



**I4 MIGRATION
QUICK START USER GUIDE**



I4 Migration Quick Start User Guide

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INTRODUCTION

Welcome to the I4 Migration Quick Start User Guide. This document will guide you through the steps required to migrate your Satellite IP Modem service from the current R-BGAN satellite to the new Inmarsat 4 satellites. For further information regarding the migration, please consult <http://regionalbgan.inmarsat.com/latest>

Migration of the Satellite IP Modem to the I4 satellites will consist of four primary functions:

- 1) Download new software and install,
 - 2) Install new Satellite IP Modem software,
 - 3) Change the Satellite IP Modem's antenna switch, and
 - 4) Point the Satellite IP Modem's antenna to one of the new Inmarsat 4 satellites.
- Instructions for completing these tasks are provided in this document.

There are 8 basic steps to get the Modem migrated and functioning with the Inmarsat 4 satellites:

- Step 1:** Download the new software
- Step 2:** Install the new software
- Step 3:** Update the Satellite IP modem software
- Step 4:** Update the Satellite IP modem System Information File
- Step 5:** Change the Modem antenna switch
- Step 6:** Rough Point to the Inmarsat 4 Satellite(s)
- Step 7:** Fine Point to the Inmarsat 4 Satellite
- Step 8:** Exit Pointing Mode

Prior to following these steps, it is highly recommended that the user read the safety and cautionary information provided in the *I4 Migration Satellite IP Modem User Manual*.

STEP 1: DOWNLOAD NEW SOFTWARE

There are three methods to obtain the new software required for the migration to the I4 satellites:

1. If you have received a new migration CD, insert it into the PC. Windows based PCs will automatically start the software installation wizard as shown in STEP 2.
2. Connect the PC to a terrestrial Internet connection. Go to one of the following URLs to obtain the "*I4 upgrade package*" and follow the instructions on the webpage to install the new software.
 - <http://rbgan.hns.com>
 - <http://regionalbgan.inmarsat.com/upgrade>
3. The user can launch the current "*Launch Pad*" software and click on Upgrade Satellite IP Modem. Follow the instructions [i] to [iii] below to download the software to the PC. Once the software is successfully downloaded, the program will automatically start the software installation wizard as shown in STEP 2.

If you have already received the "I4 Upgrade package" (Method 1 or 2 in STEP 1), please proceed directly to STEP 2.

For software download using the existing "Launch Pad" (Method 3 in STEP 1), please execute the following steps.

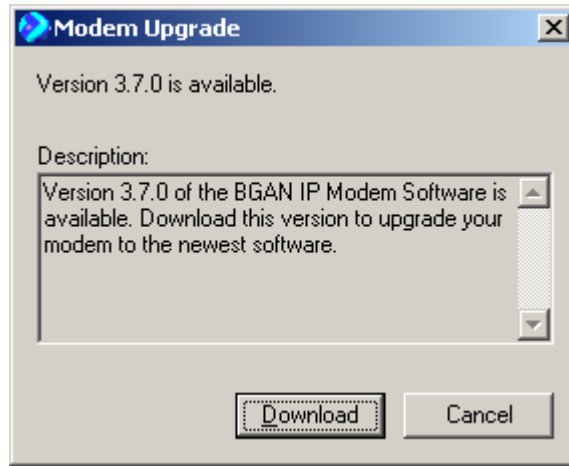
Note: You need to have the Internet connection to proceed.

[i]. From the existing "Launch Pad", click on "Upgrade Satellite IP Modem".



Launch Pad screen

[ii]. The following popup window will appear indicating that a newer software version is available. Click on "Download" to download the new software release from the Internet.



Modem Upgrade screen

Note: The actual software version might differ from the one shown in the figure.

[iii]. Once the software is successfully downloaded, the program will automatically start the software installation wizard as shown in STEP 2.

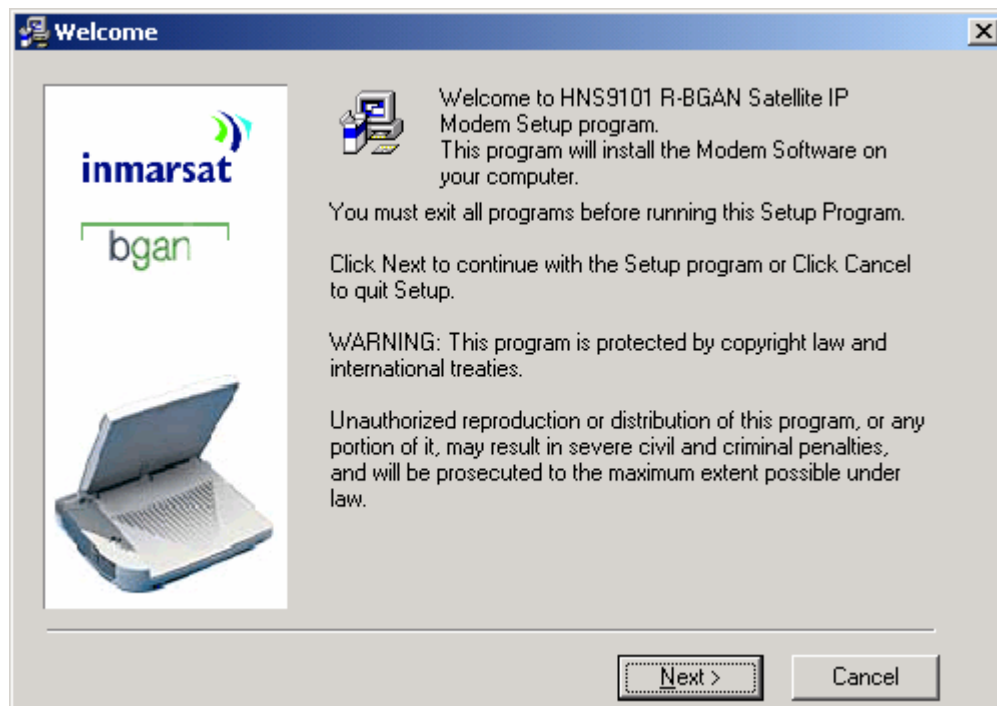
STEP 2: SOFTWARE INSTALLATION PROCEDURE

The remaining STEPS should only be executed after the transition date (July 09, 2005 – subject to change). For the latest transition information, please consult your service provider.

STEP 2 guides you through the procedure to install the new software on the PC.

[a]. The following software installation screen will appear on the screen.

- Press “Next” to begin installation.

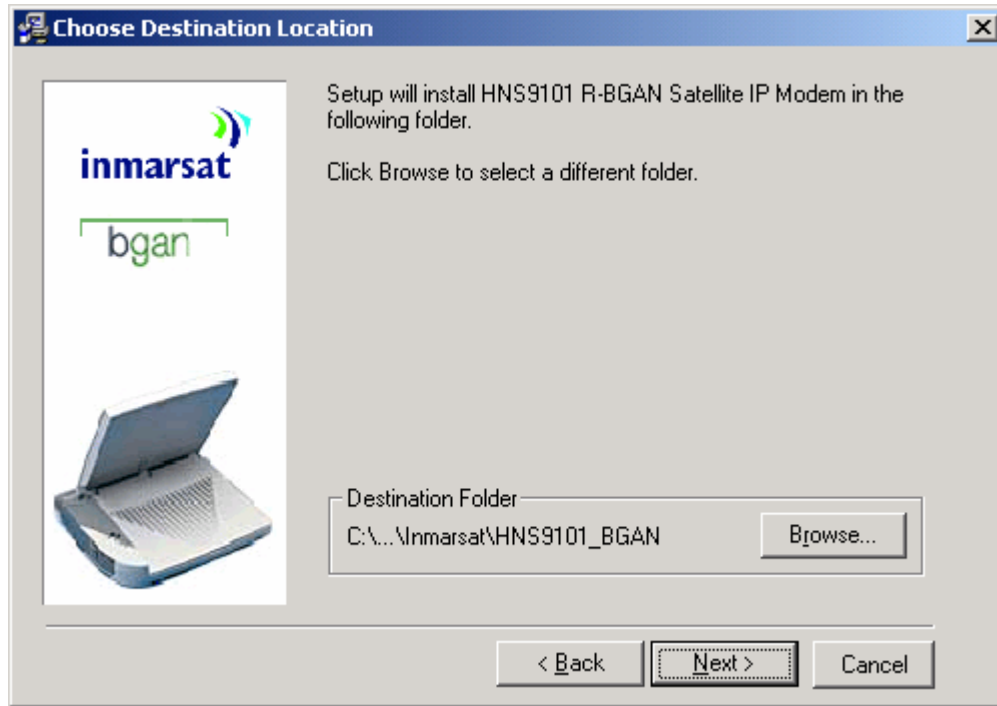


Satellite IP Modem software installation welcome screen

[b]. The following screen lets you select the destination folder where the software will be installed.

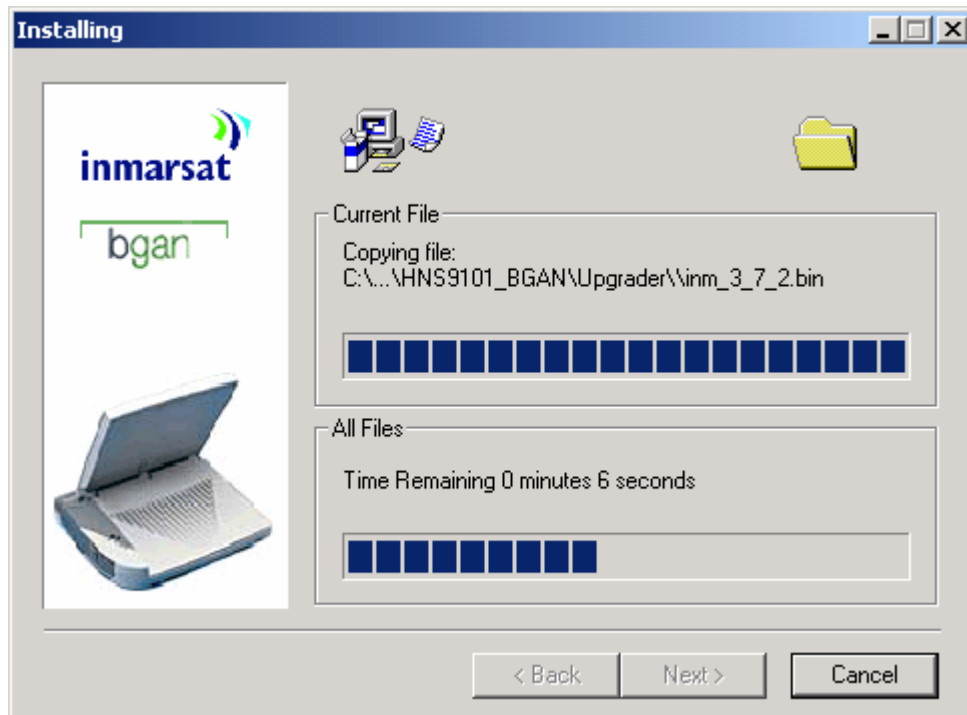
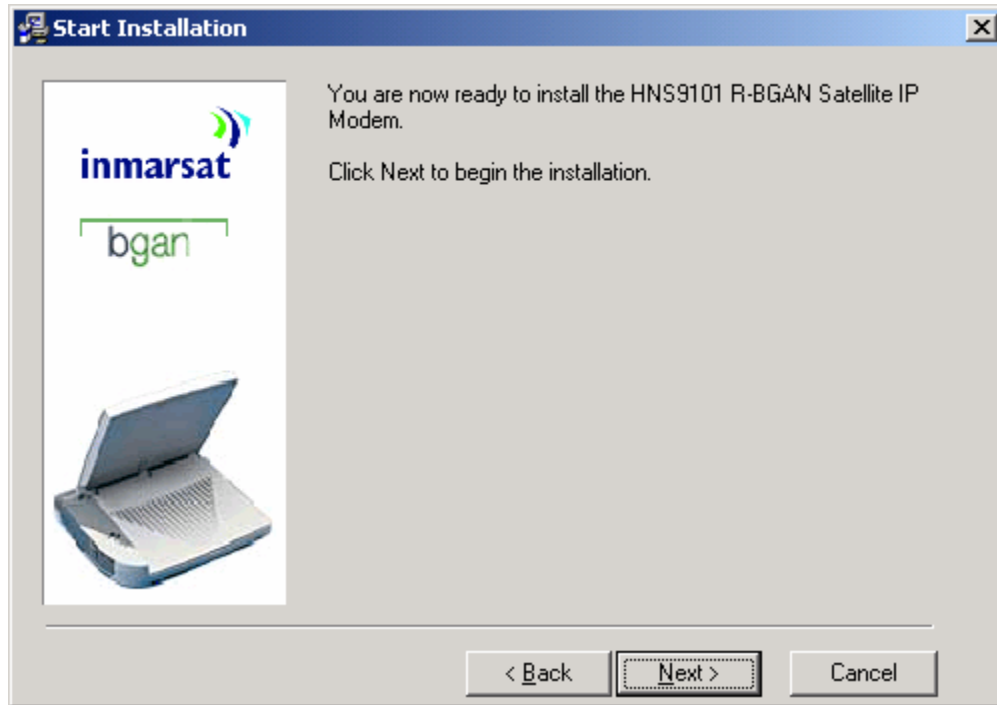
The default destination is C:\Program Files\Inmarsat\HNS9101_BGAN. To select a different destination, click on "Browse" and choose the new location.

- Click on "Next" to proceed.



Choose Destination Location screen

[c]. To begin software installation on the PC, click on "Next".

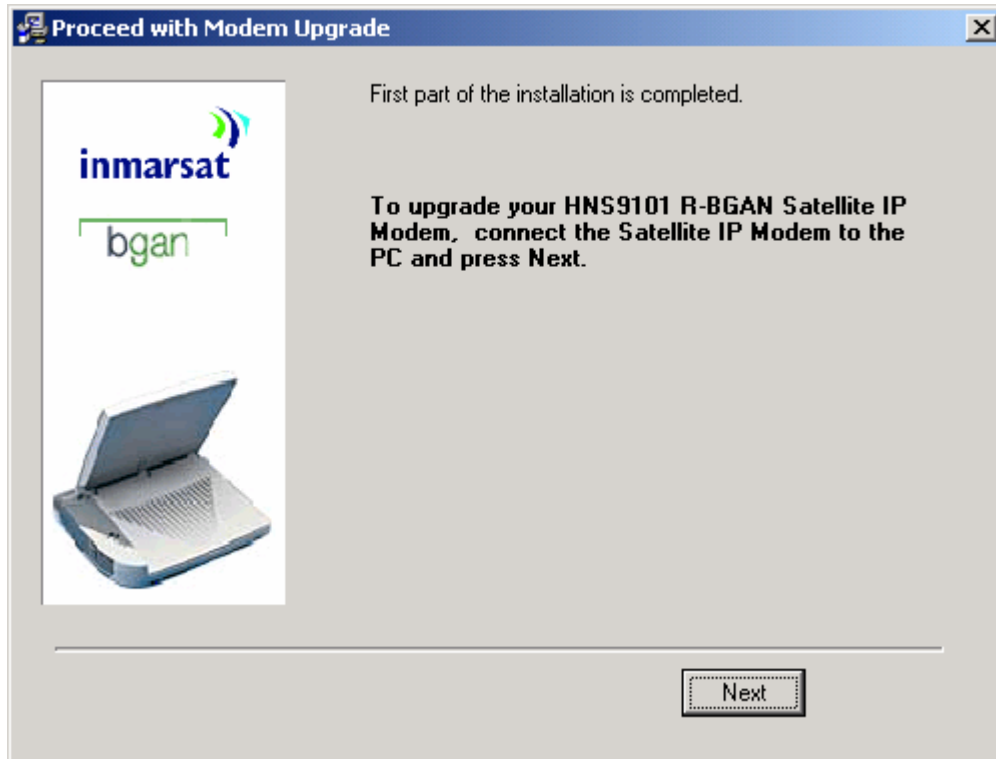


[d].The following screen will appear. This indicates that the software has been successfully installed on the PC.

The next step is to upgrade the Satellite IP Modem software. Please follow the instructions in the "Proceed with Modem Upgrade" screen shown below.

Note: Before proceeding to the next step, please make sure that the PC is connected to the Satellite IP Modem.

- Press "Next" to begin Satellite IP Modem software installation procedure.



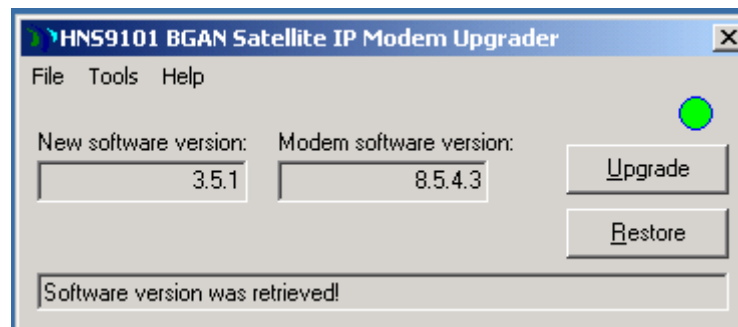
Proceed with Modem Upgrade screen

STEP 3: UPDATE THE SATELLITE IP MODEM SOFTWARE

STEP 3 guides you through the procedure to install the new software in the Satellite IP Modem.

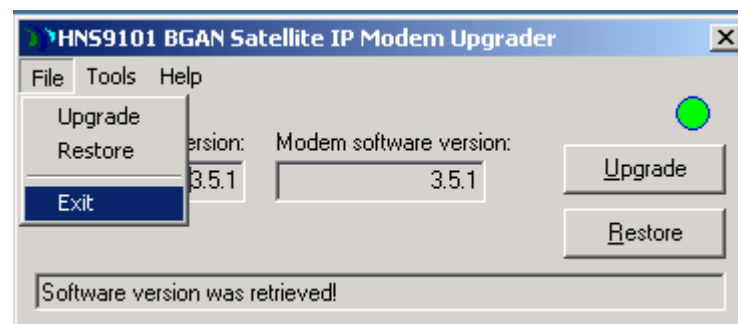
The following pop up screen will appear to install the Satellite IP Modem software.

- Click on "Upgrade" to install the new software.



After the software is successfully installed, the Modem software version will match the new software release version. Now exit from the Upgrader as shown below.

Note: The actual software version might differ from the one shown in the figure.



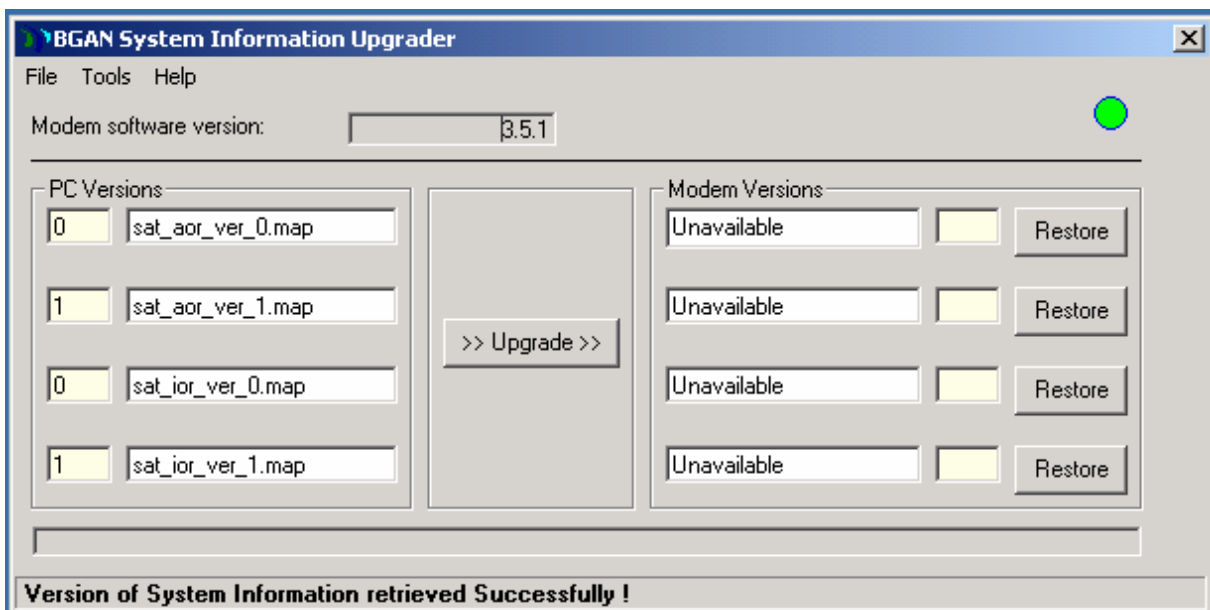
After exiting from the Upgrader, wait until the SystemInformation Upgrader window appears as shown in STEP 4.

STEP 4: UPGRADE SYSTEM INFORMATION FILE

The following menu provides the steps to upgrade the System Information file in the Satellite IP Modem. This is a new set of files required for the I4 satellite.

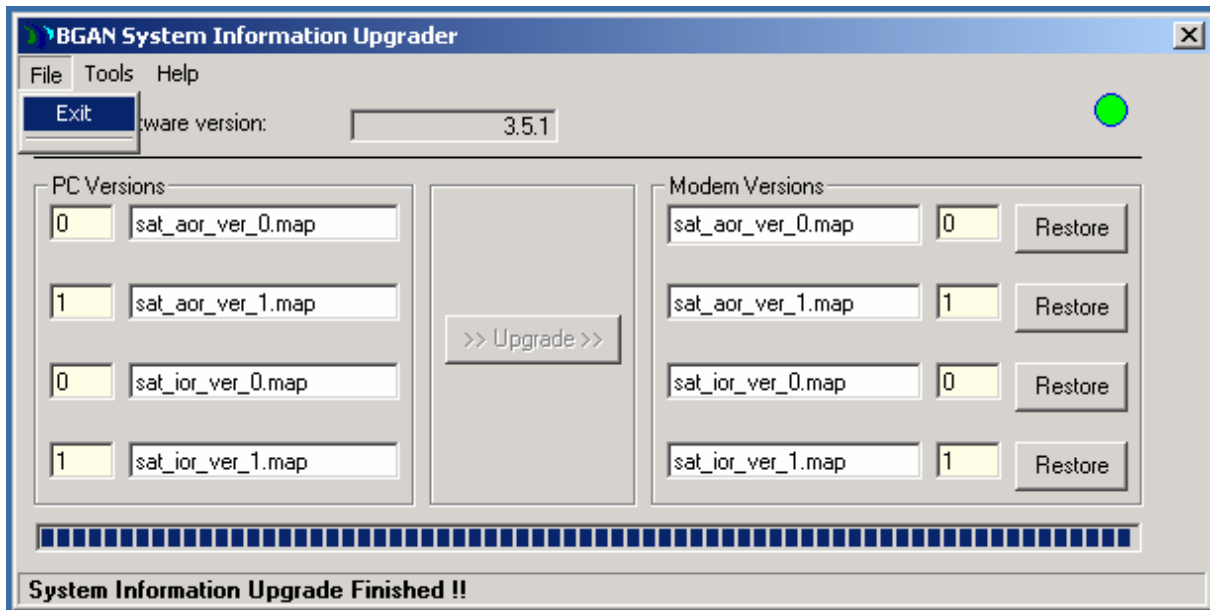
[a]. Click on ">>Upgrade >>" to upgrade the system information files.

Note: The **System Information Upgrader** screen below indicates the file versions that are on the PC vs. the file versions on the modem. During the very first time installation, the modem version will indicate "unavailable". The actual software version might differ from the one shown in the figure.



System Information Upgrader screen

[b]. After the System Information upgrade procedure is completed, exit from the Upgrader as shown below:

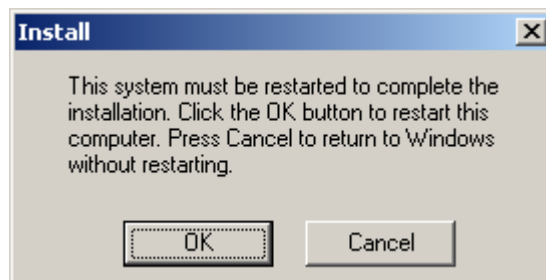


[c]. This completes the Satellite IP Modem software upgrade procedure.



[d]. The installation wizard now checks for the Java Run Time Environment, Adobe Acrobat and Internet Browser software versions that are loaded on the PC. If the minimum required software versions are not available, the installation wizard will prompt and the user may choose to install them.

[e]. Your PC's operating system may or may not request to reboot the PC. If prompted, click on "Yes" to reboot the PC, in order for the new software to take effect.



STEP 5: CHANGE THE MODEM'S ANTENNA SWITCH

Use the following instructions to change the modem's antenna switch. This step is not required if you are using an external antenna. If using an external antenna, rotate the antenna switch to EXT and change antenna polarity as indicated in the external antenna manual.

- Open the modem's antenna to the full upright position.
- On the bottom center of the inside of the antenna, you will see a round slotted disk.
- Using a coin, rotate the disk until it is pointing to the "R" position.

Note: This changes the antenna's circular polarization from Left hand to Right hand so that it can communicate with the Inmarsat 4 satellites.



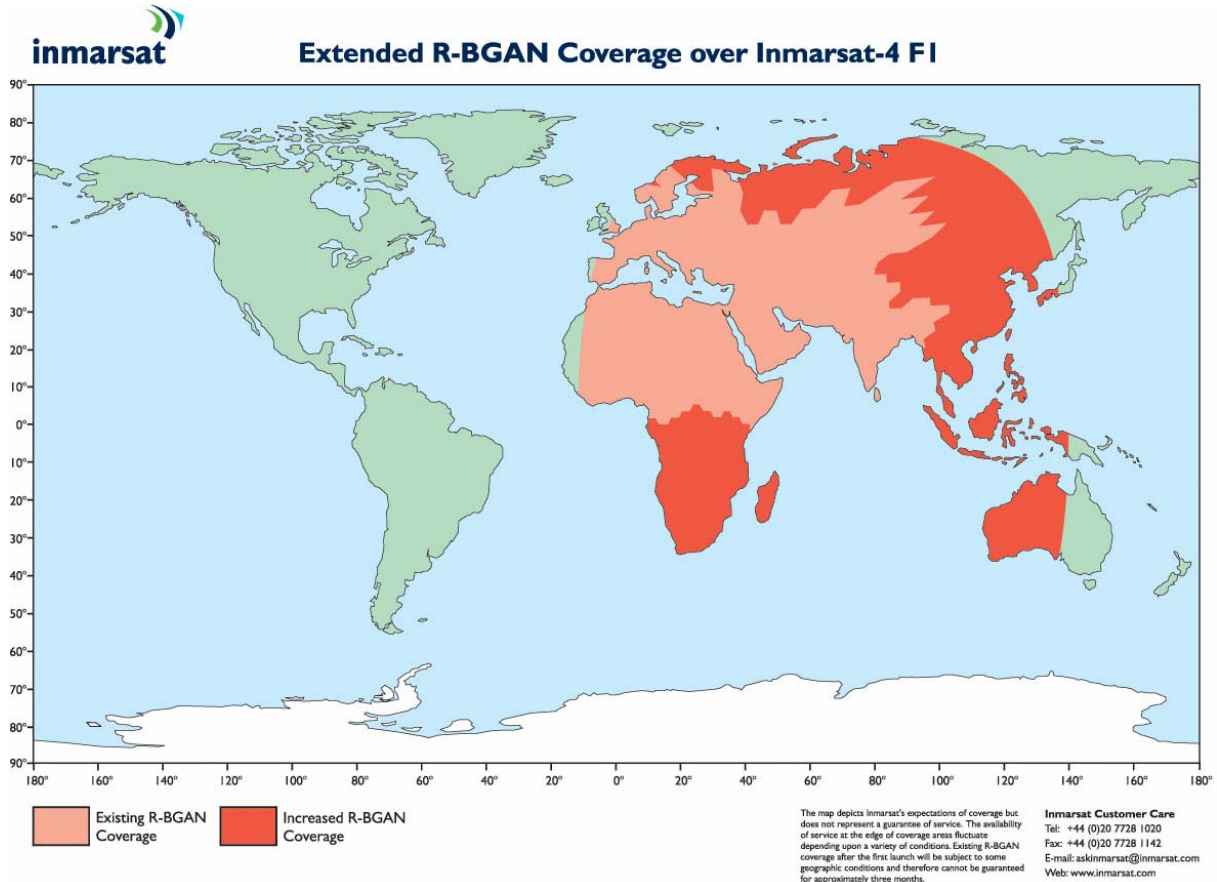
Normal Position



Rotated to "R" Position

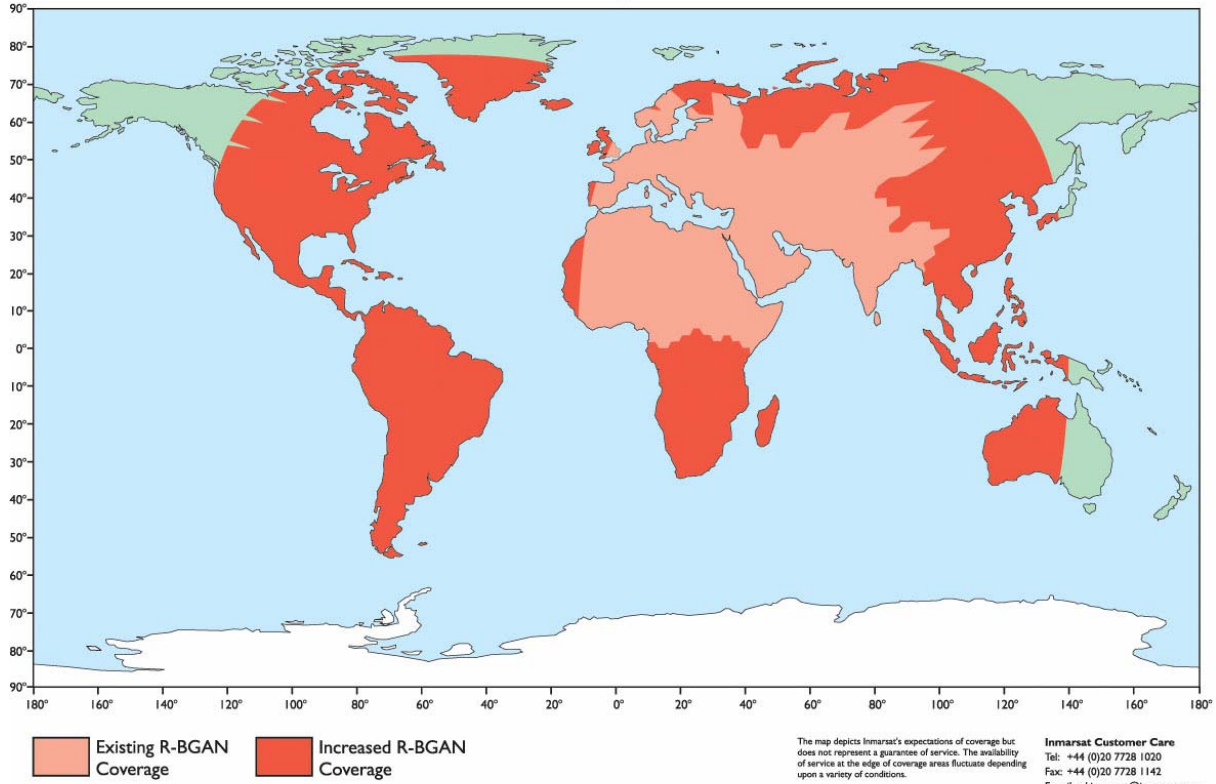
STEP 6: ANTENNA POINTING TO I4 SATELLITE

Use the following instructions to initiate the rough pointing sequence. Please obtain a current GPS Fix before starting the rough pointing sequence. With the new modem software installed, the antenna pointing screen will show which Inmarsat 4 satellite is in view. The first satellite coverage map depicts Phase 1 of the migration coverage. See second satellite coverage map for Phase 2 coverage once both I4 satellites are launched.



Phase 1 Satellite Coverage

Extended R-BGAN Coverage over Inmarsat-4 F1 & F2



Phase 2 Satellite Coverage

Note: If you are in an overlap region of the satellite's coverage, the pointing screen will show two satellites, two compass directions, and two antenna angles as shown in the picture below:

Rough Pointing to Satellite

The screenshot shows the 'POINTING' screen of the Satellite IP Modem Control Pad. The interface includes the BGAN Inmarsat logo, a menu with 'POINTING' and 'EXIT POINTING', and a main display area. The display area shows 'GPS Validity: Using Stored Location', 'Point Antenna to These Settings: Satellite: AOR', 'Compass Direction: E (105°)', and 'Antenna Angle: 14°'. Below this, it shows 'Acquired Satellite: None' and 'Signal Strength: 50.00'. At the bottom, there are controls for 'Switch GPS Antenna' (Internal/External) and 'Apply', along with 'Mute Beep' and 'Exit Pointing' buttons. Two callout boxes on the right side of the screen point to the 'Compass Direction' and 'Antenna Angle' fields.

Note: You must have a valid GPS location for the compass direction and Antenna Angle to be displayed.

- 1) Note the Compass Direction and Antenna Angle from the Control Pad interface as shown above; these will be used to assist you in roughly pointing the Satellite IP Modem antenna towards the satellite. Rough pointing consists of determining the rough direction and elevation angle that the antenna needs to "see" the Regional BGAN Satellite.

Antenna Pointing Screen – Satellite Overlap Region

If you are in an overlap region, you will see reference to both satellites in the pointing page.

Until the second Inmarsat-4 F2 satellite (AOR) is operational, please ignore any reference to it and only point your satellite IP modem towards the IOR satellite.



SATELLITE IP MODEM CONTROL PAD

- POINTING
- EXIT POINTING

POINTING

GPS Validity: Using Stored Location

Point Antenna to These Settings:

Satellite:	AOR
Compass Direction:	E (105°)
Antenna Angle:	14°

Acquired Satellite: None

Signal Strength:  50.00

Switch GPS Antenna: Internal External

Compass Direction

Antenna Angle

Note: You must have a valid GPS location for the compass direction and Antenna Angle to be displayed.

- 1) Note the Compass Direction and Antenna Angle from the Control Pad interface as shown above; these will be used to assist you in roughly pointing the Satellite IP Modem antenna towards the satellite. Rough pointing consists of determining the rough direction and elevation angle that the antenna needs to “see” the Regional BGAN Satellite.

Rough Pointing to Satellite – Compass Direction



Rotate left and right

- 1) Look at the Control Pad Pointing display and determine the Compass Direction needed for the antenna. Rotate the Satellite IP Modem left and right to the correct compass direction.



Below are sample compass directions.



South



Southwest



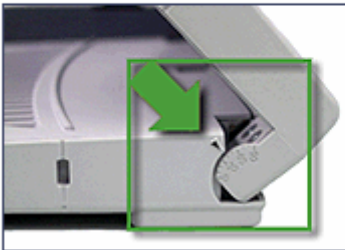
Southeast

Rough Pointing to Satellite – Antenna Angle



Protractor should match number off Control Pad

- 1) Look at the Control Pad Pointing display and determine the elevation angle needed for the antenna. Tilt antenna up and down to the correct antenna angle.



- 2) The small arrow on the Satellite IP Modem Protractor should point to the number that was read off the Control Pad.

STEP 7: FINE POINTING TO THE I4 SATELLITE

Use the following instructions to fine point the antenna.

Fine Pointing to the Satellite



Pointing interface

Signal Strength:  50.00

➔ **IMPORTANT:** The reliability and speed of your connection to the network will be adversely impacted unless the antenna is correctly pointed towards the satellite. Please follow these directions closely so that your Satellite IP Modem is optimally pointed.

Use the Control Pad to optimally fine point the antenna. The Control Pad pointing screen has a signal strength bar graph and numeric value to assist in accurate antenna pointing. The orange peak-hold bar at the end of the blue bar identifies the highest signal strength measured during antenna pointing and will help you optimize the pointing direction.

➔ **Note:** The power light must be flashing red/amber or amber/green. If this is not the case, turn the Satellite IP Modem off and then back on to reenter the pointing display.

Fine Pointing to the Satellite



Rotate left and right slowly

- 1) To find the optimal antenna pointing direction, rotate the Satellite IP Modem slowly left and right a small amount. Find the center peak of the signal strength using one of the methods described on the prior pages. Once a peak has been found, keep the Satellite IP Modem pointing in that direction.



Tilt antenna up and down

- 2) To find the optimal antenna pointing elevation, tilt the antenna slowly up and down a small amount. Find the center peak of the signal strength using one of the methods described on the prior page. Once a peak has been found keep the Satellite IP Modem antenna at that angle.

STEP 8: EXITING POINTING MODE

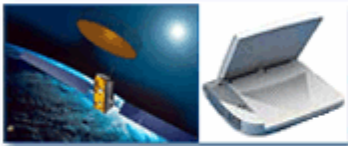
Use the following instructions to begin using your Satellite IP Modem to connect to the Internet.

Exit Pointing Mode



Select "Exit Pointing" option

- 1) Your antenna is now optimally pointed. Exit the pointing mode by selecting the "Exit pointing" option on your Control Pad.
- 2) Your service provider may have supplied additional instructions for configuring your Satellite IP Modem along with your SIM card. If provided, please refer to the configuration instructions and make the required changes now. If you are unable to successfully connect to the Internet, please see the troubleshooting section of the *Regional BGAN Satellite IP Modem User Manual*.



- 3) Congratulations your modem is successfully connected.

Note: If you experience any problems executing this procedure, please contact your service provider.

FREQUENTLY ASKED QUESTIONS

1. While upgrading the Satellite IP Modem software, FTP Time-out occurred.

Symptoms:

- While upgrading the Satellite IP Modem software as shown in STEP 3 and STEP 4, FTP time out pop-up window appeared.

Causes:

- FTP failure between the PC and Satellite IP Modem.

Troubleshooting and Resolution:

- Power cycle the Satellite IP Modem and reboot your PC.
- If possible, try to perform the upgrade with a different PC.
- Repeat STEP 3 and 4.
- If the problem persists, please contact your service provider.

2. After Upgrading, you tried to access the Modem pointing page using the 'Refresh Button' in the Browser.

Symptoms:

- The pointing page does not appear but you see the error page

Causes:

- After upgrade the http page for pointing changes.

Troubleshooting and Resolution:

- Access the Control Pad through the Launch Pad utility
- Alternatively close the browser and reopen it.

ACRONYMS

AOR – Atlantic Ocean Region

FTP – File Transfer Protocol

GPS – Global Positioning System

IOR– Indian Ocean Region

IP – Internet Protocol

PIN – Personal Identification Number

SIM – Subscriber Identity Module

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