STARBAND®

BY SPACENET

StarBand® Upgrade Installation

And User Guide

For the

SkyEdge Satellite Modem

Version 1.2

Welcome

Thank you for upgrading your StarBand high speed Internet service to the new Nova service!

The *StarBand Upgrade Installation & User Guide* includes step-by-step instructions for properly upgrading your StarBand satellite modem and configuring your computer.

Although StarBand Nova services and products are compatible with most operating systems that support the TCP/IP protocol (i.e. Windows™, Macintosh™, Linux™, UNIX™, etc.), technical support is only provided for the following operating systems:

- Windows Vista
- Windows 2000 Professional
- Windows XP Home and Windows XP Professional
- Mac OS X

Other operating systems with TCP/IP components may work but will not be directly supported by StarBand.

Enjoy your StarBand Internet service!

Table of Contents

1. Getting Started

This section provides an overview of the installation and set-up process for getting you up and running with your new system and broadband service.

1.1 Package Contents

After unpacking your StarBand modem, please verify that your SkyEdge satellite modem was shipped with the following items:

- One SkyEdge satellite modem
- One external power supply
- One power cord
- One RJ-45 cross-over Ethernet cable
- StarBand Upgrade Installation and User Guide

Immediately contact StarBand or your StarBand dealer if there are any incorrect, missing or damaged parts.

1.2 What You Will Need

To insure a smooth installation, please make sure you have the following information available:

- Your assigned static IP address (if applicable) along with the required Domain Name Server (DNS) and Gateway IP addresses

Note: If you did not receive an e-mail with this information, please contact Customer Support at 1-800-295-4315.

1.3 PC Requirements

Please be aware of the minimum system requirements for using the StarBand SkyEdge satellite modem. These requirements include:

- Operating systems supporting the TCP/IP protocol (StarBand support is limited to Windows Vista, Windows 2000 Professional, Windows XP, and Macintosh OS X)
- Microsoft© Internet Explorer (v 5.5 or higher) and Firefox (v 1.0 or higher) web browsers are supported on Windows PCs
- CD-ROM drive
- Ethernet port

1.4 Upgrade Preparation & Reconfiguration

Your satellite modem was preconfigured with your individual communications parameters prior to shipping.

The following steps outline the general process for the installation of your StarBand system and configuration of your PC.

1. Find the coaxial ("coax") cable connected to your current satellite modem that is closest to the ON/OFF switch. This is the "RF-OUT" cable. Mark this cable with a piece of tape, sticker, etc.
2. Disconnect both coax cables from the modem.
3. Turn off the modem and unplug the power cable.
4. Disconnect the Ethernet (or USB if you have a Model 360) cable from the modem. **NOTE:** If you are currently using a StarBand 484 satellite modem, and if you are using the additional Ethernet ports on that modem, please be aware that the SkyEdge modem only has one Ethernet port. If you need to connect multiple computers to your SkyEdge modem, you will need to purchase a personal home router from a consumer electronics retailer. Please be aware that StarBand cannot support the setup or configuration of this device.
5. Remove the **StarBand Mission Control (Model 360) / StarBand Communications Center (48X)** software by following these steps:

a. Go to Add/Remove Programs by clicking

b. Now click on **Control Panel** and then click **Add or Remove Programs**

Click **Here**...

...then click **Here**

c. Find the **StarBand** software in the list of applications that is displayed, select it and click to remove it.

6. Once the StarBand software removal has been completed, reboot your PC, if not prompted to do so automatically.

7. Your computer must be configured to accept its IP address automatically from your new StarBand SkyEdge modem. Go to your PC's desktop, right-click on the **My Network Places** icon and select **Properties**.
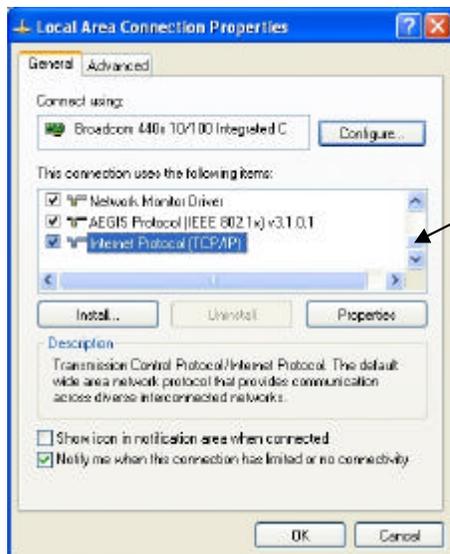
8. Now find the **Local Area Connection** icon that is associated with your Ethernet adapter. If you have multiple Local Area Connections (as shown in the next image) please follow step 10 for each Local Area Connection listed.
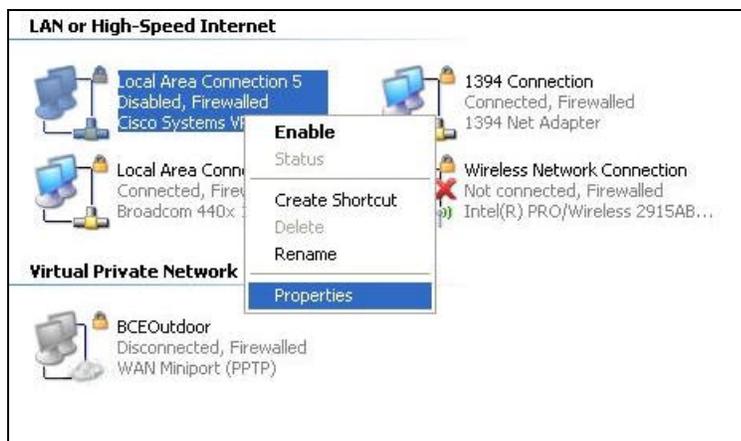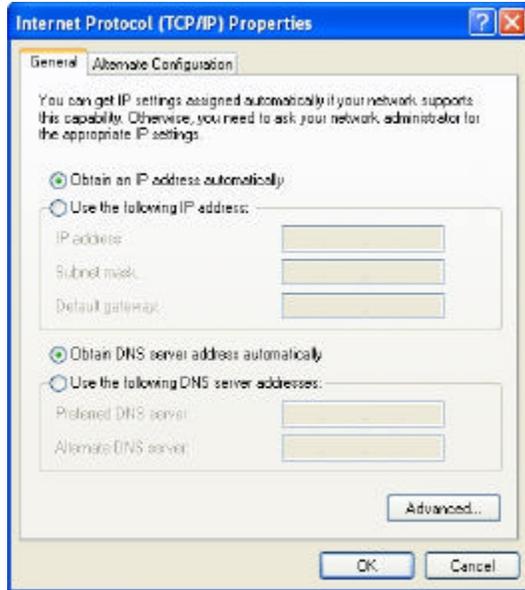

9. Right-click the icon and select "properties".
10. Now highlight **Internet Protocol [TCP/IP]** and click the **Properties** button.

You may have to slide the scroll bar down to see the Internet Protocol [TCP/IP] option.

11. Make sure the **Obtain IP Address Automatically** and the **Obtain DNS Automatically** radio buttons under the **General** tab are selected.

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12. Click **OK** until you are back to the **Local Area Connections** icon. Repeat steps 10 through 12 for each Local Area Connection.
13. Launch Internet Explorer. On the top menu bar, click **Tools > Internet Options**.
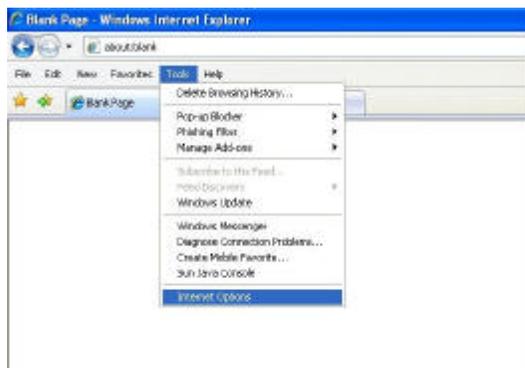
14. Now click **Connections** and then click the **LAN settings** button.
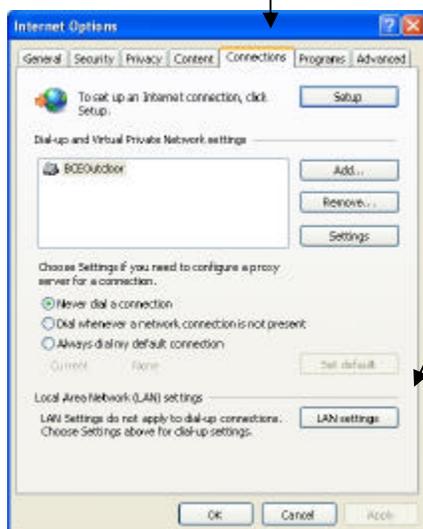
15. Make sure that NONE of the boxes on the window shown below are checked.

> If any are checked, please click the boxes to remove the checks and click **OK** until you are back in Internet Explorer. Close your browser. Continue to the next steps under the "Installing Your New SkyEdge Modem" section below.

1.5 Installing Your New SkyEdge Modem

Follow the steps below to install your new SkyEdge modem.

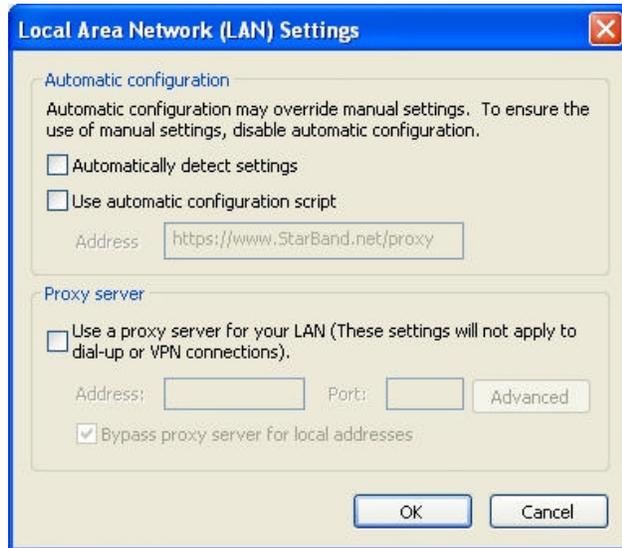If you have not performed the steps above to prepare for the upgrade, (removal of the existing software and reconfiguration of your PC) please return to the beginning of this document and follow the steps listed in Section 1.4 before continuing.

1. **Connect the coaxial cables to your new SkyEdge modem.** Locate the cable you marked as the "RF-Out" cable earlier. On the rear of the SkyEdge modem you will see two coaxial screw-on post connectors. Locate the connector labeled "RF-Out" and connect this cable securely. Connect the other coax cable to the remaining post ("RF-In").
2. **Connect the Ethernet cable.** Connect the Ethernet cable provided to the SkyEdge modem and to an Ethernet port on your PC. You MUST use a cross-over type category 5 Ethernet cable for this connection.
3. **Connect the power cable.** Plug the power cable into the power supply and then into an available wall outlet. Make sure this connection is secure before proceeding. Connect the round "DIN" power connector to the rear of the SkyEdge modem. This should immediately illuminate the green PWR LED on the front of the modem.
4. **Observe the RX LED.** The RX LED should illuminate shortly after connecting power if all other cables are properly connected. If the RX LED does not illuminate after several minutes, proceed to the Troubleshooting section at the end of this document.
5. **Wait 10 minutes.** Your new SkyEdge modem will typically require up to 10 full minutes to download its new operational code, frequencies, and other information from the StarBand hub. During this time, the LEDs on the front of the modem will go off and on repeatedly. Please give your modem time to complete its connection cycle before attempting to proceed.
6. **Confirm that the PWR, RX, SYN and On-Line LEDs are illuminated.** After the full 10-minute download is complete, all LEDs on your modem other than the TX and VPN LED should be illuminated and steady. If one or more are not illuminated, please wait a few more minutes. If you still do not have RX, SYN and On-Line, please proceed to the Troubleshooting section at the end of this document.
7. **Reboot your computer.** After your modem is online, you will need to reboot your computer to ensure you receive an IP address for your new service.
8. **Launch Internet Explorer and complete your upgrade.** You will be redirected to a StarBand webpage to complete your upgrade. Please follow the instructions provided on that page.

Once you have completed the onscreen instructions, your upgrade to the new StarBand Nova service is complete.
Thank you for upgrading and congratulations on your new service!

1.6 More information about your service and your account

Once your upgrade is complete, you can continue to enjoy the StarBand account features that you have been using previously.

Your email addresses, personal Web hosting, member name, password, etc. will all remain the same and should not be affected by this upgrade.

However, there is one important change related to accessing the StarBand Member Portal that you should be aware of. **The URL that you use to access your StarBand account information, webmail, etc. has changed. Instead of using the URL http://starband.net to access the StarBand Member Portal, please use the following URL:**

http://portal.StarBand.net

Please note this change, and if you use the member portal as your home page, you will need to reset your home page to this new URL.

That's it! You're all set and ready to go!

Once you have successfully completed the installation of your StarBand modem and have verified that you can browse the Internet, StarBand recommends that you install a firewall on each computer connected to your StarBand modem. Due to the multitude of firewall products on the market, StarBand is unable to provide configuration instructions or technical support for specific firewalls. Should you require assistance, contact your firewall vendor.

2. The StarBand SkyEdge Satellite Modem and Related Hardware

2.1 Hardware Description

The front of your StarBand-provided SkyEdge satellite modem possesses the following LEDs:

PWR (Power indicator): When this green LED is on, the satellite modem is powered up. This light should always be on if the system is plugged into a good power source.

Rx (Receive signal indicator): When this green LED is on, the satellite modem is properly locked-on and able to receive communication from the satellite. This light should always be on if the system is operating properly.

SYNC (Hub synchronization indicator): When this green LED is on, the satellite modem receiver and transmitter are properly synchronized with the StarBand satellite hub. This light should always be on if the system is operating properly.

ON-LINE (Network connection indicator): When this green LED is on, the satellite modem is properly connected to the StarBand network. This light should always be on if the system is operating properly.

Tx (Transmit signal indicator): When this green LED is flashing, the satellite modem is transmitting data to the satellite. This light is only on when the StarBand modem is sending communication to the satellite.

VPN (Virtual Private Network) – Not enabled for StarBand customers.

NOTE: A modem that has not been configured will have only the PWR LED illuminated.

The rear of your StarBand SkyEdge satellite modem has the following connections:

RF-IN (Female F-Type connector): The Rx coaxial cable from your satellite out-door unit connects to this port.

Serial (DB-9 serial port): Standard Serial Port. This connection is not enabled in StarBand-provided SkyEdge IP modems.

LAN (RJ-45 Ethernet port): Use the supplied Ethernet cross-over cable to connect the LAN port of your modem to your computer. NOTE: If the included cable is lost or damaged you can use any high quality Crossover-type Category-5 Ethernet cable of similar length. Straight-Through or "Patch" type cables will not work with your SkyEdge IP.

RF-OUT (F-Type Connector): The Tx coaxial cable from your satellite out-door unit connects to this port.

POWER – (DIN connection for power supply cable, +24vdc/2.8A) Connect the supplied external power adapter to this socket.

NOTE: There is no power switch. To power up or reset the modem, it is necessary to unplug the DIN connector from the

modem.

2.2 Installation Notes for Your Satellite Modem

2.2.1 Mounting the Modem

Depending on your preference, the satellite modem can be mounted in three possible orientations: desktop horizontal, desktop vertical and wall-mounted. Regardless of which orientation you choose, do not block the ventilation openings of the modem.

2.2.2 Connecting the Modem

Steps to connect the modem to the other parts of your system:

1) Connect the RF-In and RF-Out cables from the outdoor equipment to the RF-In and RF-Out ports on the back of the StarBand modem.
2) Before powering on the modem, connect the included Ethernet cross-over cable between your computer and the satellite modem.
3) Connect the power adapter to the modem and your electrical outlet.

2.2.3 General Precautions

- Do not cover the modem; placing anything on top of or near the satellite modem may block the air vents and prevent the proper air circulation required for correct operation. Covering the vents may result in substantial damage to your satellite modem, rendering your StarBand system inoperable.
- The modem does not require or have an internal fan. It may get warm to the touch during use, but should not be cause for concern.

2.3 Modem Operation

2.3.1 Boot and Operational Modes

Whenever the modem is powered on, the LEDs on the front of the modem will flash in accordance with Table 1.

Mode	LED	Status
Boot Mode	PWR	On
	Tx	Flash On and Off
	On-Line	Flash On and Off
	SYNC	Flash On and Off
	Rx	Flash On and Off
	Tx	Flashes On and Off for 5 seconds
	Rx	On
Operational Mode	Rx	Off
	Rx	On
	SYNC	On
	Tx	Flash On and Off
	On-Line	On
	SYNC	Off and On
	Tx	Flashes

Table 1: LED Boot Sequence

Upon completion of its boot sequence, the modem will be put into its Operational Mode. The status of the LEDs of a correctly functioning and online modem in operational mode will correspond to those as stated in Table 1 under operational mode.

Once the boot up sequence has completed, the modem should be operating normally and you may begin web browsing.

2.3.2 Rebooting / Resetting the Modem

To reset/reboot the StarBand SkyEdge modem, unplug the power cable from the rear of the modem and wait 60 seconds before reattaching it. The modem will be ready and operational after it has completed its reboot sequence (as described in Table 1).

3. Configuring Your Computer's IP Address

Please note that the following instructions are only valid for computers directly connected to the StarBand satellite modem.

In order to connect to the Internet via the StarBand satellite modem, your computer must have its TCP/IP settings properly configured to use either a dynamic or a static IP address assigned to you by StarBand. The correct type of IP address for your computer will depend on which StarBand service you purchased (if you are unsure which you have, contact your local StarBand dealer for assistance). To properly configure your computer please read the section below which corresponds to the type of IP address you have.

Static IP Addresses
If the service package you purchased includes a static IP address (or if you purchased an optional one), please remember the following:

- The static IP can be used only on a single computer.
- Once you have setup your StarBand member name, you can also find your IP address information by visiting **portal.StarBand.net** and clicking on the **My Account** button.
- Additionally, operating system-specific instructions on how to configure a static IP address for your computer is described below.

Dynamic IP Addresses
If a static IP address was not included with your service package and you did not purchase one, then your computer should be configured to use a dynamic IP address. Use the following operating system-specific instructions for configuring Dynamic IP addresses for your computer:
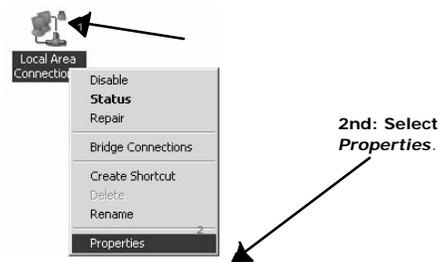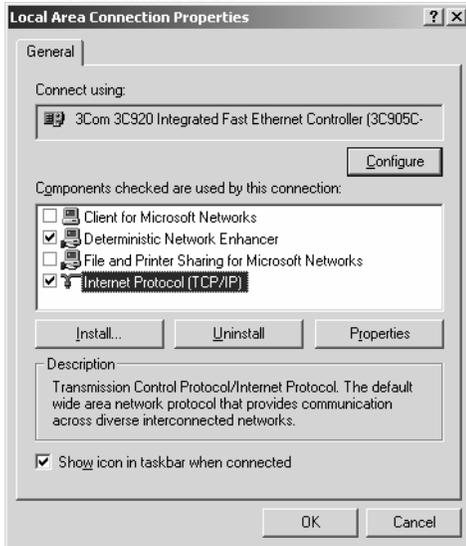
3.1 Windows™ 2000 and Windows™ XP:

1. On the desktop, right-click on *My Network Places*.
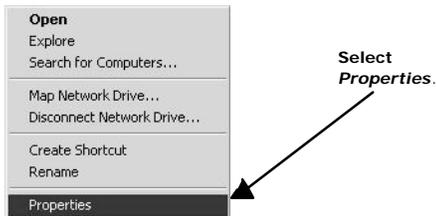

2. From the drop-down menu, select *Properties*.

3. Right-click the *Local Area Connection* icon for the Ethernet adapter to which the StarBand modem is connected, and from the drop-down menu, select *Properties*.

4. Highlight Internet Protocol (TCP/IP). Click the **Properties** button

5. To setup a static IP address, continue with step 6. To setup a dynamic IP address, select *Obtain an IP address automatically*, then click *OK*. When the Local Area Connection Properties window appears again, click OK again, which will return you to your desktop.
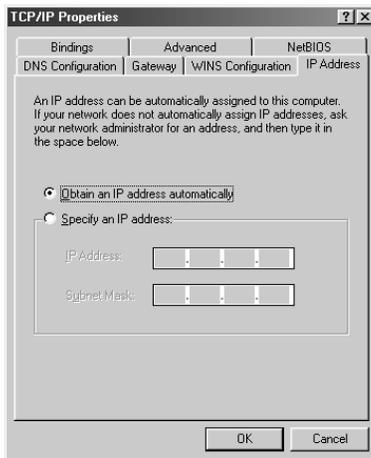
6. To setup your public static IP address, select *Use the* following IP address. Enter in your IP address, your Subnet mask, Default gateway, Preferred DNS server and *Alternate DNS server addresses* (these values were sent to you via e-mail; if you did not receive this e-mail, contact your Installer). Once you have finished, click *OK* twice to return to your desktop.
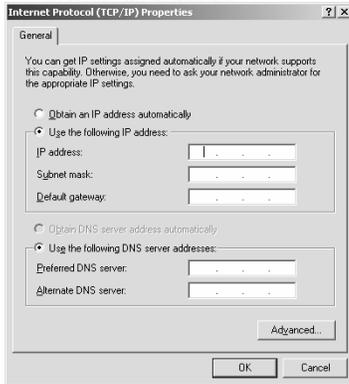
7. Your Windows PC is now configured to utilize the StarBand provided static IP address.

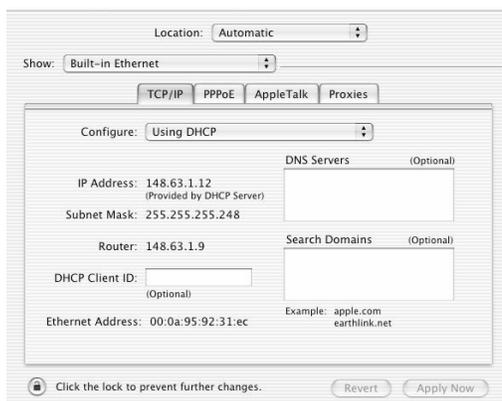## 3.2 Setting Up Mac OS X To Use A StarBand Assigned Dynamic IP Address

1. Click the **Apple icon** and select **System Preferences** from the drop-down menu.

2. In *System Preferences* locate and click the **Network** icon.

3. At the *Network* setup screen, complete the following:

- Click the **PPPoE** tab and uncheck the Connect Using PPPoE box.
- Click the **TCP/IP tab**. Select **Automatic** from the *Location:* drop-down list.
- Select the **Built-in Ethernet** option from the *Show:* drop-down list.
- On the **Configure:** drop-down list, select **Using DHCP**.
- The *DHCP Client ID:* box should remain blank. If any data is there, delete it.
- In the *DNS Servers* window enter the **DNS Addresses** provided by StarBand.
- Click **Apply Now** and close the window.

4. Your OS X Macintosh in now configured to utilize the StarBand provided dynamic IP.

3.3 Setting Up Mac OS X To Use A StarBand Static IP Address

The setup information provided applies only to computers connected directly to the StarBand modem.

Note: Not all StarBand customers have static IP addresses as part of their account, so this section may **NOT** apply to you.

1. Click the Apple icon and select System Preferences from the drop-down menu.

2. In *System Preferences* locate and click the **Network** icon. Click *Network*.

3. At the *Network* setup screen, complete the following:

- Click the **PPPoE** tab and verify that the **Connect Using PPPoE** box is unchecked.
- Click the **TCP/IP** tab and select **Automatic** from the *Location:* item list.
- Select the **Built-in Ethernet** option from the *Show:* list.
- Select **Manually** from the *Configure:* list.
- In the *IP Address:* field enter the **IP Address** provided by StarBand.
- In the *Subnet Mask:* field enter the **Subnet** *Mask* provided by StarBand.
- In the Router: field enter the **Default** Gateway IP *address* provided by StarBand.
- In the *DNS Servers* window enter the **two DNS addresses** provided by StarBand.
- Finally, click **Apply Now** and then close the window.
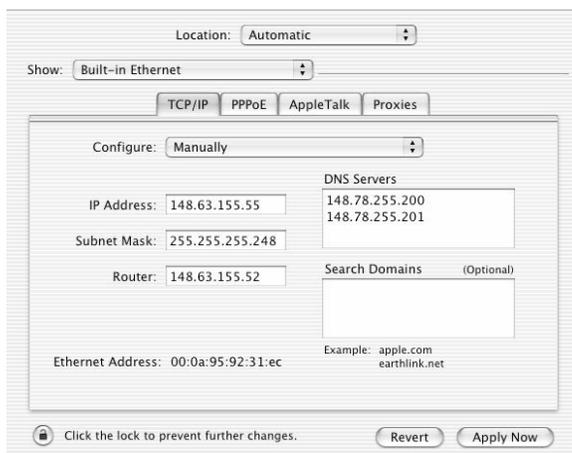
4. Your OS X Macintosh in now configured to utilize the StarBand provided static IP address.

4. Troubleshooting Guide

This section may be helpful in working through some of the issues that can arise during use of your StarBand broadband service. If you experience a problem not listed in this guide or you are unable to resolve your problem, please visit the online Support Center at portal.StarBand.net or call **StarBand Technical Support at 1-800-295-4315**.

4.1 You Were Previously Able to Browse the Internet But Now You Cannot

If after previously using your StarBand broadband satellite service, you are now unable to browse the Internet, find the description below that best fits your situation and complete the steps that follow:

No lights on modem (including PWR)
- Make sure that power cable is securely plugged into the wall, the power adapter, and the back of the modem.
- Make sure that the power adapter is plugged into a working power outlet.

Only PWR light on Modem
- Reset the modem by removing the power cable from its rear (see the Modem Operation section for additional details).
- Make sure the RF cables in the rear of the modem are securely connected.
- If there is bad weather (heavy rain or dark clouds) locally or on the horizon, wait for the weather to pass.
- There may be bad weather at the StarBand hub. Such conditions are infrequent and normally pass in approximately 10 minutes.
- If the problem persists, please contact your installer for assistance.

Only PWR, RX or PWR, RX & SYNC lights on the modem
- Reset the modem (see the Modem Operation section for additional details).
- Make sure RF cables in the rear of the modem are securely connected. Also make sure that the cable you labeled as "RF-Out" is connected to the RF-Out connector on the modem.
- If there is bad weather (heavy rain or dark clouds) locally or on the horizon, wait for weather to pass.
- There may be bad weather at the StarBand hub. Such conditions are infrequent and normally pass in approximately 10 minutes.
- If the problem persists, please contact your installer for assistance.

PWR, RX, SYNC and ON-line lights on modem, but can't access the internet from any PC

- Wait five minutes as the modem may appear to be online, but is actually in its start-up (boot) mode.
- Reset the satellite modem (see the Modem Operation section for details). After it has completed its boot process reboot your PC.
- Make sure that the cable connecting the PC to the modem is securely connected on both ends (remember that a cross-over Ethernet cable is required).
- If you are using any local networking devices (wireless router, etc) between the modem and the PC, reset them.
- If there are any local networking devices between the satellite modem and your PC, connect the PC directly to the satellite modem and reboot the PC.

Some PCs can access the internet, but others can't

- Reboot the PCs that do not work.

- If you are using any local networking devices (wireless router, etc) between the modem and the PC, reboot them.

- Reset the satellite modem. After it has completed its reboot process, restart any attached PCs or networking devices.

- Make sure that you do not have more than 1 computer configured to use a particular static IP address. If necessary, reconfigure your systems so that there is only 1 computer using each static IP address.

Problems with the system connecting intermittently

If your system is only able to connect intermittently, or the modem seems to reset on its own periodically (every 5-10 minutes), please contact the StarBand Technical Support center at 1-800-295-4315:

Can browse the Internet, but email doesn't work

- Make sure that you are using the correct password (you can reset you password by logging into your account on portal.StarBand.net)

- Check the configuration of your email application (many guides are available on https://portal.StarBand.net/email)

- Wait awhile and try again. One or more StarBand mail servers may be experiencing problems or delays.

If you are unable to resolve any of the above problems
call StarBand Technical Support at: **1-800-295-4315**

4.2 For Troubleshooting Information on Other Issues

Go to portal.StarBand.net, click on the *Support* tab, scroll down and click on **Ask a Question**. Select your PCs operating system from the pull-down menu. Enter in your keywords or questions. You will then be led to documents discussing the subject you entered.

Your StarBand Modem Parameters

Tech ID: _____

VSAT ID: _____

For Customers with Static IP Addresses

Static IP Address(es): _____

Subnet Mask: _____

Default Gateway: _____

DNS1: _____

DNS2: _____

FCC Compliance Notice of StarBand Equipment
NOTE: 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:

- Reorient or relocate the (radio or TV) receiving antenna.

- Increase the separation between the equipment and receiver.

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

- Consult the dealer or an experienced radio/TV technician for help.