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Note: This documentation applies to Keyspan's SXPro Serial Card Software for Mac OS X and covers the features and use of this software. For specific information about Keyspan's SXPro Serial Card hardware, please visit Keyspan's web page <<http://www.keyspan.com>> or read the Keyspan Mac OS 9 User Manual for that product.



The Keyspan SXPro Serial Card Software for Mac OS X allows you to add serial ports to your Mac OS X computer. Using Mac OS X native software, you can use your Keyspan SXPro Serial Card to communicate with various serial devices via the POSIX API (for more information, Serial Ports - Mac OS X vs 'Classic' Mac OS section in this manual) .

The Keyspan SXPro Serial Card Software for Mac OS X will make your serial devices work under Mac OS X ONLY if your serial device has Mac OS X native software. If you are not certain if your serial device's software can access Mac OS X serial ports, please read the **Serial Ports - Mac OS X vs 'Classic' Mac OS** section in this manual. Examples of serial devices that use Mac OS X serial ports are modems using PPP (for internet access - configured via the Networking System Preference icon) and UPS devices (using PowerGuardian software - www.benatong.com).

Requirements

- **Macintosh:**
 - At least one available USB port
 - Mac OS X (**10.1** or greater)
 - SXPro Serial Card (pn# SXPro-4)



Serial Ports - Mac OS X vs 'classic' Mac OS

Mac OS X is Apple's new modern operating system that combines the power and stability of UNIX with the simplicity and elegance of the Macintosh. This new operating system brings new technologies that change how serial ports and serial devices work.

This section is intended to briefly explain the how 'classic' Mac OS (Mac OSes released before Mac OS X. ie Mac OS 8.1 through 9.2.1) serial ports differ from serial ports on Mac OS X. This section is intended as overview to help you device whether or not you need to install Keyspan's SXPro Serial Card software for Mac OS X.

Please note that when 'classic' is used in lowercase, we are referring to an operating system or application software that was made prior to Mac OS X.

When 'CLASSIC' is used in UPPERCASE, we are referring to Apple's CLASSIC environment that allows certain older (or 'classic') software to run under Mac OS X.

Which Keyspan Software Should I Use?

There are basically 2 requirements in order for your serial device to work natively on Mac OS X:

1. a Mac OS X serial port
(provided by Keyspan's software and hardware)
2. a serial device that has Mac OS X software
(that can see/access Mac OS X serial ports e.g. modem)

Note: We will be posting a list of Mac OS X compatible serial devices soon. The URL for this page is <<http://www.keyspan.com/support/macosx./>>.

Since Mac OS X is a new operating system and serial device manufacturers have not yet made their products Mac OS X compatible, you may find cases where it is **better not to install** the SXPro Serial Card software for Mac OS X. You may also find cases where your serial device will not work under Mac OS X at all. For this reason, we ask you read this guide to help you in determining whether or not you need to install the SXPro Serial Card software for Mac OS X.

If your serial device (ie printer, Palm Pilot, modem, etc.) does **not** have Mac OS X native software, you **should not** install the SXPro Serial Card software for Mac OS X. In this case, please skip ahead to **'classic' Mac OS Serial Ports & Serial Devices ...**

If your serial device does have Mac OS X native software, please skip ahead to **Keyspan**



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Mac OS X Serial Ports & Serial Devices ...

If you are not sure if your serial device has Mac OS X native software, please read the rest of this section ...

'classic' Mac OS Serial Ports & Serial Devices

Serial devices under the 'classic' Mac OSes (Mac OSes released before Mac OS X) access serial ports via the following software:

- the Chooser (ie printers)
- applications (ie Palm Pilots)
- Control Panels (ie Wacom tablets)

Regardless of which software you used, your serial device was communicating with software libraries that handled the very low level communications between your serial device hardware and your serial port. These low level software libraries (specifically: Communications Resource Manager (CRM), CommToolBox (CTB), and OpenTransport) are **unique to the 'classic' Mac OSes** and are **not found on Mac OS X**.

Therefore, if your serial device's software only works on a 'classic' Mac OS, installing the SXPro Serial Card software for Mac OS X will not make your serial device work under Mac OS X.

If your serial device's software only runs in 'classic' Mac OSes, you have several options:

1. Try to get your serial device to work using your existing 'classic' hardware and software (the hardware and software that ran on Mac OS 8.1 through 9.2.1) via Mac OS X CLASSIC environment. If this does not work, please try option 2.
2. Boot into Mac OS 9.1 or 9.2.1 and use your serial device from there.

Keyspan, Mac OS X Serial Ports & Serial Devices

Serial devices that run natively on Mac OS X access serial ports via the following software:

- System Preferences
- Mac OS X applications
- terminal applications

Regardless of which method is used, your serial device communicates with a software library called **POSIX** (aka POSIX API).

When a Keyspan USB to Serial adapter or serial PCI card is connected, the Keyspan SXPro Serial Card software for Mac OS X registers a port with the **IORegistry** (this is another software



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library). At this point, a program can get the list of available serial ports (including Keyspan serial ports) from **IORegistry**. Once the program has the list available serial ports, the program uses the **POSIX API** to communicate with the serial port.

Note: If you are a developer and need more information about using Mac OS X serial ports, please visit our Developer web page at:

[<http://www.keyspan.com/support/developers/>](http://www.keyspan.com/support/developers/)

Using the Keyspan Serial Assistant application, you see which **Keyspan** serial ports have been added to Mac OS X. This is useful in determining which port to select in your serial devices software.

Please note, the POSIX API is unique to Mac OS X and cannot be used by 'classic' applications.

Mac OS X vs CLASSIC

Since both Mac OS X and the Classic environment have the ability to use USB devices directly, you may run into a case where you have installed the SXPro Serial Card software for Mac OS X as well as the 'classic' SXPro Serial Card software. At this point, you have two software drivers for one hardware device.

In these cases, Mac OS X will use the SXPro Serial Card software for Mac OS X and ignore the 'classic' SXPro Serial Card software. This essentially will disable any serial device working in the CLASSIC environment.

The workaround for this is:

1. Uninstall the SXPro Serial Card software for Mac OS X and restart.
(Please see the Appendices section in the guide for detailed instructions.)

or

2. Boot into Mac OS 9.1 or 9.2.1 and use your serial device from there.



Installation Instructions

Installing the SXPro Serial Card Software for Mac OS X

Note: Only proceed if you are sure that your serial device and its software are Mac OS X compatible. If you are not sure about this, please read the **Serial Ports - Mac OS X vs 'Classic' Mac OS** section in this manual for further information.

Step 1 - Insert the Keyspan SXPro Serial Card CD-ROM

Place the CD into the CD-ROM drive. When the CD icon appears on your desktop, double click on this icon to display its contents.

Step 2 - Run the Keyspan SXPro Serial Card Software for Mac OS X Installer

Run the Keyspan SXPro Serial Card Software for Mac OS X Installer by double clicking the "KeyspanSXProDrv.pkg" installer icon. This will start the installer. Once the installer is running, follow the instructions on screen.

Note: The installer requires that you enter an administrator password before the Keyspan software installer. Generally, this password will be the same as your standard password.

To take advantage of your new software, the Keyspan installer will restart your computer for you.

Step 3 - Software Installation Complete!

Now that you have installed the Keyspan SXPro Serial Card software, you are ready to install the Keyspan SXPro Serial Card hardware. Please proceed to the **installing the Keyspan SXPro Serial Card Hardware** instructions.



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Installing the Keyspan SXPro Serial Card Hardware

The following hardware installation instructions provide a basic overview on installing the **Keyspan SXPro Serial Card** in a PCI slot. For detailed instructions on how to connect USB devices your specific computer, please refer to the USB Device Install section in your computer's user's manual.

Step 4 - Turn off and open your computer

The computer must be powered off when installing the Keyspan SX Pro Card. Once your computer is completely turned off, remove the cover of your computer to access the PCI slots.

IMPORTANT: Ground yourself by momentarily touching the metal part of the case. Failing to do so could cause damage to your computer and/or your Keyspan SX Pro Serial Card.

Step 5 - Find the PCI Slotso your USB port

Locate the PCI slots in your computer and choose which one you will use to install the SX Pro card. If necessary remove the silver back cover plate of the slot you have selected.

Plug the card into the slot. When handling the card, hold the card by grabbing the back edge bracket. When pressing the card into the slot, do so by pressing on the top edge of the card. Try not to touch the gold PCI connector pins or other components on the card itself.

Visually confirm that the card is firmly seated in the slot. You should not be able to see the gold PCI connector pins once the Keyspan SX Pro card is fully inserted into the slot.

Note: If your computer uses a screw to secure PCI cards, be careful that the you do not over tighten this screw. Over tightening of this screw may cause the back of the Keyspan SX Pro Card to slightly lift out of the PCI slot and cause your card to become unseated. An unseated Keyspan SX Pro Card will not be recognized by the Keyspan software.

Step 6 - Hardware Installation Complete!

Replace your computer's cover and turn on your computer. You have now installed the Keyspan SX Pro Card.



Keyspan Serial Assistant

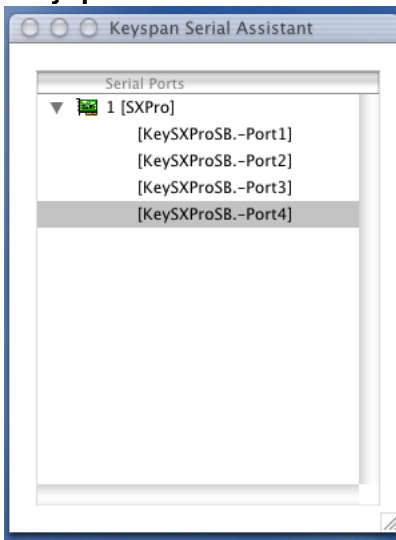
Besides the required drivers, the Keyspan SXPro Serial Card software installer installs an application called **Keyspan Serial Assistant**. This application is used to:

- Show the names of the installed serial ports
- Show which Keyspan adapters and serial cards are connected
- Determine the status of the Keyspan software and hardware
- Assist in problem solving

Launching the Keyspan Serial Assistant

To launch the Assistant, double click the "Keyspan Serial Assistant" icon in your **Applications** folder. This will open the **Keyspan Serial Assistant** window.

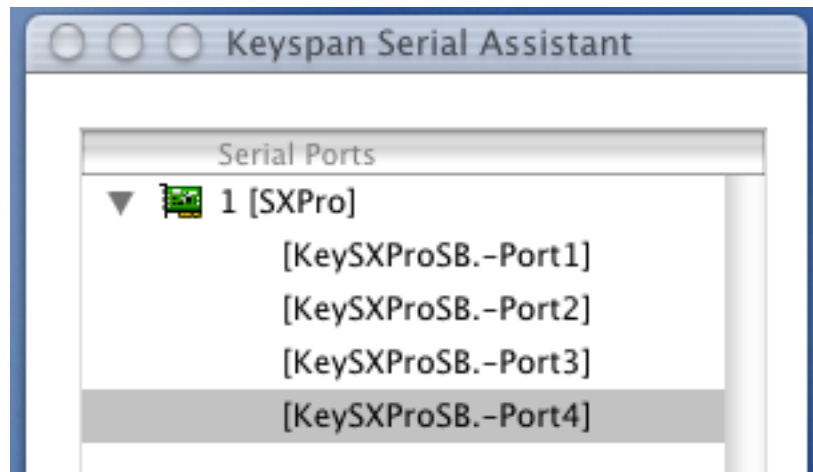
the **Keyspan Serial Assistant** window



The Keyspan Serial Assistant will display any Keyspan SXPro Serial Cards connected to your computer. You can also see the names of the Keyspan serial ports by clicking on the *TRIANGLE* next to adapter or serial card icon as shown below:



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Once you know the names of the Keyspan ports, you can then select the appropriate port name in your serial device's software.

The Settings Menu



The Keyspan Serial Assistant's **Settings** menu is located in the Menu bar and provides access to the following command(s):

- The **Un-install USB Serial Extension** command uninstalls the Keyspan USB Serial extension. For specific instructions on how to use this feature, please read the documentation for your Keyspan USB Serial Adapter software for Mac OS X.
- The **Un-install SXPro Extension** command uninstalls the Keyspan USB Serial extension. For specific instructions on how to use this feature, please read the [Uninstalling the SXPro Serial Card for Mac OS X](#) section in this guide.



Configuring Your Serial Device To Use The Keyspan Serial Port

Prior to using your serial device (modem, UPS, etc.) with the Keyspan SXPro Serial Card, you must:

1. connect your serial device (*hardware*) to the Keyspan port
2. configure your serial device's *software* to use the Keyspan port

The following instructions provide a general overview of this process.

Note: We will be adding detailed instructions in how to configure specific serial devices in the future. Please check Keyspan's website for the latest version of this document.

Connecting Your Serial Device (Hardware)

Step 1 - Connect Your Serial Device To The Keyspan Serial Port

Attach your serial device's serial cable to the serial port on your Keyspan SXPro Serial Card.

Step 2 - Determine Which Keyspan Port Your Serial Device Is Connected To

If you have a Keyspan product that has more than one serial port, please note which Keyspan serial port your serial device is connected to (the serial port on the Keyspan product, not your USB ports on your computer or USB hub). This information will become useful as we start Configuring Your Serial Device's Software.

Configuring Your Serial Device's Software



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The following configuration instructions provide a basic overview of how to configure your software to use your Keyspan serial port(s). For specific instructions on how to operate your serial device, please refer to that device's user's manual for detailed instructions...

Step 3 - Determine Where To Select/Configure The Keyspan Serial Port(s)

Prior to using your serial device with a Keyspan serial port, you must first tell that serial device's software which Keyspan serial port your device is connected to.

Most serial devices will have software that will allow you to select which serial port the device is connected to. Depending on your serial device and its software, you may have to configure: a System Preference item (ie modems accessing ISPs), an application (ie UPSes), or some combination of these (ie modems accessing terminals using Zterm).

Please refer to your serial devices documentation on which method your serial device uses and how to access that software's serial port "configuration" screen.

Once you've determined where to select or configure your serial device's software's serial port settings, please proceed to **Step 4**.

Step 4 - Determine Which Serial Port To Select In Your Serial Device's Software

When you've found the port selection screen in your serial device's software, you may be presented with a list of serial port names.

If you have a Keyspan device that only has one serial port, simply select the port name that starts with the letters **KEY**.

If you have a Keyspan device that has two or more serial ports, you will have more than one choice in your list of ports. Depending on the software, you should be able to see several ports with the letters **KEY**. These ports will end with a number that corresponds to the port number on the card.

Step 5 - Use Your Serial Device

Once you've configured your serial software to use the Keyspan serial port, you're ready to start using your serial device under Mac OS X.



Configuration Examples

The section is reserved for instructions on how to configure specific serial devices and their software. Although we do not currently have any examples, we will be adding detailed instructions on how to configure specific serial devices in the future. Please check Keyspan's Mac OS X web page <<http://www.keyspan.com/support/macosx/>> for the latest version of this document.



Problem Solving

If you are having problems with your Keyspan serial port product, please read the following instructions to assist you in troubleshooting your Keyspan product.

Hardware Troubleshooting

Step 1 - Use the Keyspan Serial Assistant

Launch the **Keyspan Serial Assistant** application. When you open the **Keyspan Serial Assistant** application, you should see your Keyspan adapter or serial card in the list of available adapters and serial cards.

If you do not see your adapter or serial card, please contact Keyspan Technical Support for further assistance.

Otherwise, skip ahead to **Step 2**.

Software/Serial Device Troubleshooting

Step 2 - Is Your Serial Device Mac OS X Compatible

Check to make certain that your serial device is compatible with the **Mac OS X**.

If your device **is not** compatible with Mac OS X, please read the '**classic**' **Mac OS Serial Ports & Serial Devices** section in this manual for more information.

If your device is compatible with Mac OS X, please proceed to **Step 3**

Step 3 - Check The Physical Connections

Make certain that your serial device is powered on and is properly connected to the Keyspan SXPro Serial Card.

Proceed to **Step 4** ...



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Step 4 - Check Your Serial Device's Software Configuration

Check to see if your serial device's software is configured to use the Keyspan port . Please refer to your serial device's documentation for instructions on how to select/switch/configure a serial port in that software.

Once you've found your software port configuration screen, does it display the Keyspan SXPro Serial Card port name(s)?

If you **do not see** the Keyspan port name(s), please contact Keyspan Technical Support for further assistance.

If you see the Keyspan port name(s) and have properly selected the Keyspan port that your serial device is connected to and are still having problems, please continue to **Step 5**.

Step 5 - Use Your Serial Device

If you have followed all of the above steps and are still having problems with your Keyspan SXPro Serial Card, contact Keyspan Technical Support for further assistance.

When You Need More Help...

The Keyspan web site <http://www.keyspan.com> is your best source for technical support information. The website includes technical notes, reference manual updates, and answers to frequently asked questions.

You may also contact our technical support department directly via email, phone, or fax. Please see the "Support Information" section in this manual for more details.



Appendices: Additional Documentation and Information

- [FAQs](#)
Frequently Asked Questions

[Uninstalling the SXPro Serial Card for Mac OS X](#)
Instructions on how to uninstall the SXPro Serial Card software for Mac OS X
- [Keyspan Warranty Information](#)
Keyspan Warranty Information
- [Support Information](#)
Information about obtaining technical support



Appendix: Frequently Asked Questions (FAQs)

The following is a list of **Frequently Asked Questions (FAQs)** about the Keyspan SXPro Serial Card. Keyspan frequently updates and adds the questions and answers list below. For the latest list, please visit the our website at: <http://www.keyspan.com>

Frequently Asked Question List

Question:

Which Keyspan SXPro Serial Cards are supported by the SXPro Serial Card Software for Mac OS X?

Answer:

The following Keyspan products are supported by the Keyspan SXPro Serial Card software for Mac OS X.

SXPro Serial Card (pn# SXPro-4)

.



Appendix: Uninstalling the SXPro Serial Card for Mac OS X

Uninstall Instructions

To uninstall the Keyspan SXPro Serial Card software for Mac OS X, you will have to:

1. launch the [Keyspan Serial Assistant](#)
2. select the **Un-install SxPro Extension** command
(from the **Settings** menu)
3. delete the [Keyspan Serial Assistant](#) application
4. Restart

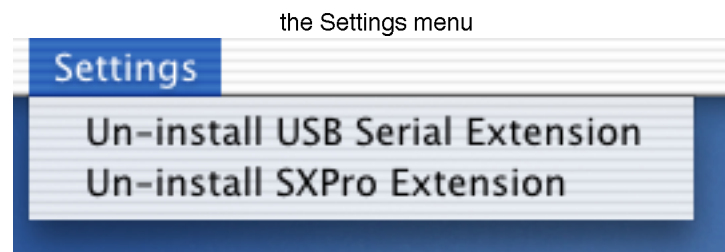
For detailed instructions on this process, please follow these steps:

Step 1 - Open the Keyspan Serial Assistant

Open the [Keyspan Serial Assistant](#) by double clicking the "Keyspan Serial Assistant" icon in your Applications folder. This will open the [Keyspan Serial Assistant](#) Assistant window.

Step 2 - Access the Settings menu

In the [Keyspan Serial Assistant](#), select the **Uninstall Keyspan SXpro** command from the **Settings** menu and follow the onscreen instructions.





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Step 3 - Delete the Keyspan Serial Assistant application

To delete the "Keyspan Serial Assistant", open your applications folder, find the Keyspan Serial Assistant icon and move it to the trash.



Step 4 - Restart Your Computer

Restart your computer to complete the uninstall process.



Appendix: Keyspan Warranty Information

KEYSPAN Software License Agreement and Limited Warranty

Definitions

The following definitions apply to the terms as they appear in this agreement.

- **KEYSPAN** means KEYSPAN, a division of InnoSys Incorporated.
- **Software** means the computer program contained in this package, and all updates to the computer program. The term also includes all copies of any part of the computer program.
- **Documentation** means the on-disk user's manual(s) as well as printed materials accompanying the Software.
- **Product** means the Software and Documentation

Copyright Protection

The Product is owned by KEYSPAN and is protected by United States and international copyright laws and international trade provisions. You must treat the Product like any other copyrighted material. This license and your right to use the Product terminate automatically if you violate any part of this agreement. In the event of termination, you must immediately destroy all copies of the Product or return them to KEYSPAN.

License Grant

Upon receipt of full payment for this product, KEYSPAN grants you a non exclusive license to:

- Use one copy of the Software on a single computer ("Dedicated Computer")
- Make one copy of the Software for archival purposes, or copy the Software onto the hard disk of your computer and retain the original for archival purposes. If one individual uses the Software on the Dedicated Computer more than 80% of the time it is in use, then the individual may also use a second copy of the Software for use on a single home computer, provided such use on a single home computer is limited to no more than 20% of the time.
- After written notification to KEYSPAN, transfer the entire product on a permanent basis to another person or entity, provided you retain no copies of the Product and the transferee agrees to the terms of this agreement.

For the purposes of this section, "use" means loading the Software into RAM, as well as installation on a hard disk or other storage device (other than a network server). You may access the Software from a hard disk, over a network, or any other means you choose, so long as you otherwise comply with this agreement.



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- Reverse engineer, disassemble, decompile, or make any attempt to discover the source code of the Software.
- Sublicense, rent, or lease any portion of the Product.
- Use the previous version of the Software that has been upgraded or updated under this agreement. Upon upgrading, or updating the Software, the old copy must be deleted from the computer and the original disks destroyed.

Limited Warranty on Software and Media

KEYSPAN warrants the disks on which the Software is distributed to be free from defects in materials and workmanship and that the Software will perform substantially in accordance with the Documentation for a period of 90 days from your receipt of the Product. Any written or oral information or advice given by KEYSPAN resellers, agents or employees will in no way increase the scope of this warranty.

If the Product fails to comply with the warranty set forth above, KEYSPAN's entire liability and your exclusive remedy will be replacement of the disk or, at KEYSPAN's option, KEYSPAN's reasonable effort to make the Product meet the warranty set forth above. This limited warranty applies only if you return all copies of the Product, along with a copy of your paid invoice, to KEYSPAN within 90 days of the date you received the Product. If KEYSPAN is unable to make the Product conform to the above warranty, KEYSPAN, at its option, will refund all or a fair portion of the price you paid for this package. Any replacement software will be warranted for the remainder of the original 90 day warranty period or for 30 days from the date you received the replacement, whichever is longer.

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No Liability for Consequential Damages

In no event shall KEYSPAN or its resellers be liable for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or other pecuniary loss) arising out of the use of or inability to use this KEYSPAN product, even if KEYSPAN has been advised of the possibility of such damages. Because some jurisdictions do



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General

This agreement constitutes the entire software license agreement between you and KEYSPAN and supersedes any prior agreement concerning the contents of this package. It shall not be modified except by written agreement dated subsequent to the date of this agreement and signed by an authorized KEYSPAN representative. KEYSPAN is not bound by any provision of any purchase order, acceptance, confirmation, correspondence, or otherwise, unless KEYSPAN specifically agrees to the provision in writing. This agreement is governed by the laws of the State of California.

Keyspan,
a division of InnoSys, Inc.
3095 Richmond Pkwy, Ste. 207
Richmond CA 94806



Appendix: Support Information

Contacting Support

If you require assistance with any Keyspan product, you may contact us by one of the following ways:

- **web/email:** <http://www.keyspan.com/support/>
(Monday through Friday: 9am to 5pm Pacific)
- **fax:** +1.510.222.0323
(Monday through Friday: 9am to 5pm Pacific)
- **telephone (tech support):** +1.510.222.8802
(Monday through Friday: 9am to 5pm Pacific)

International Support Options

If you live outside of the United States and require assistance with your Keyspan product, please contact the Keyspan's distributor in your country for technical support in your language. For a list of Keyspan's international distributors, please visit our international web page at:

<http://www.keyspan.com/international/>