

**100BASE-TX/10-BASE-T Network CardBus PC Card  
for PowerBook & MacOS 8.1/8.5**

**CB81PB**

**User Guide**

Rev. 1.1

Mar 2000

** RATOC Systems, Inc.**

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# REX-CB81PB User Guide

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# FCC Statement

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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.

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



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# 1. Introduction

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Thank you for purchasing the REX-CB81PB kit. This kit contains the REX-CB81 100 BASE-TX/10BASE-T Network CardBus PC Card, RJ-45 cable, the support software for MacOS 8.1/8.5 and this document. This guide contains the most complete information for installation and operation of the REX-CB81 100 BASE-TX/10BASE-T Network CardBus PC Card at press time. Be sure to read this guide before using the Network PC Card the first time. The README file included on the supplied floppy disk may contain more recent information which may not be included in this guide. Be sure to read the README file as well.

## 1-1. Features

- CardBus Compatible
- 32-bit data Bus and 33MHz operation
- Supports Bus-mastering data transfer
- Low power consumption
- Auto-negotiation of 10/100 Mbps

## 1-2. Trademarks

- Macintosh and MacOS are registered trademarks of Apple Computer, Inc.
- Other names of companies and products appearing in this guide are trademarks or registered trademarks respectively of those companies.

## 1-3. Before Using the REX-CB81

- Never attempt to disassemble the PC Card and the cable.
- Do not bend, drop or strike the PC Card and the cable, or subject it to heavy pressure.
- Information in this document is subject to change without notice.
- If you have any questions or find errors in this guide, do not hesitate to let us know.

## 1-4. System Requirements

- Macintosh PowerBook with CardBus-enabled PC Card slot
- MacOS 8.1, 8.5 or later

**NOTE:**

- If the version of your MacOS is former than MacOS 8.1, you cannot use the REX-CB81.
- Macintosh PowerBooks with CardBus-enabled PC Card slot as of December 1998 are as follows:

Macintosh PowerBook G3/233, G3/250, G3/292, G3 233/14, G3 266/14

## 1-5. Check Package Contents

- REX-CB81 100BASE-TX/10BASE-T Network CardBus PC Card
- RJ-45 cable
- Support software on 3.5" floppy disk
- User Guide (This document)

**NOTE:**

- If anything is missing, contact your store or RATOOC Systems.

## 1-6. How to Register

1. On the Internet, access our site (<http://www.rexpccard.co.jp>)
2. Follow window menu guide to register.
3. Fill out and submit the registration form.

## 1-7. Program Update and Support

We recognize the need to keep users up-to-date with the latest software releases. Software updates can be downloaded from our web site (<http://www.rexpccard.co.jp>).

Technical support is handled by RATOOC Systems, Inc. at the following:

<b>RATOOC Systems, Inc.</b>
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1-6-14 Shikitsu-higashi, Naniwa-ku, Osaka, JAPAN 556-0012
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FAX : +81-6-6633-3553    E-mail : <a href="mailto:int-support@rexpccard.co.jp">int-support@rexpccard.co.jp</a>
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**NOTE:**

- Please include the following information to help us to assist you in the event of a problem:
  - Model type, serial number, and product description
  - Host Computer Name, MacOS Version
  - Software driver version number





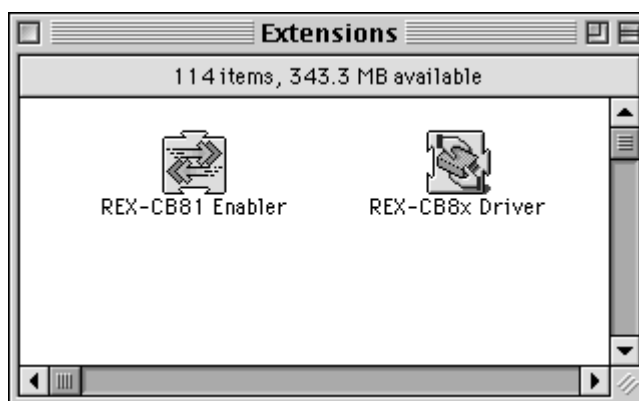
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## 2. Setup

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### 2-1. Setup Procedure

1. Check to be sure that the REX-CB81 is not inserted into the PowerBook.
2. Insert the support software floppy disk into the PowerBook.
3. Double click on the floppy disk icon labeled **REX-CB81PB**.
4. Select then copy **REX-CB8x driver** and **REX-CB81 Enabler** into the **Extensions** folder in **System Folder**.



5. Shut down the PowerBook.
6. Insert the REX-CB81 which has already been connected to the network into the PowerBook. For more information about connecting the REX-CB81 to the network and inserting into the PowerBook, refer to page 9.
7. Restart the PowerBook.
8. Verify installation of the REX-CB81 referring to **2-2 Verifying installation of the REX-CB81**.

## 2-2. Verifying installation of the REX-CB81

1. Check to be sure that the **REX-CB81** icon appears on the desktop.

If the icon does not appear, check the following points:

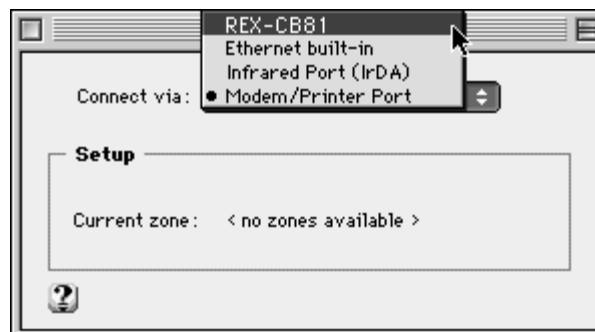
- Make sure that the REX-CB81 is inserted correctly and firmly.
- Make sure that the driver software is copied correctly.

2. In **Control Panels**, select **AppleTalk**.

3. If the following window appears, click on the **Yes** button.



4. When the following window appears, select **REX-CB81** in **Connect via** box, then close **AppleTalk**.

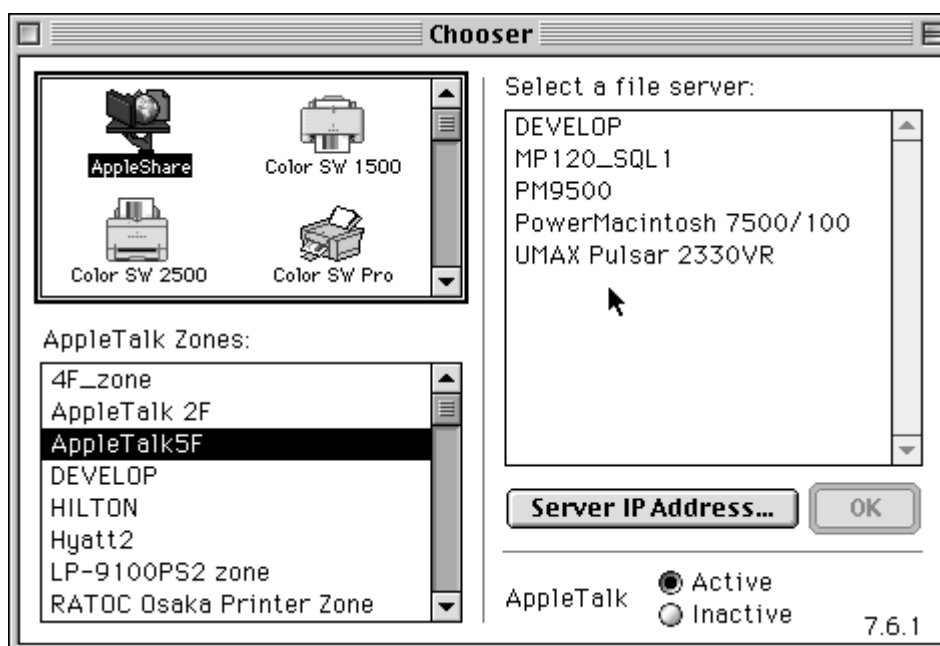


5. If the PowerBook is connected to another network, the following window may appear. Click on the **Save** button.



6. Select **Chooser** from **Apple Menu**.

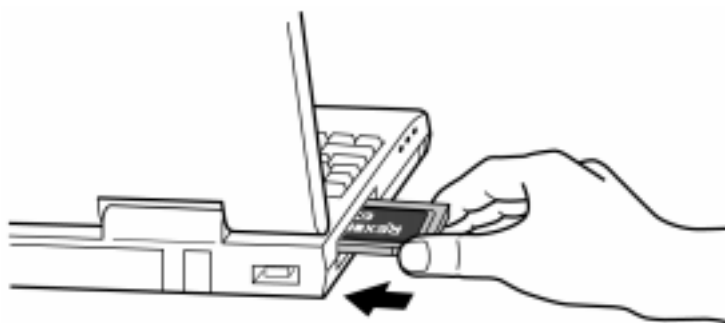
7. When the following window appears, select the **AppleShare** icon. If the computers appear in the **Select a file server** box, the REX-CB81 is installed correctly.



## 2-3. Inserting the REX-CB81

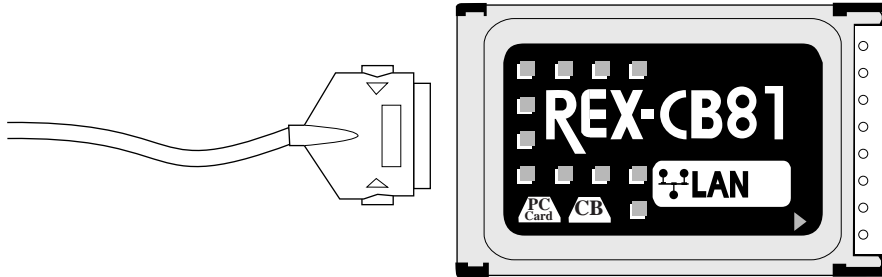
Grasp the REX-CB81 by the edges with the label facing upward and the connector next to the insert slot. Insert the REX-CB81 into the slot and push it in until it is firmly seated.

If the REX-CB81 cannot be firmly seated, check to see if the PC Card slot supports CardBus PC Cards.

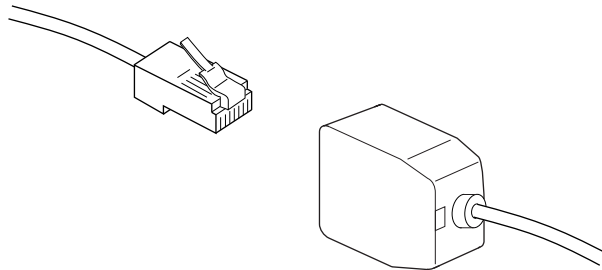


## 2-4. Connecting to the network

1. Attach the 15-pin connector at the end of the RJ-45 cable to the mating connector on the end of the adapter. Press the cable connector gently into the connector on the card until it clicks into place. Do not force the connection.



2. Plug the network cable into the female RJ-45 connector.



## 2-5. Removing the REX-CB81

1. Drag the server icon appearing on desktop to the **Trash**.
2. Then drag the **REX-CB81** icon appearing on desktop to the **Trash**.
3. When the REX-CB81 is released, pull it straight out from the PowerBook.

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## 3. Setup Utility

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### 3-1. Before using the setup utility

- Remain the REX-CB81 inserted while the setup utility is used. Do not remove the REX-CB81 during changing settings.
- Do not remove the REX-CB81 while the setup utility is used.
- Before open the setup utility, disconnect all of the shared disk.
- The settings will be effective after restarting the PowerBook or removing and reinserting the REX-CB81.
- Before starting the setup utility, close all of the applications.

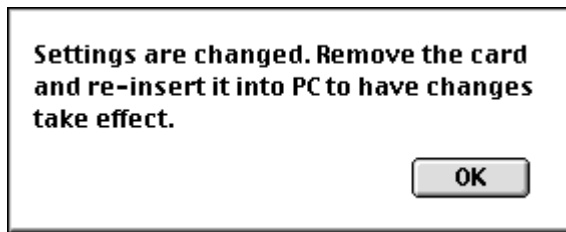
### 3-2. Using the setup utility

1. Make sure that the REX-CB81 is inserted into the PowerBook.
2. Make sure that no networks are connected to the PowerBook.
3. Insert the support software floppy disk into the PowerBook.
4. Double click on the floppy disk icon labeled **REX-CB81PB**.
5. Double click on the **REX NetWork Utility** icon.
6. When the following window appears, click on the **OK** button.



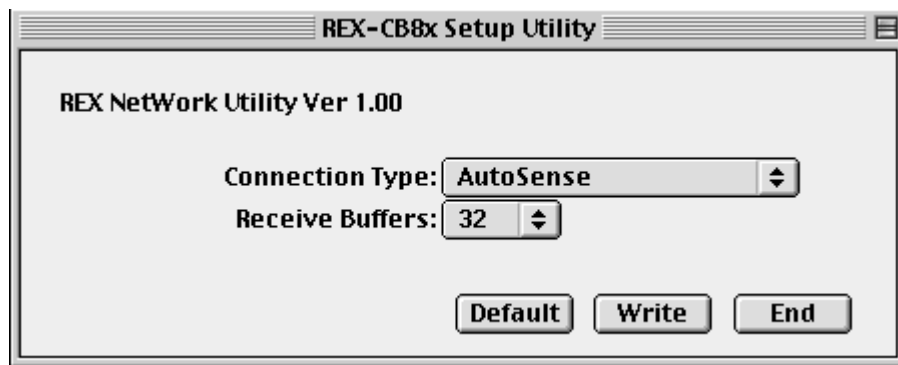
7. Change the settings for the REX-CB81 referring to the next page, then click on the **Write** button.

8. When the following window appears, click on the **OK** button.



9. Remove the REX-CB81, then reinsert it into the PowerBook.

## 3-3. Changing the settings



### Connection type.

If the autonegotiation function of the REX-CB81 does not work properly with that of the Hub, choose a connection type from among the following value:

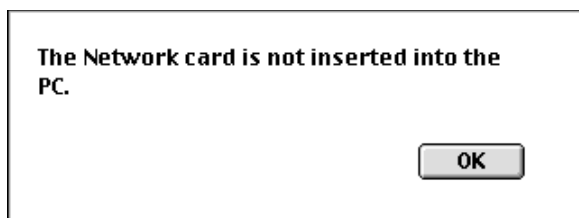
- AutoSense
- 100BaseTX
- 100BaseTX FullDuplex
- 10BaseT TwistPair
- 10BaseTX FullDuplex

### Receive Buffers.

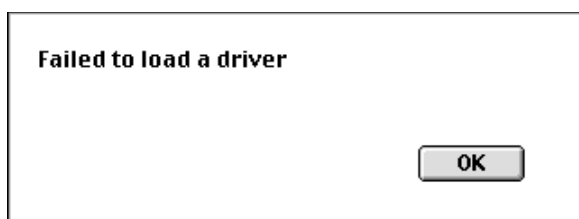
Select the most suitable receive buffers.

## 3-4. Error messages and solutions

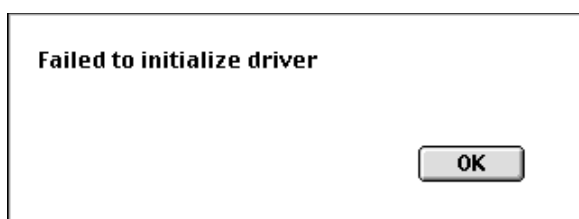
If any of the following windows appear, follow the appropriate instructions:

**Solution:**

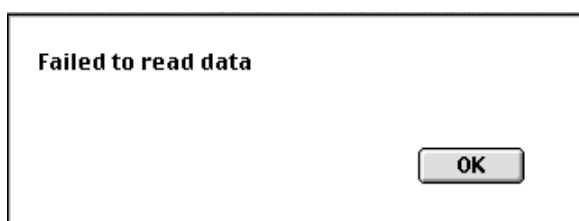
Insert the REX-CB81 into the PowerBook and restart the utility.

**Check:**

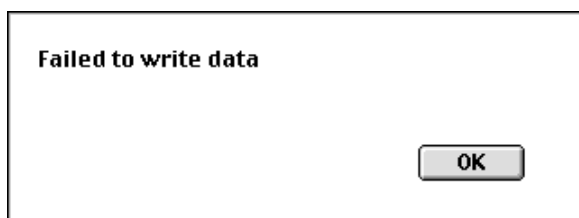
- Make sure that the REX-CB81 is inserted into the PowerBook.
- Make sure that the **REXCB8x configDriver** exists in the folder in which the utility file is in.

**Check:**

- Make sure that the REX-CB81 is inserted into the PowerBook.
- Make sure that the **REXCB8x configDriver** exists in the folder in which the utility file is in.

**Solution:**

1. Close the utility, then remove the REX-CB81.
2. Then insert the REX-CB81 and verify that the REX-CB81 works properly.
3. Restart the utility.

**Solution:**

1. Close the utility, then remove the REX-CB81.
2. Then insert the REX-CB81 and verify that the REX-CB81 works properly.
3. Restart the utility.





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## 4. Troubleshooting

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### 4-1. The REX-CB81 is not recognized

**The REX-CB81 is not recognized by the PowerBook!**

**Solution:**

1. Make sure that your PowerBook has at least one CardBus-enabled PC Card slot.
2. Make sure that **REX-CB8x driver** and **REX-CB81 Enabler** are in the **Extensions** folder.

### 4-2. The REX-CB81 is not recognized

**My PowerBook can not be connected to the network!**

**Check:**

- Make sure that the REX-CB81 is connected to the Hub properly.
- Make sure that **AppleTalk** or **TCP/IP** are set properly.
- Check to see if your Hub is autonegotiation type.  
If your Hub is autonegotiation type, try to set transfer speed with the setup utility.  
For more information on the setup utility, refer to page 11.

### 4-3. The REX-CB81 becomes hot

**The REX-CB81 becomes much hotter after using it!**

**Solution:**

It is natural that the REX-CB81 becomes hotter after use.



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## 5. Specifications

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**Card size**

PC Card Type II

**Compatible with the following standard:**

PC Card Standard '97 (CardBus)

**Interface type**

100BASE-TX/10BASE-T autonegotiation

**Connector type**

RJ-45

Impedance 100 ohms

**Interface type to CPU**

32bit Bus-mastering

**I/O address**

Occupies 128 bytes allocated by OS

**Interrupt request**

Uses IRQ allocated by OS

**Global address (Mac address)**

Stored into EEPROM in the Card

**Power requirements**

Voltage +3.3V

300 mA (MAX)

**Operating environment**

Temperature from 0 to 55°C

Humidity from 20 to 80% (Non-condensing)