows 2000

3. You will see the screen below. Click **Next**.

4. You will see the screen below. Select the **Search for a suitable driver for my device(recommended)** option and click **Next**.

5. You will see the screen below. Insert the CB32U floppy disk for Windows 2000. Then, select the **Floppy disk drives** option and click **Next**.

6. You will see the screen below. Click **Next**.

7. You will see the screen below. Click **Yes**.

8. You will see the screen below. Click **Finish**.

9. Wait until the **PC Card (PCMCIA)** icon appears on the Windows taskbar. This icon indicates that the CB32U is recognized.

10. Remove the floppy disk from the PC.

2-5-2. Confirming the Installation

1. Right-click on **My Computer** and select **Properties**. You will see the screen below.

Click the **HardWare** tab. Click the **Device Manager** button.
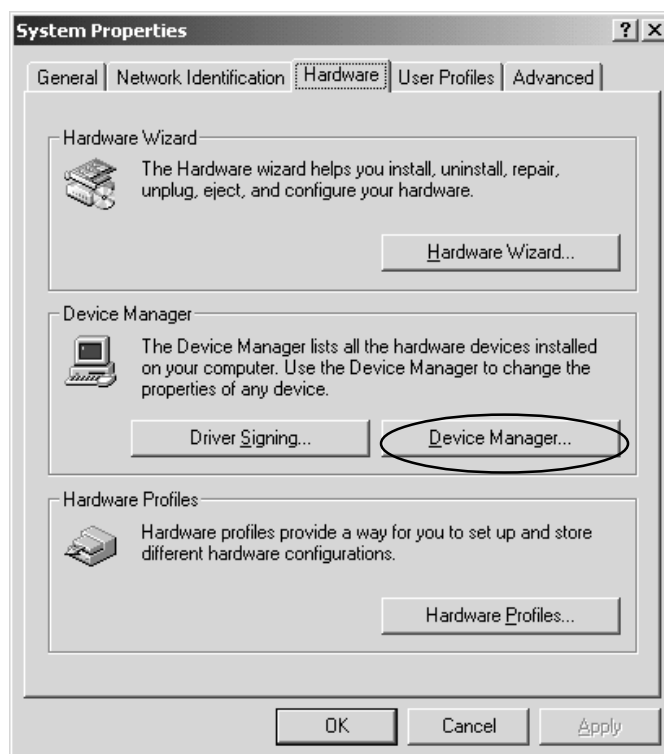
2. You will see the screen below. Double-click **SCSI PC Card REX-CB32 Win2K**.
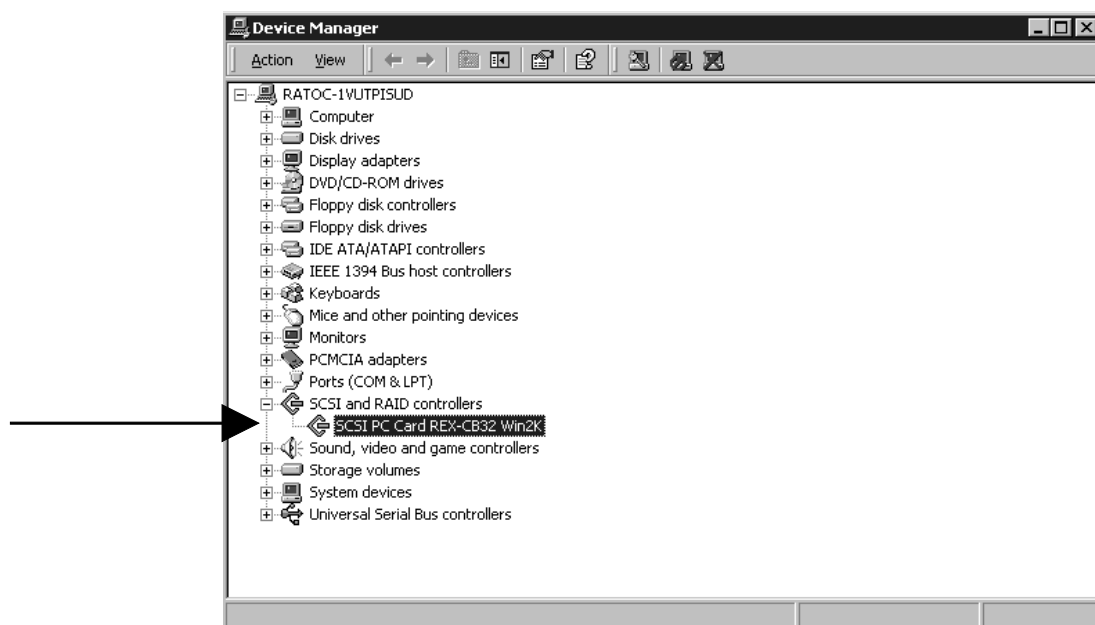
3. You will see the screen below.Click the **General** tab.If **This device is working properly** appears under the **Device status**, you have installed the CB32U driver correctly.
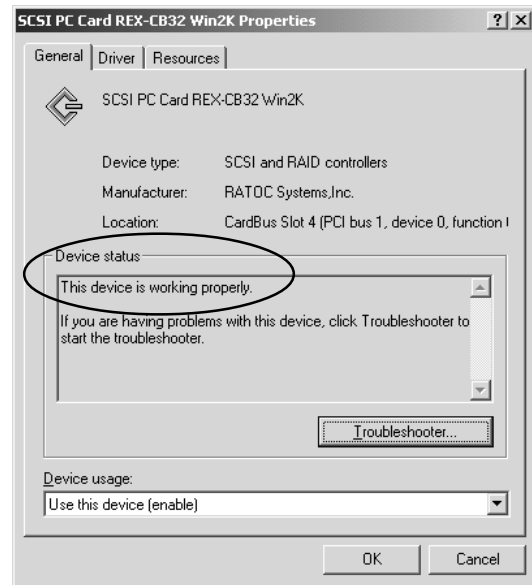
2-5-3. Removing the CB32U

When you want to remove the CB32U from the PC, you have to follow these steps through:

1. Click the **PC Card** icon on the Windows taskbar.
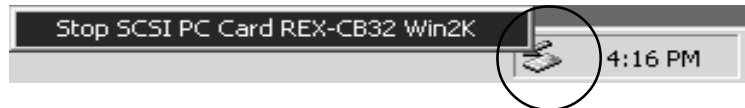
2. Select **Stop SCSI PC Card REX-CB32 Win2K**.

3. When the window saying **You may safely remove this device** appears, you can remove the CB32U from the PC.

4. Press an eject button of the PC Card slot (1). Grasp the CB32U by the edge and pull it straight out of the PC Card slot (2).
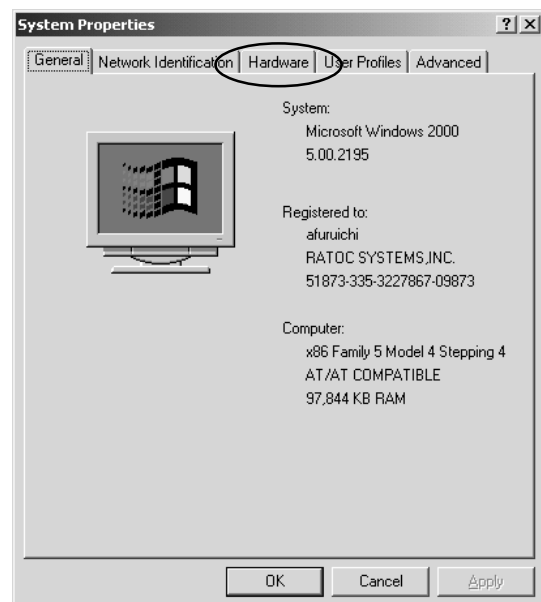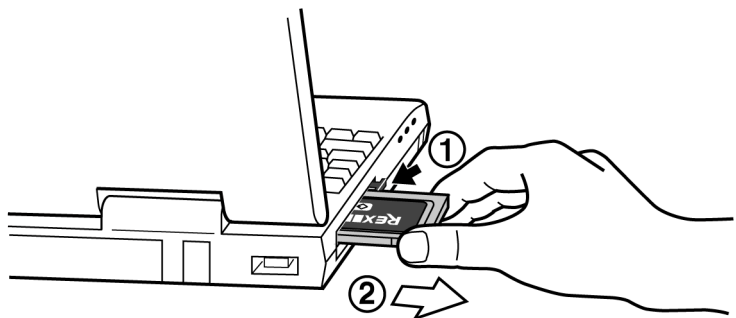
2-6. Windows XP Setup

Here's how to get started with the CB32U and SCSI devices on Windows XP:

1. Read the restrictions before you install the CB32U.

2. Install the CB32U into the PC. Refer to Chapter 2-6-1.

3. Confirm the installation. Refer to Chapter 2-6-2.

4. Remove the CB32U from the PC. Refer to Chapter 2-6-3.

5. Connect a SCSI device. Refer to Chapter 3-1.
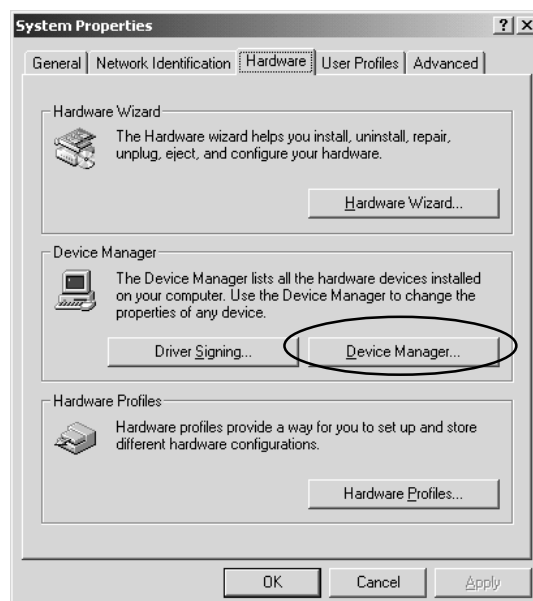
6. Confirm the SCSI connection. Refer to Chapter 3-2.

*You must be logged on as Administrator or have administrator privileges to install the CB32 driver.

2-6-1. Installing the CB32U on Windows XP

1. Check to see if your PCMCIA Controller supports CardBus PC Cards.

   a. Right-click on the **Start** button.

   b. Right-click on **My Computer** and select **Properties**. You will see the **System Properties** window below.

   c. Click the **Hardware** tab.

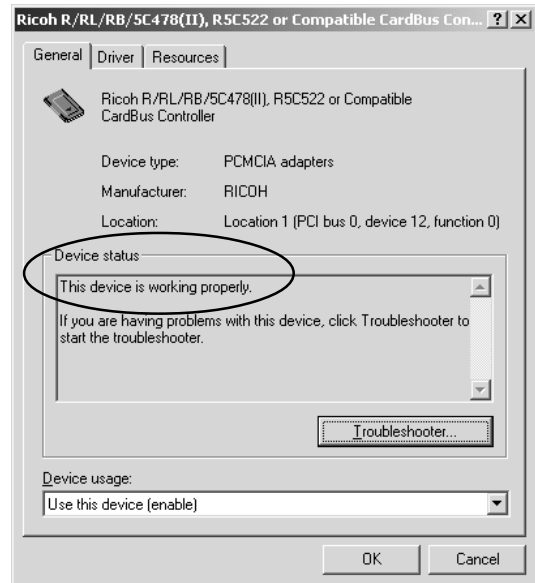   **d.** Click the **Device Manager** button.

e. Double-click **PCMCIA adapters** and make sure there is a CardBus controller name string without "**!**" or "**X**" marks.

If you find a **Intel PCIC compatible PCMCIA controller** string under the **PCMCIA adapters**, your PC Card slot may not support CardBus PC Cards or CardBus setting may be set disable in the BIOS of your PC. If CardBus setting is set disable in the BIOS, select **CardBus** from **Disable/PCIC Compatible/CardBus** option in the BIOS to set CardBus setting enable.

f. Double-click the CardBus controller name string to show the property window. If **This device is working properly** appears under the **Device status**, you can use the CB32U.

2. Grasp the CB32U by the edges with the label facing upward. Insert the CB32U into the slot and push it in until it is firmly seated. If the CB32U can not be firmly seated, check to see if the PC Card slot supports CardBus PC Cards. If the following window as shown at step 3 does not appear, the PC may not support CardBus PC Cards. Check to see if the PC Card slot supports CardBus PC Cards. For more information, contact your PC manufacturer.

3. You will see the screen below. Insert the CB32U floppy disk for Windows XP. Select the **Install from a list or specific location(Advanced)** option. Click **Next**.

4. You will see the screen below. Select the **Don't search. I will choose the driver to install** option and click **Next**.

Found New Hardware Wizard

Please choose your search and installation options.

○ Search for the best driver in these locations.

Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.

☑ Search removable media (floppy, CD-ROM...)
☐ Include this location in the search:

[   ] ▼   Browse

◉ Don't search. I will choose the driver to install.

Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.

< Back   Next >   Cancel

5. You will see the screen below. Select **SCSI and RAID controllers** and click **Next**.
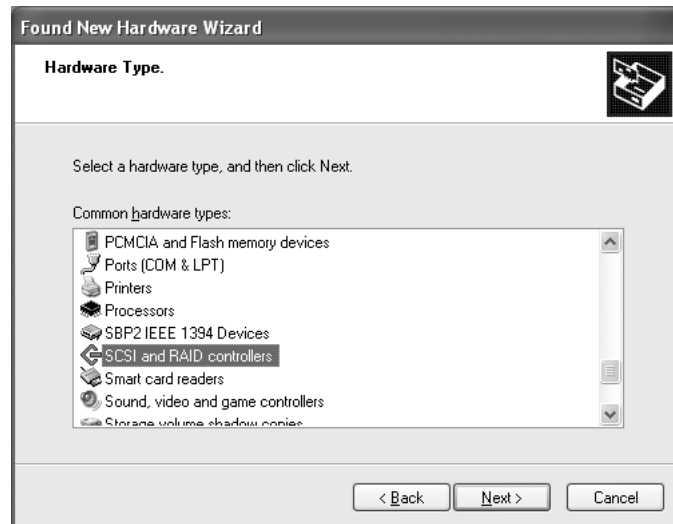
6. You will see the screen below. Select **Have Disk...** and click **Next**.

7. You will see the screen below. Type **A:** at the Copy manufacturer's files from and click **OK**.
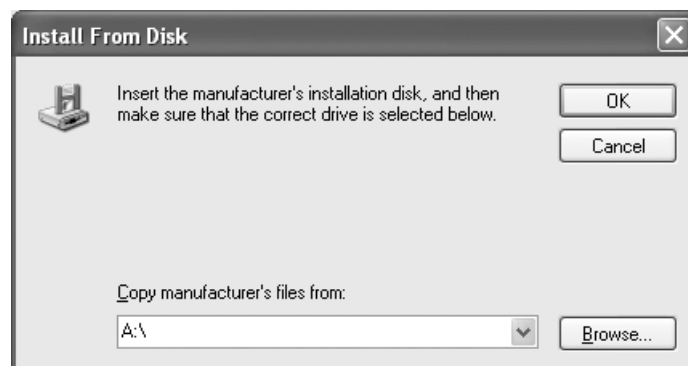
8. You will see the screen below. Click **Next**.

9. You will see the screen below. Click **Continue Anyway**.

10. You will see the screen below. Click **Finish**.

11. Wait until the **PC Card (PCMCIA)** icon appears on the Windows taskbar. This icon indicates that the CB32U is recognized.


**12.** Remove the floppy disk from the PC.

2-6-2. Confirming the Installation

1. Open **System Properties**. You will see the screen below. Click the **HardWare** tab. Click the **Device Manager** button.
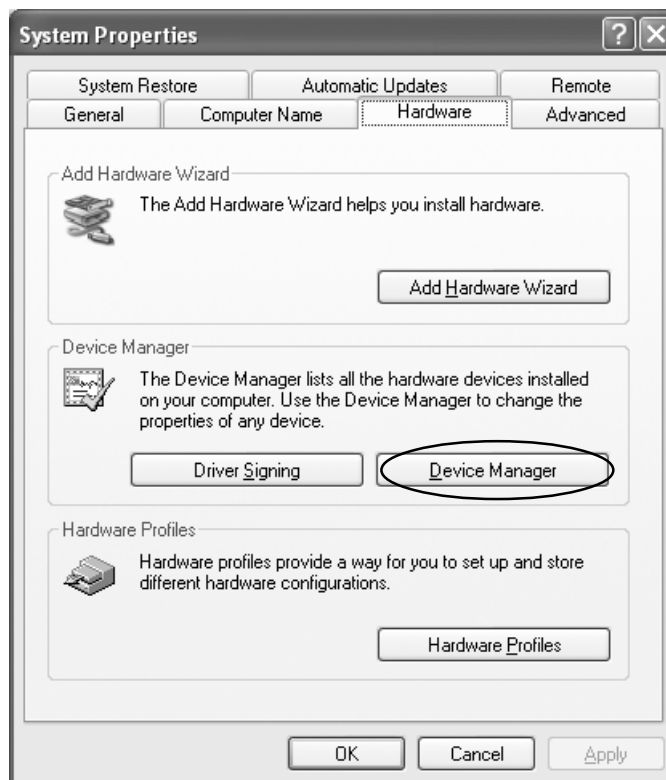
**2.** You will see the screen below. Double-click **SCSI PC Card REX-CB32 Win2K**.
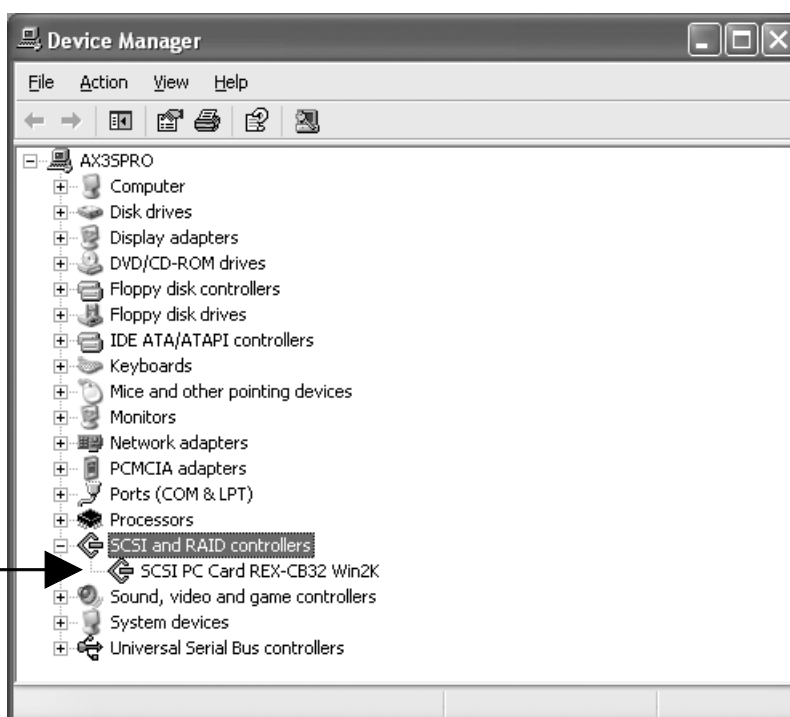
3. You will see the screen below. Click the **General** tab. If **This device is working properly** appears under the **Device status**, you have installed the CB32U driver correctly.

2-6-3. Removing the CB32U

When you want to remove the CB32U from the PC, you have to follow these steps through:

1. Click the **PC Card** icon on the Windows taskbar.

2. Select **Stop SCSI PC Card REX-CB32 Win2K**.

3. When the window saying **You may safely remove this device** appears, you can remove the CB32U from the PC.

4. Press an eject button of the PC Card slot (1). Grasp the CB32U by the edge and pull it straight out of the PC Card slot (2).

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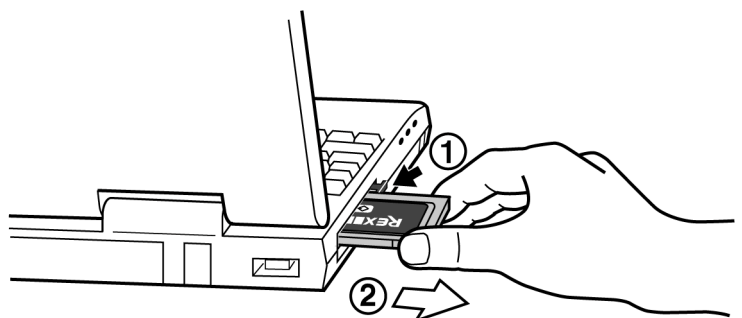
3. Using SCSI devices

3-1. Connecting a SCSI device

1. Attach an external active terminator to the SCSI device, as shown below. If the SCSI device has an internal terminator and the switch, set it on state. Refer to the SCSI device manual if you are not sure how to activate termination.
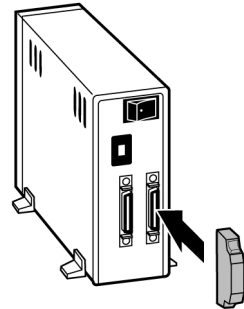
2. Be sure that at least one SCSI device connected to the CB32U supplies termination power to the SCSI bus. Refer to the SCSI device manual if you are not sure whether the SCSI device provides termination power.

3. Be sure that each SCSI device has a unique SCSI ID, ranging from 0 to 6. The CB32U uses SCSI ID 7. You can usually change a SCSI ID with a switch on the back of the SCSI device. For more information, refer to the SCSI device manual.
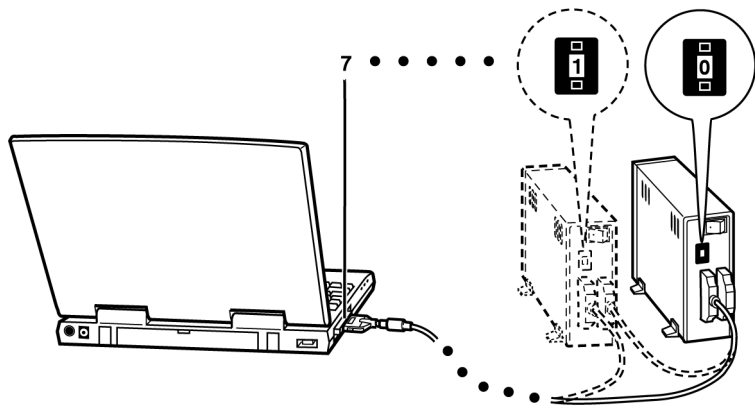
4. Connect the PCMCIA connector at the end of the SCSI cable to the CB32U, as shown below.
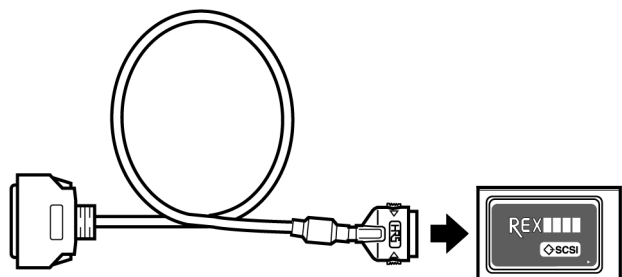
5. Attach the SCSI connector into the SCSI device.
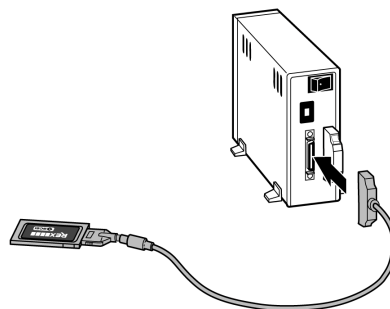
6. Turn on all the SCSI devices connected to the CB32U.

7. Wait until ACCESS LED of the SCSI devices goes off.
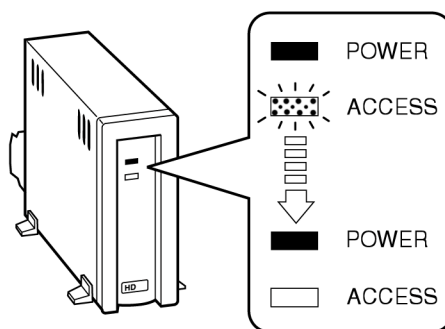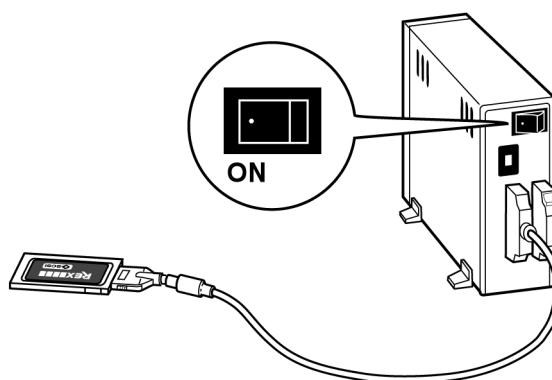
8. Turn your PC on and insert the CB32U into your PC.
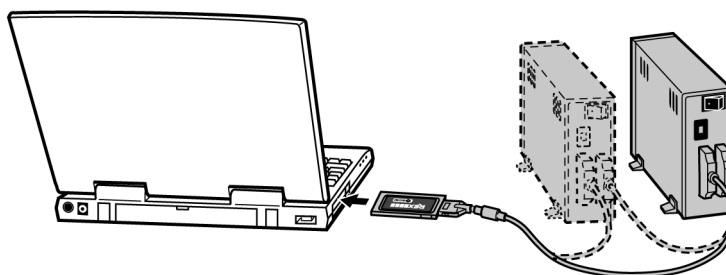
3-2. Confirming the SCSI device Connection

If you use Windows 95/98/Me/2000/XP, follow the steps through:

If you use Windows NT4.0, proceed to the next page.

1. Open **Device Manager**. Make sure the SCSI device name string appears in the **Device Manager**.

The following Device Manager in Windows 2000 shows Iomega Zip drive is connected to the CB32U.
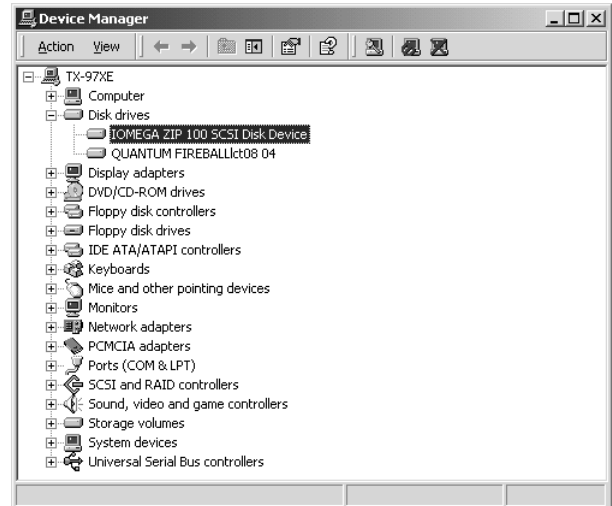
2. Double-click the SCSI device name string. The device properties window will appear.

3. If you can find **The device is working properly** under the **Device status**, the SCSI device is

working fine. The following SCSI device properties window in Windows 2000 also shows SCSI ID No.

Target ID xx means SCSI ID No.
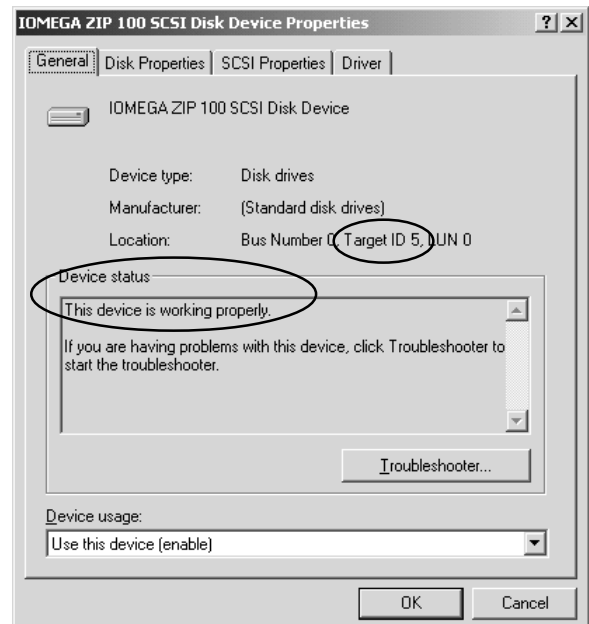
If you have connected a HDD, CD-ROM, Removable Disk such as Jaz or Zip drive, you can also find the

icon in **My Computer**.

NOTE

Never remove the CB32U until the ACCESS LED of the SCSI device goes off.

If you use Windows NT4.0, follow the steps below.

1. Open **SCSI Adapters** in the **Control Panel**.

2. You will see the following window. Click **SCSI CardBus PC Card REX CB32** to confirm your SCSI device is connected to the CB32U correctly. Select the SCSI device name and click **Properties**.
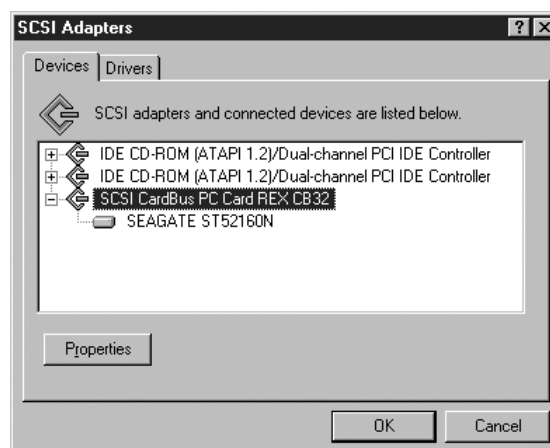
3. You will see the following window. If you can find **The device is working properly** under the **Device Status**, the SCSI device is working fine.
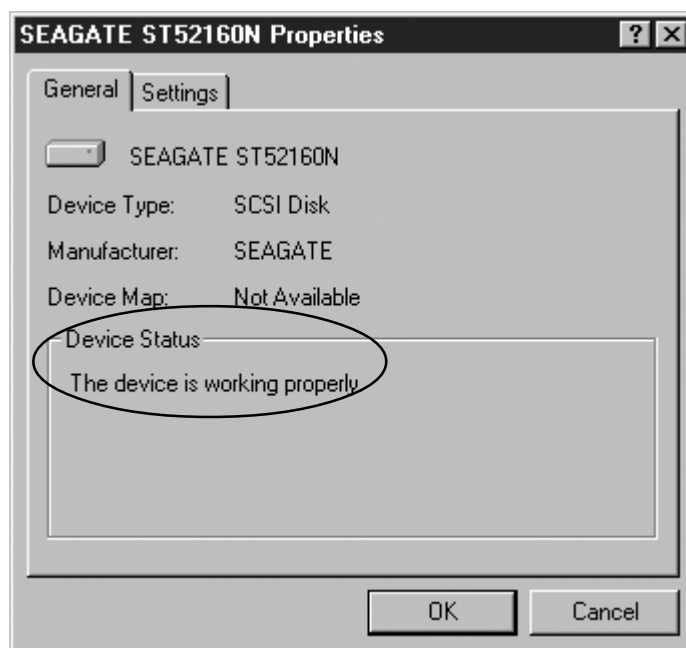
If you have connected a HDD, CD-ROM, Removable Disk such as Jaz or Zip drive, you can also find the icon in **My Computer**.

NOTE

Never remove the CB32U until the ACCESS LED of the SCSI device goes off.

4. Installing SCSI Utility

To install SCSI Utility, follow the steps through:

1. If you use Windows 95/98/Me, insert the CB32U floppy disk for Windows 95/98 into the floppy drive.

If you use Windows NT4.0, insert the CB32U floppy disk for Windows NT4.0 into the floppy drive.

If you use Windows 2000, insert the CB32U floppy disk for Windows 2000 into the floppy drive.

2. Double-click the **SCSIUT** folder in the floppy disk.

3. Double-click on the **Setup.exe**. You will see the screen below. Click **[Next]**.
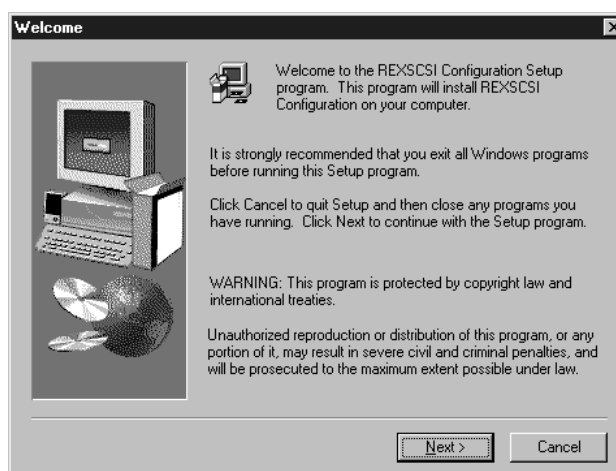
4. Follow the instructions on the screen. If you have installed it correctly, the following utility is installed

in the **[RexSCSI]**-**[Programs]**of the **[Start]** button on the Windows taskbar.

-**Format Utility** : Refer to Chapter 4-1 for more information.

-**REXSCSI Configuration Utility** : Refer to Chapter 4-2 for more information.

-**SCSI Device Check Utility** : Refer to Chapter 4-3 for more information.

4-1. Format Utility

You can format a HDD, Jaz, MO, Zip drive, etc., with this uiliity.

NOTE:

You can not format CD-R, CD-RW or DVD-RAM.

Follow these steps through to format your SCSI drive.

1. Make sure the SCSI device is connected and powered on.

2. If the device is a removable disk and a media is not inserted, insert a media.

3. Click the **[Start]** button and select **[Programs]**-**[RexSCSI]**-**[Format Utility]**.

4. You will see the window below. Select the SCSI device you want to format. Then, click the **Select**

   button.

5. You will see the window below. Select **Initialize/Format media** from the **Edit** menu.
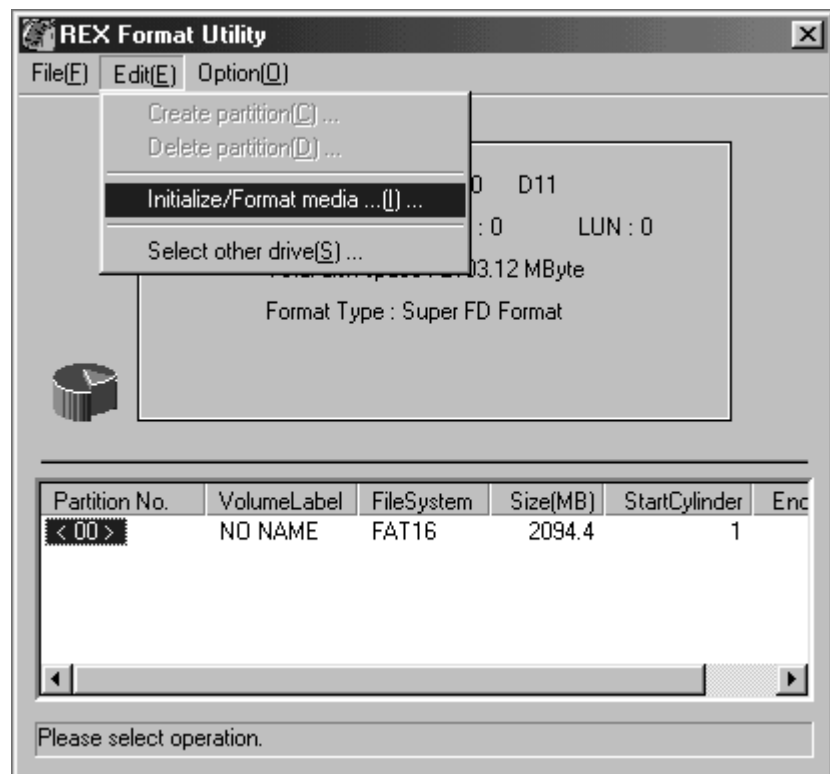
6. You will see the window below. Choose **format type**. If you want to do Low Level Format simultaneousely, check the **Low level format** check box. Then click **OK**.
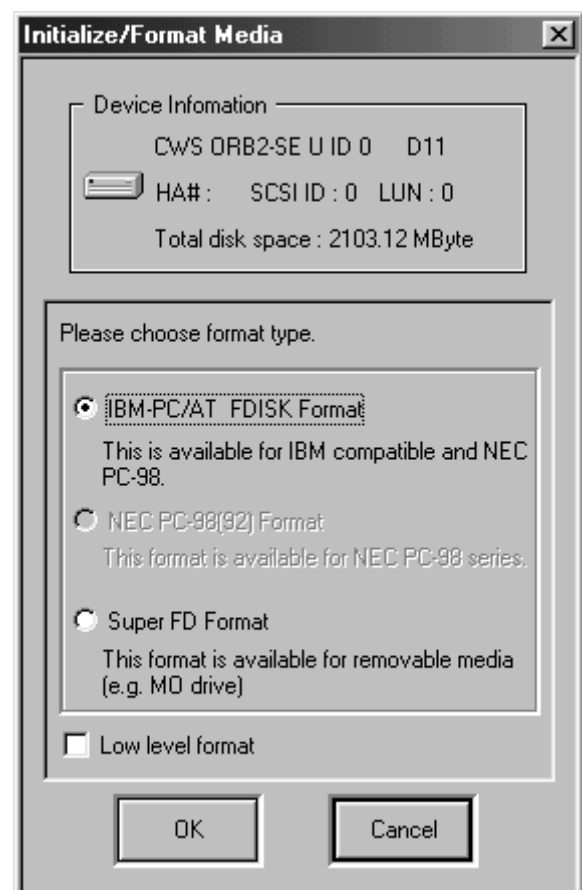
7. a. If you have selected **IBM-PC/AT FDISK Format** at step 6, the message box saying **[You should create partition next]** appears. Click **OK**. You will see the screen shown at step 5. Select **Create partition** from the **Edit** menu to create partition.

You will see the screen below. Select **File System** from the list box and set Partition size, using the slider bar. Then, click **OK**.

b. If you have selected **Super FD Format** at step 6, you will see a screen similar to the following. Select **File System** from the list box.

Slider bar
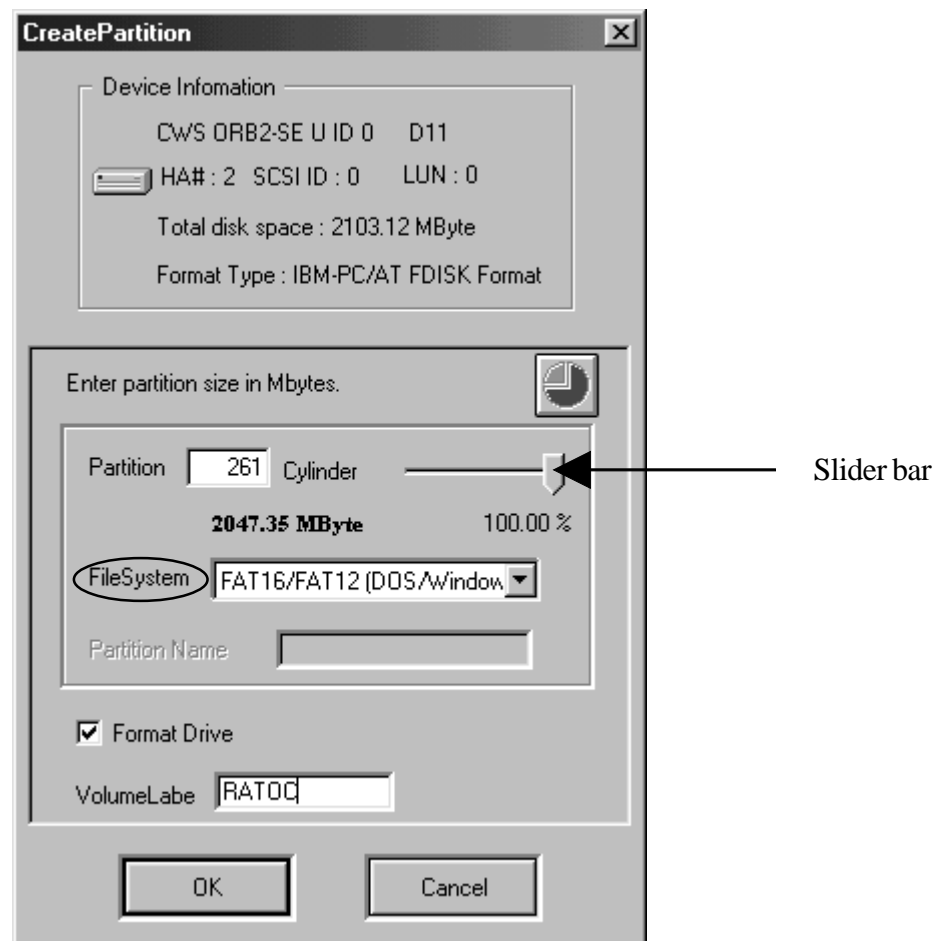
NOTE:

If you select FAT32 in [File System], MS-DOS/Windows 3.1, Windows NT can not access to the FAT32 media.

8. To take efect, restart your computer or take the CB32U out and into the slot.

4-2. REXSCSI Configuration Utility

Normally you don't need to use this configuration utility. But, when you use the following SCSI devices, you need to use this configuration utility to change SCSI configuration.

-FUJITSU M2512A/M2513A MO drive (You need to set **10MB/s** at transfer rate)

-some scanners (You need to set **asynchronous** at transfer rate)

Follow these steps through to change SCSI configuration.

REXSCSI Configuration Utility

1. Turn off the SCSI device connected to the CB32U and close all programs currently running.

2. Click the **[Start]** button and select **[Programs]**-**[RexSCSI]**-**[REXSCSI Configuration]**.

3. You will see the screen below. Select **REXCB32** in the **Select SCSI HostAdapter** list and click **Select**.
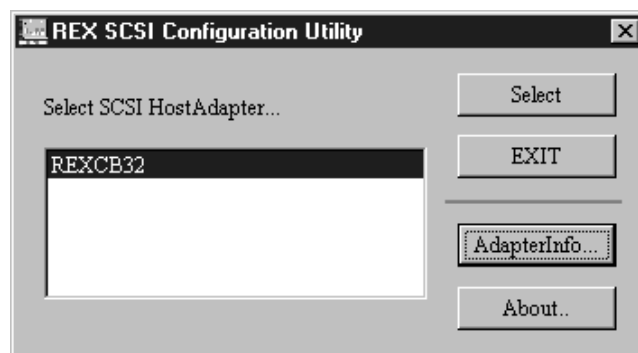
4. SCSI Configuration window will appear. If you connect **FUJITSU MO(M2512A, M2513A)**, select

10MB/sec.at **MaxTransfer**. If you connect an asynchronous scanner device, don't put check mark

at **Sync. Transfer Enable**. Then click **WRITE**.

HostAdapter SCSI ID

Default setting is 7.If you connect the device which can not assigned other than 7,change the ID.

Parity Check

Default setting is Enable.If you connect the device which does not have parity function,check Disable.

Max Transfer(MB/s)

Default setting is 40. Select the transfer rate by trying the choices shown until you find one

that is successful.

Sync.Transfer Enable

Default setting is on(checked). If you connect a asynchronous device, set this function off.

Wide Transfer Enable

Default setting is on(checked). If you connect a narrow SCSI device, set this function off.

Disconnect Enable

Default setting is on(checked) at all IDs. In case of ON,the device is disconnected from the SCSI bus

temporarily.While the device is disconnected, the SCSI PC Card can run other function to the SCSI

bus.

NOTE

If your SCSI device doesn't work fine, try to set Sync.Transfer, Wide Transfer and Disconnect

function disable.

4-3. SCSI Device Check Utility

With this utility, you can check whether your SCSI device connected to the CB32U is recognized or not.

Follow these steps through to check it.

1.   Connect your SCSI device to the CB32U and turn on the SCSI device.

2.   Click the **[Start]** button and select **[Programs]**-**[RexSCSI]**-**[SCSI Device Check Utility]**.

3.   You will see the screen below. Make sure **REXCB32** appears in the **HostAdapter** list box.

   If **ESDI** appears in the **HostAdapter** list box, change it to **REXCB32**.

   If you can not find **REXCB32** or change **ESDI** to **REXCB32**, check the following points:

   -You have not installed the CB32U driver yet.

   -The SCSI cable is not connected firmly.

   -You have not turned on the SCSI device or have not set terminator of the SCSI device ON.
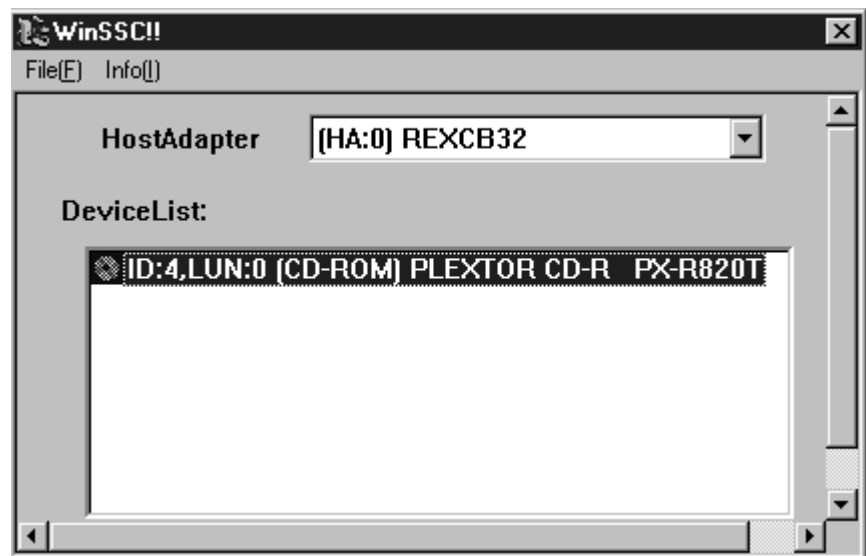
   If Device List shows your SCSI device name connected to the CB32U, your SCSI device is recognized

   correctly. Device List also shows the following information from the left:

   - SCSI device ID No.(ID:)

   - Logical Unit No.(LUN:)

   - Device type (xxx)

   - Vendor name and model name

When you double-click on the SCSI device name in the Device List, you will see information on it as shown below.

5. Installing Windows 95/98

This chapter explains how to make a startup floppy disk and how to access to a SCSI CD-ROM connected to the CB32U with the startup floppy disk. If you can accees to a SCSI CD-ROM with the startup floppy disk, you can install Windows 95/98 from the SCSI CD-ROM.

If you use Windows 95, refer to Chapter 5-1.

If you use Windows 98, refer to Chapter 5-2.

MS-DOS

5-1. Making a Windows 95 startup floppy disk

This section gives you information on how to make a Windows 95 startup flopply disk. With the startup

floppy disk, you can access to the SCSI CD-ROM drive connected to the CB32U and install Windows 95

from the SCSI CD-ROM drive.

Follow the steps through to make a Windows 95 startup floppy disk

1.Edit Config.sys file in a Windows 95 startup floppy disk

 Edit config.sys file in a Windows 95 startup floppy disk as shown below.(This is an example)

```
DEVICE = HIMEM.SYS
DEVICE = EMM386.EXE  X = CC00-CFFF
BUFFERS = 10
FILES = 20
DEVICE = CBENABLE.EXE  IRQ = A  MEM = CC00
DEVICE = ASPCB32.SYS  /D
DEVICE = REXCD.SYS  /D:MSCD001 /E
```

> **NOTE:**   **CBENABLE.EXE** is CardBus Enabler. Refer to CBENABLE.EXE parameter.
> **ASPCB32.SYS** is ASPI Manager. Refer to ASPCB32.SYS parameter.
> **REXCD.SYS** is CD-ROM driver. Refer to REXCD.SYS parameter.

2.Make Autoexec.bat file in the Windows 95 startup floppy disk and edit it as shown below.

```
@echo off
MSCDEX.EXE  /D:MSCD001
```

3. a.Copy the **CBENABLE.EXE, ASPCB32.SYS, REXCD.SYS** in the **[Dos]** folder in the CB32U
floppy disk for Windows 98/95 to the Windows 95 startup floppy disk.

 b.Copy the EMM386.EXE and MSCDEX.EXE in your system to the Windows 95 startup floppy disk.

4.Insert the Windows 95 startup floppy disk and start your PC.

 The SCSI CD-ROM will be assigned and you can access to the SCSI CD-ROM drive. You can install

 Windows 95 from the SCSI CD-ROM drive.

MS-DOS

5-2. Making a Windows 98 startup floppy disk

This section gives you information on how to make a Windows 98 startup flopply disk. With the startup floppy disk, you can access to the SCSI CD-ROM drive connected to the CB32U and install Windows 98 from the SCSI CD-ROM drive.

Follow the steps through to make a Windows 98 startup floppy disk

1.Edit Config.sys file in a Windows 98 startup floppy disk

Edit config.sys file in a Windows 98 startup floppy disk as shown below.(This is an example)

```
[CD]
DEVICE = HIMEM.SYS /testmem:off
DEVICE = EMM386.EXE  X = CC00-CFFF
BUFFERS = 10
FILES = 20
DEVICE = CBENABLE.EXE  IRQ = A  MEM = CC00
DEVICE = ASPCB32.SYS  /D
DEVICE = REXCD.SYS  /D:MSCD001 /E
```

NOTE: **CBENABLE.EXE** is CardBus Enabler. Refer to CBENABLE.EXE parameter.
ASPCB32.SYS is ASPI Manager. Refer to ASPCB32.SYS parameter.
REXCD.SYS is CD-ROM driver. Refer to REXCD.SYS parameter

2.a.Copy the **CBENABLE.EXE, ASPCB32.SYS, REXCD.SYS** in the **[Dos]** folder in the CB32U floppy disk for Windows 98/95 to the Windows 98 startup floppy disk.

b.Copy the EMM386.EXE and MSCDEX.EXE in your system to the Windows 98 startup floppy disk.

3.Insert the Windows 98 startup floppy disk and start your PC.

When you start your system, select **Start computer with CD-ROM support**.

The SCSI CD-ROM will be assigned and you can access to the SCSI CD-ROM drive. You can install Windows 98 from the SCSI CD-ROM drive.

MS-DOS

---------------------------- **CBENABLE.EXE parameter** --------------------------

Format: **DEVICE = <directory path>: \ CBENABLE.EXE [IRQ] [IO] [MEM]**

Parameter

[IRQ]

Set IRQ number used by the CB32U. If you don't set anything to this parameter, Ah(10) is set as IRQ number. If this doesn't work, you have to set IRQ number from among IRQ numbers which any devices don't use.   e.g.) IRQ = A

[IO]

Set IO port address used by the CB32U. If you don't set anything to this parameter, 1300h is set as IO port address. If this doesn't work, you have to set IO port address from among IO port address which any devices don't use.   e.g.) IO = 1000

[MEM]

Set memory address used by the CB32U. If you don't set anything to this parameter, the CB32U tries automatically to assign memory address which any devices don't use automatically. If the CB32U failed to assign memory address, memory address is not assigned.   e.g.) MEM = CC00

MS-DOS

------------------------- **ASPCB32.SYS parameter** ----------------------------

Format: **DEVICE = \<directory path\>: \ ASPCB32.SYS [/L] [/D]**

Parameter

[/L]

LUN(Logical Unit No). When you set this parameter, All LUN will be searched. If you don't set anything to this parameter, only LUN=0 will be searched. When you use PD drives, CD-ROM Changers, set this /L parameter.

[/D]

Display. When you set this /D parameter, the CB32U displays information including IO port address, IRQ, and the SCSI device connected to the CB32U as shown below.

MS-DOS

```
Card Bus Enabler  Vx.xx

IRQ = 0A  IO BASEAddress =1000  MEMORY BASE Address = CC00

Enable Success



REX Universal ASPI Manager x.xx

ASPI HOST Adapter #0  I/O Port 1000h   IRQ 10   SCSI ID 7

 SCSI ID #4  TYPE 5: MATSUSHITA PD-2 LF-D100  A106
```

------------------------- **REXCD.SYS parameter** -----------------------------

REXCD.SYS is a CD-ROM driver based on ASPI manager for DOS.

Format: **DEVICE = <directory path>: \ REXCD.SYS [/D:<Device name>][/U:1]**
                        [/ScanID:id + id + ……] [/NoScanID: id + id + ……][/N:1][/E][/HA:0]
                        [/NoPreFetch]

Parameter

[/D:<Device name>]   Set your CD-ROM device name.Use the same name written after /D: at
                                MSCDEX.EXE in Autoexec.bat file.

[/U:1]   If you connect only one SCSI CD-ROM drive, be sure to set /U:1.
                                 If you don't set anything to this parameter, all SCSI CD-ROM drives will
                                be registered after searching SCSI ID from 0 to 6.

[/ScanID:id + id + ……]   If you don't set anything to this parameter, REXCD.SYS searches SCSI ID
                                from 0 to 6 to find the SCSI CD-ROM connected to the CB32U.
                                But, if you set this parameter like /ScanID:0+1, REXCD.SYS skips searching
                                 SCSI ID from 2 to 6.

[/NoScanID: id + id + …]   If you set this parameter like /NoScanID:5+6, REXCD.SYS skips searching
                                 SCSI ID 5 and 6.

[/N:1]   If you set this parameter, REXCD.SYS will not search Logical Unit for SCSI
                                 CD-ROM drives. REXCD.SYS finds logical drive number of CD-ROM drives,
                                 searching Logical Unit No from 0 to 7. But there are some old types of CD-
                                 ROM drives having trouble when REXCD.SYS accesses to the CD-ROM
                                 drives with the Logical Unit No except 0. In this case, set this parameter /N:1.
                                 Don't set this parameter when you use drives which need to be set for Logical
                                 Unit like CD-Changers.

[/E]   Be sure to set this parameter /E

[/HA:0]   Set Host Adapter number. If you don't set anything to this parameter, 0 is set.

[/NoPreFetch]   If you set this parameter, Prefetch command is not issued to SCSI drives.
                                If you use CD-R drives named CD-R824SK, CD-R56S made by TEAC, be
                                sure to set this parameter.

MS-DOS

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------------------------- **REXDISKW.SYS parameter** --------------------------

REXDISKW.SYS is a driver for Hard Disk/Jaz/Zip drives based on ASPI manager for DOS.
REXDISKW.SYS can use only FAT12, FAT16 file system. REXDISKW.SYS can not use FAT32 file system.

Format: **DEVICE = <directory path>: \ REXDISKW.SYS [/ScanID:id + id + ……]**
                         [/NoScanID: id + id + ……] [/E][/HA:0]

Parameter

[/ScanID:id + id + ……] If you don't set anything to this parameter, REXDISKW.SYS searches SCSI ID
                          from 0 to 6 to find the Hard Disk Drive, etc connnected to the CB32U.
                          But, if you set this parameter like /ScanID:0+1, REXDISKW.SYS skips
                          searching SCSI ID from 2 to 6.

[/NoScanID: id + id + …] If you set this parameter like /NoScanID:5+6, REXDISKW.SYS skips searching
                          SCSI ID 5 and 6.

[/E]   Be sure to set this parameter /E

[/HA:0]   Set Host Adapter number. If you don't set anything to this parameter, 0 is set.

MS-DOS

6. Installing Windows 2000

This chapter explains how to install Windows 2000 from a SCSI CD-ROM connected to the CB32U.

If you upgrade Windows 98 or Windows NT4.0 to Windows 2000, refer to Chapter 6-1.

If you install a new copy of Windows 2000(Clean Install) from Windows 98/NT4.0, refer to Chapter 6-2.

If you install Windows 2000 with a Windows 95/98 startup floppy disk, refer to Chapter 6-3.

6-1. Upgrading Windows 98 or Windows NT4.0 to Windows 2000

Follow these steps through:

1. Connect your CD-ROM to the CB32U first. Then start Windows 98 or Windows NT4.0.

2. Copy **[i386]** directory in the Windows 2000 CD-ROM to the internal HDD.

3. If you have installed CardWare on Windows NT4.0, uninstall the CardWare from Windows NT4.0.

4. Remove the CB32U and start the **[WINNT32.EXE]** in the **[i386]** directory copied from Windows 2000 CD-ROM.

5. When setup starts, you can see two ways to install Windows2000 on the screen:

      -**[Upgrade to Windows 2000(Recommended)]**

      -**[Install a new copy of Windows 2000(Clean Install)]**

6. Select **[Upgrade to Windows 2000(Recommended)]**.

7. Install Windows 2000, following the instructions.

8. When you finish installing it, set up the CB32U if you need it.

Windows2000

Windows2000

6-2. Installing a new copy of Windows 2000 from Windows 98/NT4.0

Follow these steps through:

1. Start Windows 98 or Windows NT4.0.

2. You will see setup program of Windows 2000 running from the SCSI CD-ROM connected to the CB32U.

3. When setup starts, you can see two ways to install Windows 2000 on the screen:

　　-**[Upgrade to Windows 2000(Recommended)]**

　　-**[Install a new copy of Windows 2000(Clean Install)]**

4. Select **[Install a new copy of Windows 2000(Clean Install)]**.

5. After typing in the Product Key, click **[Advanced Options]** on the **[Select Special Options]** screen saying **[To review or change the default Setup options for copying files, click (Advanced Options)]**.

6. Check **[Copy all setup files from the setup CD to the hard drive]** on the **[Advanced Options]** screen and click **[OK]** button.

7. Install Windows 2000, following the instructions.

8. Before you restart your system, remove the CB32U.

9. When you finish installing it, set up the CB32U if you need it.

6-3. Installing Windows 2000 with a Windows 95/98 startup disk

Follow these steps below:

1. Make a Windows 95/98 startup floppy disk, refering to Chapter 5-1 or 5-2. Then, have your SCSI CD-ROM recognized by the Windows 95/98 startup floppy disk.

2. Format your internal HDD, if necessary.

3. Start **[WINNT.EXE]** in the **[i386]** directory in the Windows 2000 CD-ROM.

4. Install Windows 2000, following the instructions.

5. Before you restart your system, remove the CB32U.

6. When you finish installing it, set up the CB32U if you need it.

7. Linux

7-1. How to install the driver for Linux

This chapter explains how to install the CB32U driver for Linux. To install the driver, development module is required for your Linux. If you do not know how to set up development module, ask the distributor of your Linux. If you want to use the CB32U on RedHat 6.1, you need to log in as a **root user** first and follow the steps through.

The version of **[Kernel]** and **[PCMCIA-CS]** of RedHat 6.1 is as follows.

 Kernel version 2.2.12 / PCMCIA-CS version 3.0.14

 1.Copying the file to your HDD
 2.Extracting the file
 3.Making driver module
 4.Installing the driver module
 5.Confirming the installation

 1.Copying the file to your HDD

Insert the CB32U for Linux into the floppy drive and type the following command to read DOS format FD.

```
# mount -t vfat /dev/fd0 /mnt/floppy
```

Then, execute the following command to copy the file to your HDD.

```
# cp /mnt/floppy/linux/cb32_cb.tar.gz .
```

 2.Extracting the file

Extract the **cb32_cb.tar.gz**, following the procedure below.

```
# gunzip cb32_cb.tar
# tar xvf cb32_cb.tar
```

You will get the **cb32** folder which contains **[src]**,**[samples]**,**[modules]**,**[lib]** folder and **README-E-cb32**.

3.Making driver module

(1)Copying the driver source file

Copy the driver source file to the directory which includes PCMCIA Client Driver source.

(The directory normally means pcmcia-cs clients directory)

If there is the extracted driver source file in the directory /root/cb32, type the command as written below.

```
# cd /usr/src/linux-2-2.12/pcmcia-cs-3.0.14/clients
# cp /root/cb32/src/* .
# cp /root/cb32/lib/* .
```

The **cb32i850.c , cb32i850.h , cb32scsi.c , cb32scsi.h , load_fw.o** files will be copied.

(2)Editing Makefile

Add the seven lines below to Makefile in the clients directory to compile cb32_cb.

```
cb32_cb.o : cb32i850.c cb32scsi.c cb32i850.h cb32scsi.h
 $(CC) -MD -c $(XFLAGS) $(CPPFLAGS) I$(LINUX) cb32i850.c -o cb32i850.o
 @mkdir -p .depfiles ; mv cb32i850.d .depfiles
   $(CC) -MD -c $(XFLAGS) $(CPPFLAGS) I$(LINUX) cb32scsi.c -o cb32scsi.o
 @mkdir -p .depfiles ; mv cb32scsi.d .depfiles
   $(LD) r o $@ cb32i850.o cb32scsi.o load_fw.o
 rm -f cb32i850.o cb32scsi.o ; chmod x $@
```

Refer to the Makefile in the **[samples]** folder.

(3)Editing proc_fs.h

Go to the include/linux directory.

```
# cd /usr/src/linux-2.2.12/include/linux
```

Edit proc_fs.h to add [PROC_SCSI_CB32,] right after [PROC_SCSI_INIA100,] line.

Refer to the proc_fs.h in the **[samples]** folder.

If you can find proc_fs.h in the directory /usr/include/linux, edit it in the same way.

(4)Compiling cb32_cb

Compile cb32_cb with make command.

```
# make cb32_cb.o
```

Caution: If you get the error message saying [Makefile:8: ../config.mk:No such file or directory make: ***

No rule to make target '../conifg.mk'. Stop], Move up one directory and execute [make config].

You will get config.mk. Then move back to the clients directory and execute make command.

```
# cd ..
# make config
# cd clients
```

4.Installing the driver module

(1)Copying the driver module file (cb32_cb.o)

Copy the driver module file named **cb32_cb.o** to the directory which includes module related to PCMCIA.

```
# cp cb32_cb.o   /lib/modules/2.2.12-32/pcmcia/.
```

(2)Editing PCMCIA database (/etc/pcmcia/config)

Add the five lines below to load module so that the CB32U will be recognized.

```
device "cb32_cb"
  class "scsi" module "cb_enabler", "cb32_cb"
card "RATOC CardBus UltraWide SCSI CB32"
  version "RATOC Systems, Inc." , "UltraWIDE SCSI CB32"
  bind "cb32_cb"
```

Refer to the config file in the **[samples]** directory.

(3)Rebooting your system for your changes to take effect.

```
# reboot
```

You have now completed the installation.

5.Confirming the installation

When you insert the CB32U while pcmcia module is running, you will hear a recognition sound and see the following message.

```
scsi0: RATOC CB32 SCSI device driver ; Revision: x.xx
scsi:   1 host
```

If PCMCIA database (/etc/pcmcia/config) is wrong or the CB32U is not recognized, you will hear a rejecting sound. In such a case, check the message which will appear in /var/log/messages.

NOTE: We tech-support only how to install the driver. We do not tech-support how to use your

SCSI devices on Linux

Linux

7-2. SCSI Configuration Utility for Linux:inicconf

This section explains the instructions to set up the CB32U on RedHat Linux 6.1.

Login as as an root user before setting up the CB32U SCSI Configuration Utility.

1.Copying the file to your HDD

Insert the CB32U for Linux into the floppy drive and type the following command to read DOS format FD.

```
# mount -t vfat /dev/fd0 /mnt/floppy
```

Then, execute the following command to copy the file to your HDD.

```
# cp /mnt/floppy/linux/inicconf.tar.gz .
```

2.Extracting the file

Extract the **inicconf.tar.gz**, following the procedure below.

```
# gunzip inicconf.tar
# tar xvf inicconf.tar
```

You will get the **inicconf** folder which contains **[bin]**,**[src]** and **README-E-inicconf**.

3. Confirming the source files

Go to inicconf/src directory to confirm you get the following files.

```
inicconf.c  --  source file of inicconf

eepinic.h  --  header file for eeprom

Makefile  --  make file
```

Linux

4. Compiling inicconf.c

Execute make and compile inicconf.c.

```
#  make inicconf
```

Note: You might see some warning messages. If you can build inicconf, don't worry about it.

5. Copying inicconf

Copy inicconf to the directory where you can execute it.

(for example : /usr/local/bin)

```
#  cp inicconf   /usr/local/bin/.
```

-Restrictions-

To execute inicconf, the driver modules of CB32U need to be loaded. If the modules are not loaded, the following error message shows up.

```
Not found host adapter
```

Sometimes, you might see the following messages.

```
Driver module does not active.
You must connect some scsi devices, then reboot system.
```

At that time, connect a SCSI device and turn on the device power and reboot the system.

Executing inicconf

[format]   inicconf <command=parameter>

[command, parameter]

-v   To show the status of current setting

-x   To show the value of EEPROM (Hex)

--disc_all=<on | off>

To set enable/disable of Disconnect for all SCSI ID

(for example)

--disc_all=on : enable Disconnect with SCSI-ID 0-15

--disc_all=off : disable Disconnect with SCSI-ID 0-15

-**-disc<n>=<on | off>**

To set enable/disable of Disconnect for specific SCSI ID

(for example)

--disc3=on   : enable Disconnect only with SCSI-ID 3

--disc5=off : disable Disconnect only with SCSI-ID 5

--sync_all=<40 | 26.6 | 20 | 16 | 13.3 | 11.4 | 10 | async>

To set Transfer rate for all SCSI ID

(for example)

--sync_all=10   : 10MB/sec for all SCSI-ID

--sync_all=async : Async. transfer for all SCSI-ID

--sync<n>=<40 | 26.6 | 20 | 16 | 13.3 | 11.4 | 10 | async>

To set Transfer rate for spesific SCSI ID

(for example)

--sync3=10   : 10MB/sec only for SCSI-ID 3

--sync5=async : Async.transfer only for SCSI-ID 5

-wide_all=<on | off>

To set enable/disable of Wide negotiation for all SCSI ID

(for example)

--disc_all=on   : enable Wide negotiation with SCSI-ID 0-15

--disc_all=off : disable Wide negotiation with SCSI-ID 0-15

--wide<n>=<on | off>

To set enable/disable of Wide negotiation for specific SCSI ID

(for example)

--disc3=on   : enable Wide negotiation only with SCSI-ID 3

--disc5=off : disable Wide negotiation only with SCSI-ID 5

Linux

[Example]

 # inicconf -v

PCI31/33, CB32 scsi configuration utility ....

Initio INIC-850 on RATOC CB32 found. I/O Base = 0800

View EEPROM Setting:	ID-0	ID-1	ID-2	ID-3	ID-4	ID-5	ID-6	ID-7
Enable Disconnect :	on	off	off	on	on	on	on	on
Syncronous transfer :	20MB	10MB	40MB	40MB	40MB	40MB	40MB	40MB
Wide Negotiation :	on	off	on	on	on	on	on	on

View EEPROM Setting:	ID-8	ID-9	ID-10	ID-11	ID-12	ID-13	ID-14	ID-15
Enable Disconnect :	on	off	off	on	on	on	on	on
Syncronous transfer :	40MB	40MB	40MB	40MB	40MB	Async	40MB	40MB
Wide Negotiation :	on	on	on	on	on	on	on	on

 # inicconf --disc_all=on --sync3=20

PCI31/33, CB32 scsi configuration utility ....

Initio INIC-850 on RATOC CB32 found. I/O Base = 0800

View EEPROM Setting:	ID-0	ID-1	ID-2	ID-3	ID-4	ID-5	ID-6	ID-7
Enable Disconnect :	on	on	on	on	on	on	on	on
Syncronous transfer :	20MB	10MB	40MB	20MB	40MB	40MB	40MB	40MB
Wide Negotiation :	on	off	on	on	on	on	on	on

View EEPROM Setting:	ID-8	ID-9	ID-10	ID-11	ID-12	ID-13	ID-14	ID-15
Enable Disconnect :	on	on	on	on	on	on	on	on
Syncronous transfer :	40MB	40MB	40MB	40MB	40MB	Async	40MB	40MB
Wide Negotiation :	on	on	on	on	on	on	on	on

Linux

8. Troubleshooting

8-1. Deleting the CB32U driver completely

If you use Windows 95/98/Me, refer to Chapter 8-1-1.

If you use Windows NT4.0, refer to Chapter 8-1-2.

If you use Windows 2000, refer to Chapter 8-1-3.

8-1-1. Deleting the CB32U driver on Windows 95/98/Me

If you failed to install the CB32U driver and want to re-install it from the start, delete it first.

Follow the steps through to delele the CB32U driver completely.

1. Remove the CB32U from the **Device tree**.

    a. Right-click on **My Computer**.

    b. Select **Properties**.

    c. Select the **Device Manager** tab.

    d. Double-click **SCSI controllers**.

    e. Select **SCSI CardBus PC Card REX CB32**.

    f. Click the **Remove** button.

    g. If you can not find it under **SCSI controllers**, check to see if there is **SCSI CardBus PC Card REX CB32** under **Other Devices**. If you find it, select it and click the **Remove** button.

    h. Remove the CB32U from the PC.

2. Remove the driver file and INF file.

    a. Double-click the **My Computer** icon.

    b. Select **(Folder)Options** in the **View(Tools)** menu.

    c. Click the **View** tab. Check the **Show all files(Show hidden files and folders)**.

    d. Select **Find(Search) and (For)Files or Folders** on the start menu.

    e. Type **REXCB32.MPD** in the **Named** box.

    f. Type the drive letter where Windows 95/98/Me is installed in **Look in** box.

    g. Click the **Find Now(Search Now)** button.

    h. If **REXCB32.MPD** appears, select it and press the **Delete** key.

    i. Type **CB32RATOCREXCB32.INF** in the **Named** box.

    j. Type the drive letter where Windows 95/98/Me is installed in **Look in** box.

    k. Click the **Find Now(Search Now)** button.

    l. If **CB32RATOCREXCB32.INF** appears, select it and press the **Delete** key.

3. You have now deleted the CB32U driver completely. You can now re-install the CB32U.

4. Restart your PC.

8-1-2. Deleting the CB32U driver on Windows NT4.0

If you failed to install the CB32U driver and want to re-install it from the start, delete it first.

Follow the steps through to delele the CB32U driver completely.

1. Remove the CB32U from the **SCSI Adapters**.

   a.   Open **[SCSI Adapters]** in the **[Control Panel]**.

   b.   Click the **Drivers** tab.

   c.   Select the **[SCSI CardBus PC Card REX CB32]**.

   d.   Click the **Remove** button to remove it from the **SCSI Adapters**.

2. Remove the driver file and INF file.

   a.   Double-click the **My Computer** icon.

   b.   Select **Options** in the **View** menu and click the **View** tab.

   c.   Check the **Show all files**.

   d.   Select **Find** - **Files or Folders** on the start menu.

   e.   Type **REXCB32.SYS** in the **Named** box.

   f.   Select the drive letter where Windows NT4.0 is installed in the **Look in** box.

   g.   Click the **Find Now** button.

   h.   If **REXCB32.SYS** appears, select it and press the **Delete** key.

   i.   Type **OEM*.INF** in the **Named** box.

   j.   Select the drive letter where Windows NT4.0 is installed in the **Look in** box.

   k.   Click the **Find Now** button.

   l.   Many files may appear. Choose OEM*.INF files(*** is a number**) and open these files to see their content. If you can find a string of CB32, select it and press the **Delete** key.
   Then, you have to delete OEM*.PNF file(* of OEM*.INF and * of OEM*.PNF are the same number)

8-1-3. Deleting the CB32U driver on Windows 2000

If you failed to install the CB32U driver and want to re-install it from the start, delete it first.

Follow the steps through to delele the CB32U driver completely.

1. Remove the CB32U from the **Device tree**.

    a. Right-click on **My Computer**.

    b. Select **Properties**.

    c. Select the **Hardware** tab.

    d. Click the **Device Manager** button.

    e. Double-click **SCSI and RAID controllers**.

    f. Select **SCSI PC Card REX-CB32 Win2K**.

    g. Press the **Delete** key.

    h. Remove the CB32U from the PC.

2. Remove the driver file and INF file.

    a. Double-click the **My Computer** icon.

    b. Select **Folder Options** in the **Tools** menu and select the **View** tab.

    c. Check the **Show hidden files and folders** .

    d. Select **For Files or Folders** of **Search** on the start menu.

    e. Type **REXCB32.SYS** in the **Named** box.

    f. Type the drive letter where Windows 2000 is installed in **Look in** box.

    g. Click the **Search Now** button.

    h. If **REXCB32.SYS** appears, select it and press the **Delete** key.

    i. Type **OEM*.INF** in the **Named** box and **CB32** in the **Containing text** box.

    j. Type the drive letter where Windows 2000 is installed in **Look in** box.

    k. Click the **Search Now** button.

    l. When appearing, open these files to see the content. If the file is related to the CB32U, select it and press the **Delete** key.

3. You have now deleted the CB32U driver completely. You can now re-install the CB32U.

4. Restart your PC.

8-2. Updating the CB31U driver for Windows95/98

1. Download the latest driver from the RATOC web site.(http://www.ratocsystems.com/english/)

2. Make the latest driver floppy disk.

   a. Download **CB32U_xx.exe** (tentative name) into an empty folder on the Hard disk drive.

   b. Double-click the **CB32U_xx.exe** icon.

   c. Be sure that multiple files are extracted.

   d. Delete **CB32U_xx.exe** from the folder.

   e. Make sure that the size of the folder is less than 1.44 MB.

   f. Get ready for an empty 1.44 MB floppy disk.

   g. Select all files in the folder, and then copy them to the floppy disk.

3. Update the driver.

   a. Right-click on **My Computer** and select **Properties**.

   b. Click the **Device Manager** tab.

   c. Double-click **SCSI Controllers** in the list.

   d. Click the **SCSI CardBus PC Card REX CB32** string in the list.
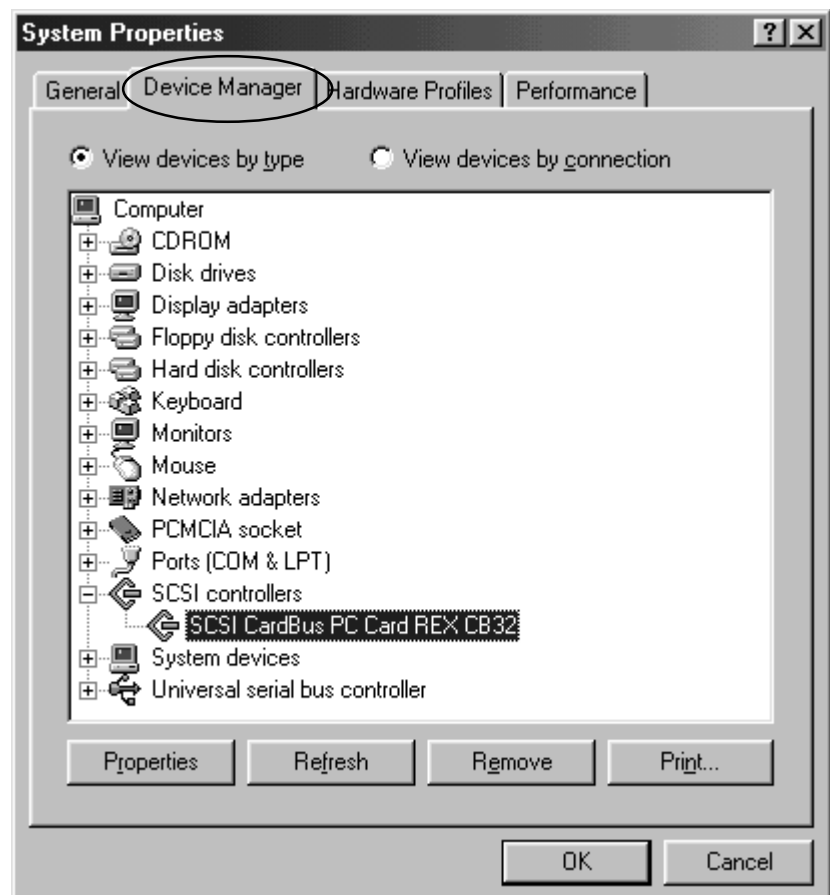
    e. Click the **Properties** button, and then select the **Driver** tab.

    f. Check the date before updating the driver.

    g. Click the **Update Driver...** button.

If your Windows is Windows 95, follow **4. To update the driver for Windows 95** procedure.

If your Windows is Windows 98, follow **4. To update the driver for Windows 98** procedure.

4. To update the driver for **Windows 95**.

    a. When the **Update Device Driver Wizard** window appears, insert the floppy disk made in step **2.**

       Make the latest driver floppy disk into the PC and select the **Yes(Recommended)** option
       on the screen below. Click **Next**.

    b. When the following window appears, click **Finish**.

    c. If a message requesting insertion of a floppy disk appears, click **OK**.

    d. When **Copying Files...** dialog appears, type **a:** for the source of files and click **OK**.
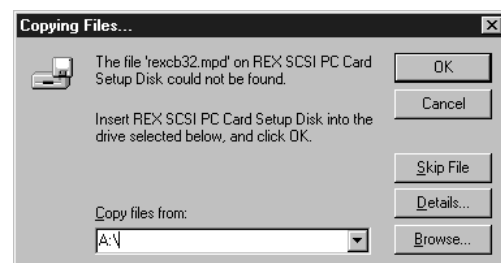
    e. You have finished updating the driver. Remove the floppy disk from the PC.

       Proceed to step 5.

4. To update the driver for **Windows 98**.

    a. When the **Update Device Driver Wizard** window appears, click **Next**.

    b. When the following window appears, select the **Search for a better driver than the one your device is using now.(Recommeded)** option and click **Next**.

    c. When the following window appears, check the **Floppy disk drives** option and insert the floppy disk made in step **2. Make the latest driver floppy disk** into the PC and click **Next**.

d. When the following window appears, select the **The updated driver (Recommended) SCSI CardBus PC Card REX CB32** option and click **Next**.

e. When the following window appears, click **Next**.

f. When the following window appears, click **Finish**. You have finished updating the driver.

g. Remove the support floppy disk from the PC.

Proceed to step 5.

5. Confirm the driver is updated.

    a. In the **SCSI CardBus PC Card REX CB32 properties** window, click the **Driver** tab.

    b. Make sure the date is later than the date you checked in the step 3-f before.

    c. Click the **Driver File Details...** button.

    d. Check the **File version** of the CB32U driver. You may need to know this version when you want to have a tech-support.
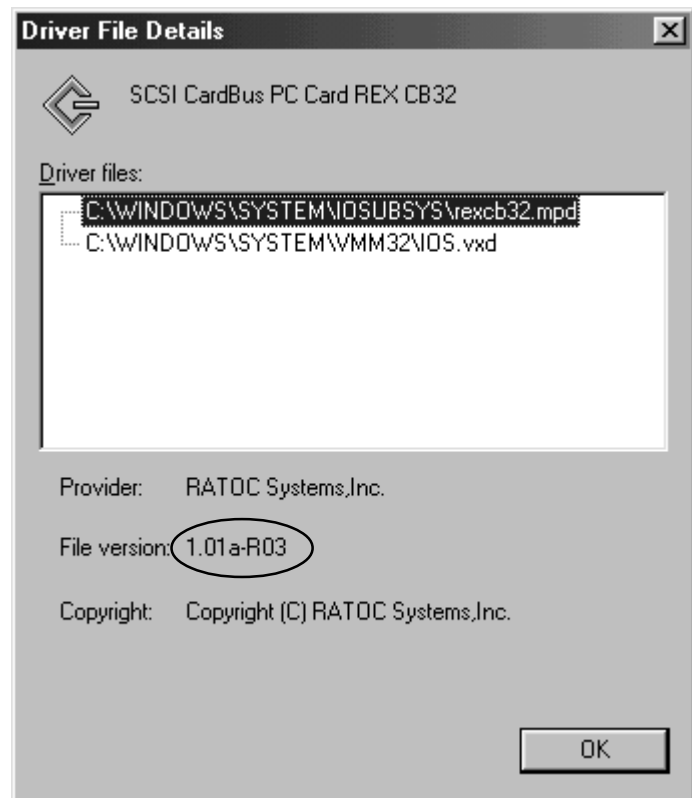
8-3. If my laptop is made by TOSHIBA

I can use 16-bit PC Card with my laptop made by TOSHIBA, but I can not get a CardBus PC Card up and running.

1. Shut down your laptop.
2. Start your computer.
3. Press the **ESC** key at boot time.
4. When **Check system. Then press [F1] key** is displayed, press the **F1** key.
5. When BIOS-SystemSetup(1/2) is displayed, select **CardBus/16-bit** under **PC Card Controller Mode**.
6. Press the **End** key to restart your system.

8-4. If I use FUJITSU MO(M2512A, M2513A)

System locks up when I connect an old model MO of which drive engine is M2512A, M2513A

You need to install our SCSI configuration utility and change transfer rate with it.

Refer to Chapter 4-2 to set transfer rate to 10MB/sec.

8-5. "? PCMCIA Card Services" appears

There is "? PCMCIA Card Services" appears under Other devices in Device Manager.

This is not an error.

If a PC Card which is not CardBus compatible is inserted, **"? PC Card Services"** appears under **Other devices**. If it is removed, you cannot use PC Cards. Never remove it.

8-6. The CB32U is registered as PCI Bridge

The CB32U is registered as PCI Bridge in Other devices in Device Manager window.

I have not installed the CB32U driver yet.

Remove the PCI Bridge and restart your PC.
Hardware wizard will appear. Install the CB32U driver.

8-7. The CB32U is registered as PCI SCSI BUS Controller

The CB32U is registered as PCI SCSI BUS Controller in Other devices in Device Manager window.
I have not installed the CB32U driver yet.

Select the PCI SCSI BUS Controller and update the CB32U driver.

8-8.When I try to capture image,I get an error on Windows 98

When I try to capture image with scanner software, I get an error saying Scanner is not ready. But, the SCSI Scanner is recognized in the Device Manager.

The same SCSI scanner names coexist in the **Scanners and Cameras** in the **Control Panel**.

Delete the same SCSI scanner names until only one SCSI scanner name exists there.

8-9. Unknown Device Window appears

When I connect a SCSI Scanner to the CB32U and start PC, the Add New Hardware Wizard saying [This wizard searches for new drives for Unknown Device] appears and I do not know what to do.

Unknow Device means your SCSI Scanner. So you need to install your SCSI Scanner driver. For more information, refer to the SCSI Scanner manual.

8-10. When I can not finish Windows 95/98

If your PC has an USB port and a PC Card inserted at the same time, you may not be able to shut down your PC.

1. Disable **fast shut down**. Refer to the Help file for information on how to do it.

2. If you can not resolve this issue at Step 1, change USB resources.

   a. Start the PC without the CB32U if you can shut down the PC after removing the CB32U.

   b. When you can not shut down the PC even if you remove the CB32U, start Safe Mode.

     You can start Safe Mode by pressing the **F8** key at boot time.

3. Right-click on **My Computer** and select **Properties**.

4. Click the **Device Manager** tab.

5. Double-click the **Intel 82371AB/EB PCI to USB Universal Host Controller** under **Universal Serial Bus controllers.**
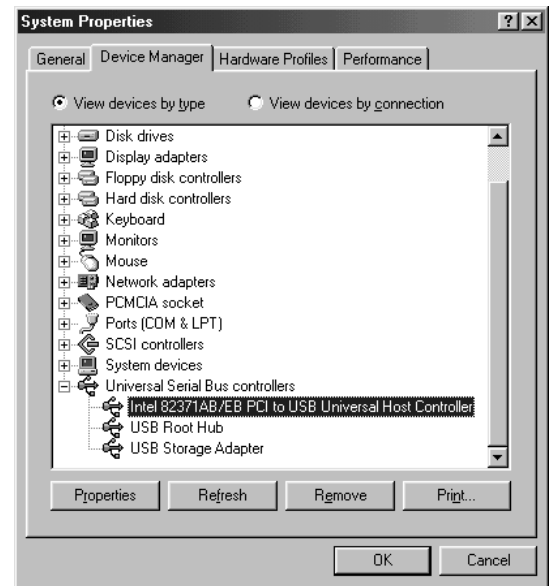
6. Select the **Resources** tab and remove the check mark at the **Use automatic settings**. And double-click **Input/Output Range.**
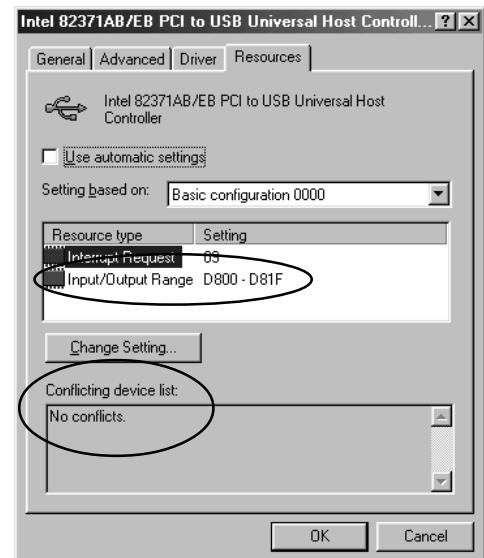
7. Set Value number larger than 1600 by clicking up/down button.

8. Make sure **Conflicting device list** shows **No conflict**.

9. Click **OK** and restart your PC. If a warning message box appears, just click **OK** and restart your PC.

8-11. When I can not detect a SCSI Scanner on WindowsNT/2000

When I try to start Scanner software, I get an error saying Failed to detect the SCSI Scanner.

You need to install ASPI manager for Windows NT4.0 or 2000.
To install it, you must be logged on as Administrator or have administrative privileges.

1. Insert the CB32U floppy disk for Windows NT4.0 or 2000.

2. Open **My Computer** and double-click the **Floppy disk** icon.

3. Double-click the **aspi32** folder.

4. Click the **WNASPI32.INF** with the right button and select **Install**.

    If you can not install it with this procedure, copy the **WNASPI32.DLL** at the **aspi32** folder to the folder named **WINNT\SYSTEM32**.

5. Remove the floppy disk from the PC.

When you want to uninstall it, follow the steps through:

1. Start **Add/Remove programs** in the **Control Panel**.

2. Select **RATOC WinASPI32 for Windows 2000/NT4.0**

3. Click the **Change/Remove** button.

8-12. When I can not assign a drive letter

I can find the SCSI drive name string in the Device Manager, but the drive icon does not appear in My Computer.

1. If your computer is in a network and all the driver letters are used, the drive icon does not appear in **My Computer**. To resolve this issue, remove the Network card and install the CB32U driver.

2. If all the drive letters are not used, your CD-ROM drive may be D drive and the drive letter is fixed. In this case, the drive icon does not appear in **My Computer**.

   1)If you use Windows2000, follow the steps below.

   To resolve this issue, do not fix the drive letter or assign your CD-ROM to other drive letter than D drive:

   a. Double-click the **Administrative Tools** in **Control Panel**.

   b. Start **Computer Management** and select the **Disk Management** under the **Storage**.

   c. Click the CD-ROM drive with the right button and select **Change Drive letter and Path.**

   2)If you use WindowsNT4.0, follow the steps below.

   To resolve this issue, do not fix the drive letter or assign your CD-ROM to other drive letter than D drive:

   a. Select the **Administrative Tools(Common)** of the **Programs** on the **Start** button.

   b. Select **Disk Administrator**.

   c. Click the CD-ROM drive with the right button and select **Assign Drive Letter.**

9. Registration and Tech-Support

9-1. How to Register

We highly recommend to register yourself as our customer through our on-line registration.

1. On the Internet, access our site (**http://www.ratocsystems.com/english/**)

2. Follow window menu guide to register.

3. Fill out the registration form and submit it.

9-2. Driver Update and Support

-**Driver Update**-

The latest driver and utility are subject to change for improvement or bug fix.

You can download the latest version from our web site.

(**http://www.ratocsystems.com/english/**)

-**Technical Support**-

You can get a Tech support from RATOC at the following:

(Open Monday - Friday, 9:30A.M. to 5:00P.M(PST))

RATOC Systems International,Inc. Tech support

  Address: 1933 O'Toole Avenue Suite A109

            SanJose, CA 95131, U.S.A.

  Phone   : (408)955-9400

  Fax   : (408)955-9402

  E-mail : int-support@rexpccard.co.jp

  Web   : http://www.ratocsystems.com/english/

NOTE:

    Please include the following information to help us to support you in the event of a problem:

    •Our product name, serial number, and its description

    •Host Computer Name, Windows version

    •Utility/Driver version

    •Your SCSI device name and its description

10. Specifications

Specifications of the CB32U

SCSI Interface

- •Ultra Wide SCSI or Ultra SCSI
- •Single ended

SCSI PC Card

- •PC Card Standard Compliant CardBus (Type II)

Data Transfer Rate

- •Up to 40MB/sec with Ultra Wide SCSI devices (synchronous)
- •Up to 20MB/sec with Ultra SCSI devices (synchronous)
- •Up to 10MB/sec with SCSI-II devices (synchronous)
- •Up to 132MB/sec between host and CB32

Power Consumption

- •Voltage +3.3V (Supplied from PC Card slot)
- •150mA (TYP) - at Reading/Writing
- •100mA (TYP) - at Idling
- • 41mA (TYP) - at Power save mode

Termination Power

- •Internal active termination embedded

Interrupt

- •Use IRQ assigned by CardBus Controller

Operation Temperature
32°F to 131°F (0°C to 55°C)

Storage Temperature
-4°F to 158°F (-20°C to 70°C)

Appendix

This equipment has been tested and found to comply with the 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 a residential installation. 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 harmful interference to radio or television 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:

(1) Reorient or relocate the receiving antenna.

(2) Increase the separation between the equipment and receiver.

(3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

(4) Consult the dealer or an experienced radio/TV technician for help.

Shielded cables and certified Class B peripherals must be used on this product.
Using unshielded cables or uncertified peripherals may result in this unit not complying with FCC Rules Part 15.

Changes or modifications not expressly approved by the party responsible for compliance may result in this unit not complying with FCC Rules Part 15.

FCC ID : M9AREXCB31SCSIPC