SkyWire

Quick Start Procedure

Quick Start Guide

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SkyWire Quick Start Procedure
AN213 - Record of Revisions

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Revision Level	Date	Reason for Change
1.0	Nov. 14, 2007	Initial Release
1.1	Dec 12, 2007	Reformatted
1.2	Jan 23, 2008	Update procedure to reflect changes in the configurator screens
1.3	Mar 31, 2008	Updated Configurator Screens

Revision Level	Engineering Approval Printed Name, Date, and Signature	Production Approval Printed Name, Date, and Signature
1.3		

SkyWire Quick Start Procedure

1.0 Introduction

The purpose of this document is to provide simple instructions to quickly configure a SkyWire Gateway. This is not a replacement to the SkyWire specifications manual. This is a help document to leverage the GUI capabilities of the SkyWire Configuration Controller. Refer to the SkyWire manual (TM131) for operational instruction and descriptions.

2.0 Required Items

SkyWire MDX420 Satellite Network Gateway
PC or Laptop with the SkyWire Configuration Controller installed

3.0 Login

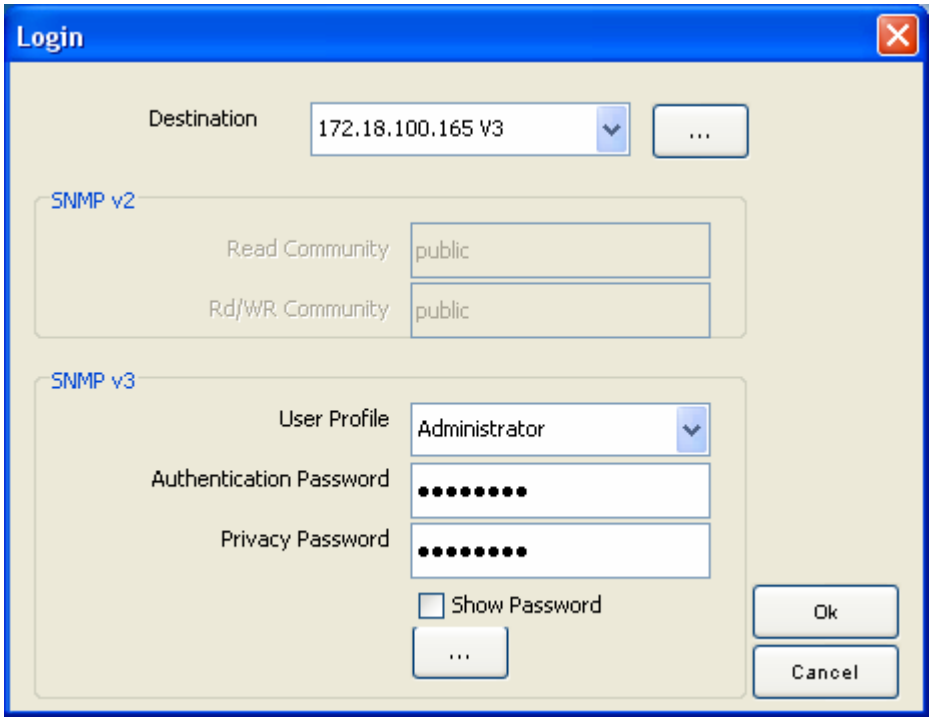

Figure 3-1 Login Screen – Gateway IP Address Auto-Detected

The gateway IP address is automatically detected by the application. Click on the 

to configure and save the gateway destination profile. Select the desired polling interval along with the SNMP protocol version to use, then click on the Save button to store the destination profile for easy future access.

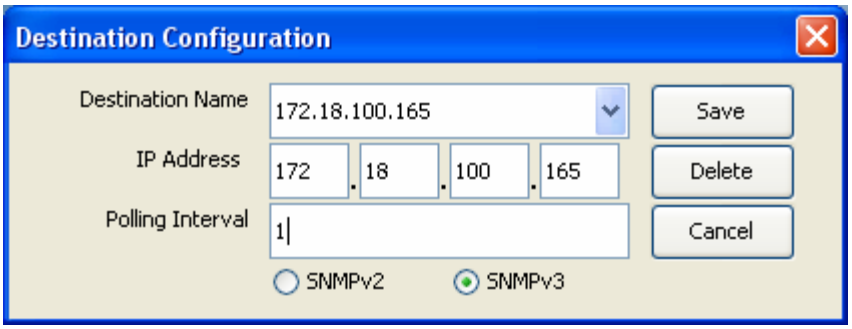

Figure 3-2 Destination Configuration

On the Login screen, specify the Read and Read/Write communities (defaults to “public”) then press the OK button to connect to the SkyWire Gateway. The community settings have to match the settings inside the gateway.

Once the user is authenticated, a quick summary of the demodulator and network status, event logs, and summary faults are displayed. A SkyWire system that has never been configured and is not part of a network looks as follows.

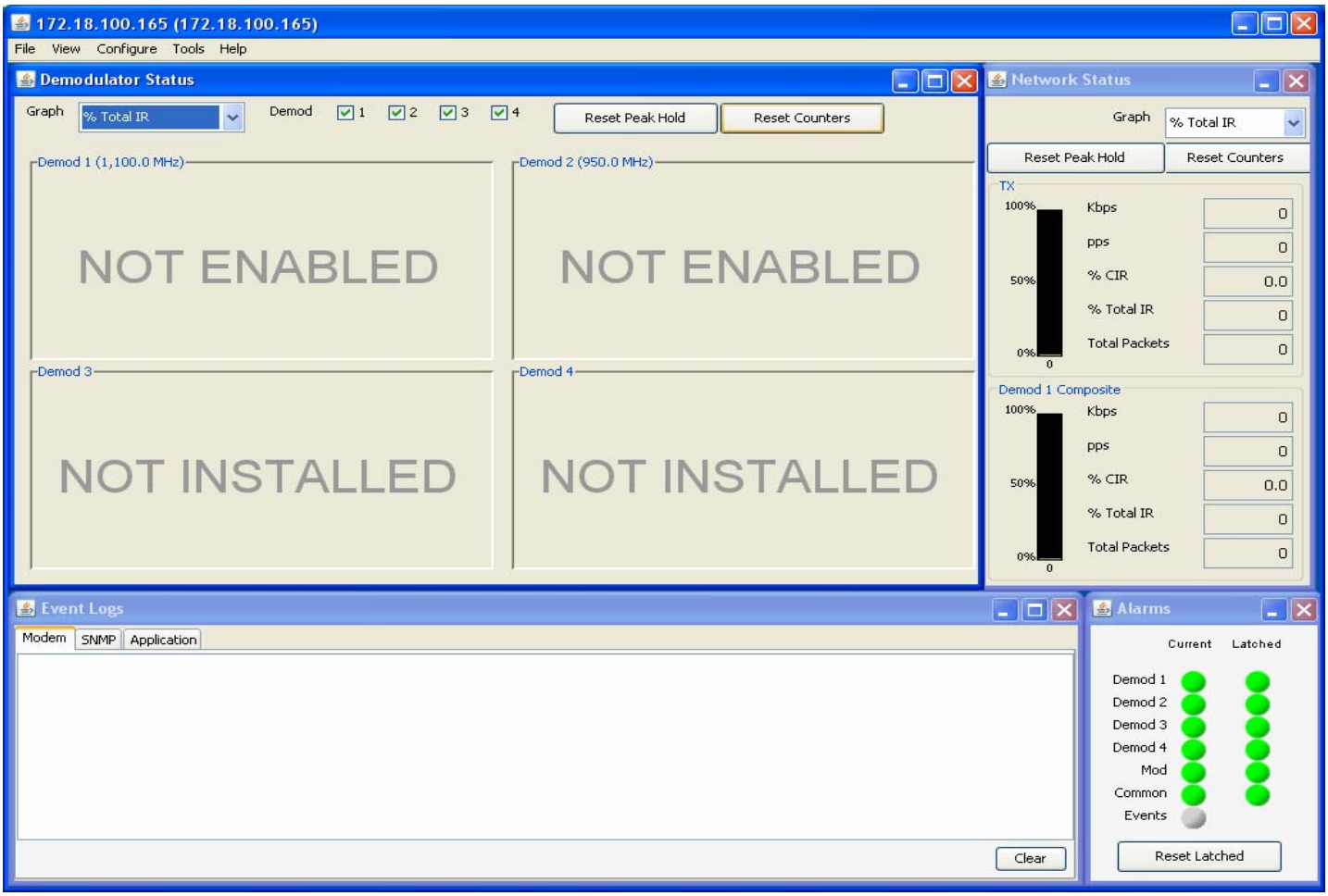

Figure 3-3 SkyWire Configuration Controller

The user gets to see which demodulators are installed and/or enabled. No remotes are active at this point.

4.0 SkyWire Modem Configuration

Using the SkyWire top-level menu system, select the Configure / Satellite Link / Modulator menu.

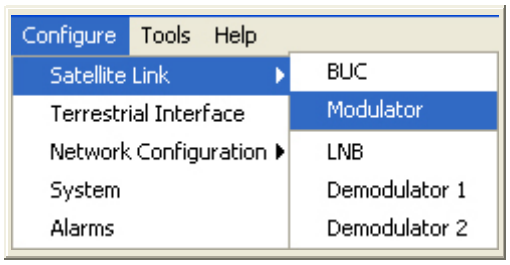

Figure 4-1 MDI Modulator Menu Selection

The satellite link configuration window groups all modem system components in one area through the use of tabs. Select a tab then press the Edit button to make modifications. It is that simple.

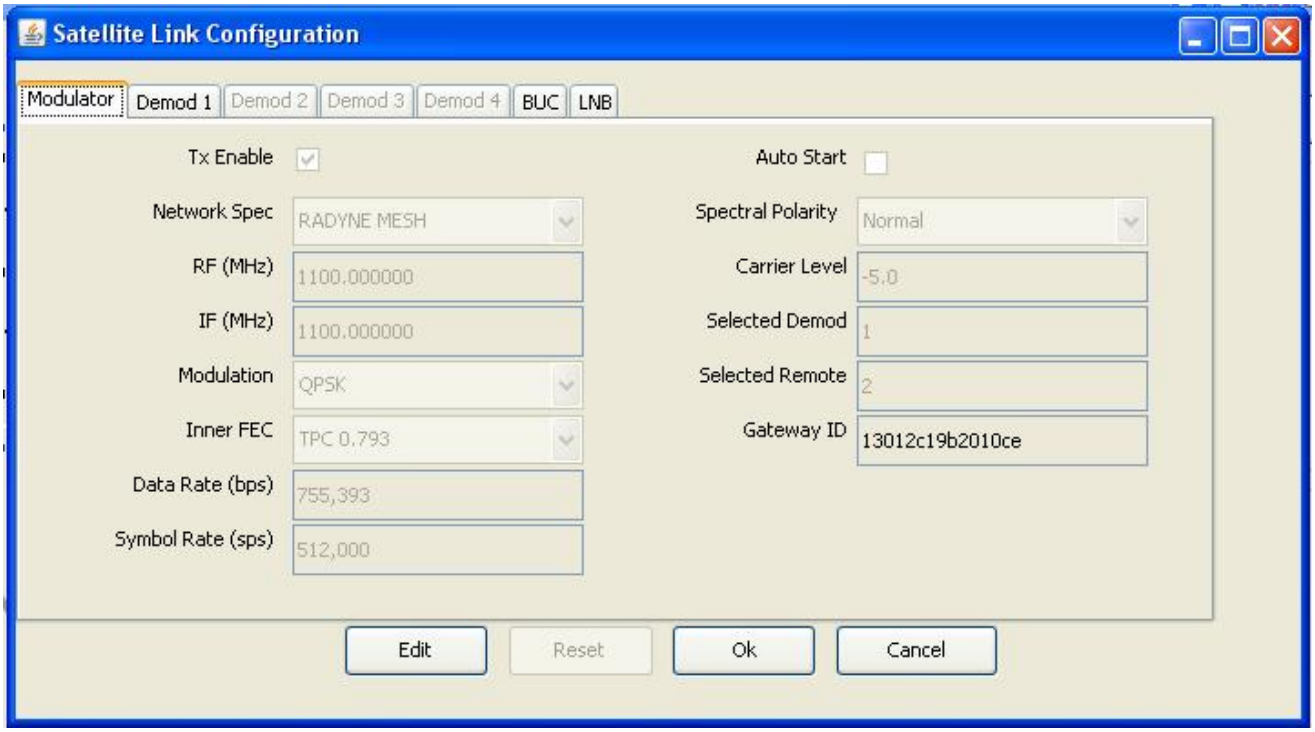

Figure 4-2 Modulator Tab Satellite Link Configuration

4.1 Modulator Configuration

To setup the modulator, simply enable the transmitter and select the carrier and bandwidth as you would a normal SCPC modem. See Figure 4-3 for Example Settings.

Once satisfied with the new settings, click on the Apply button to have them take effect.

NOTE

The Gateway Identification number, this is unique to every product and will be used later during network configuration.

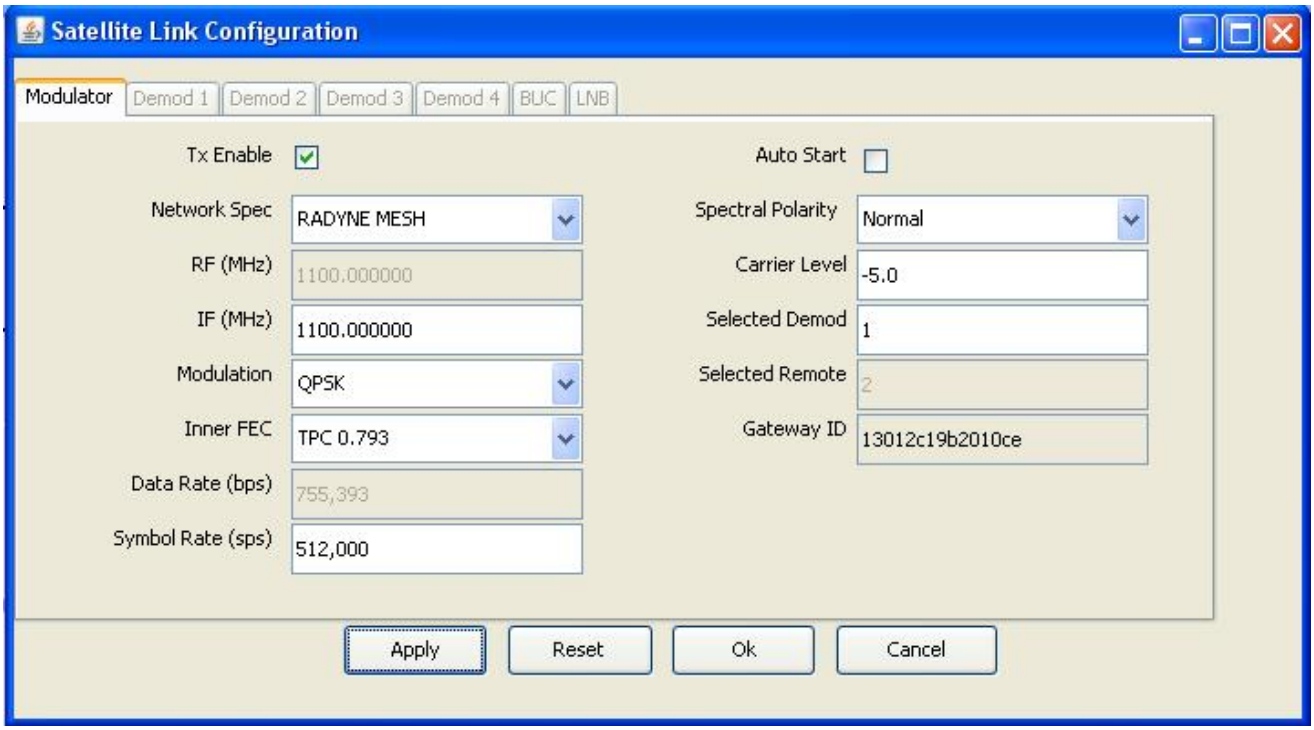

Figure 4-3 Modulator Tab Edit Mode

4.2 Demodulator Configuration

There are up to four demodulators that may be installed in the SkyWire Gateway. To configure any of the installed demodulators, select the corresponding demod tab and click on the Enable button. Then select the carrier and bandwidth as you would a normal SCPC modem.
See Figure 4-4 for Example Settings.

Once satisfied with the new settings, click on the Apply button to have them take effect.

Repeat the above process for all the demodulators that are installed in the SkyWire Gateway.

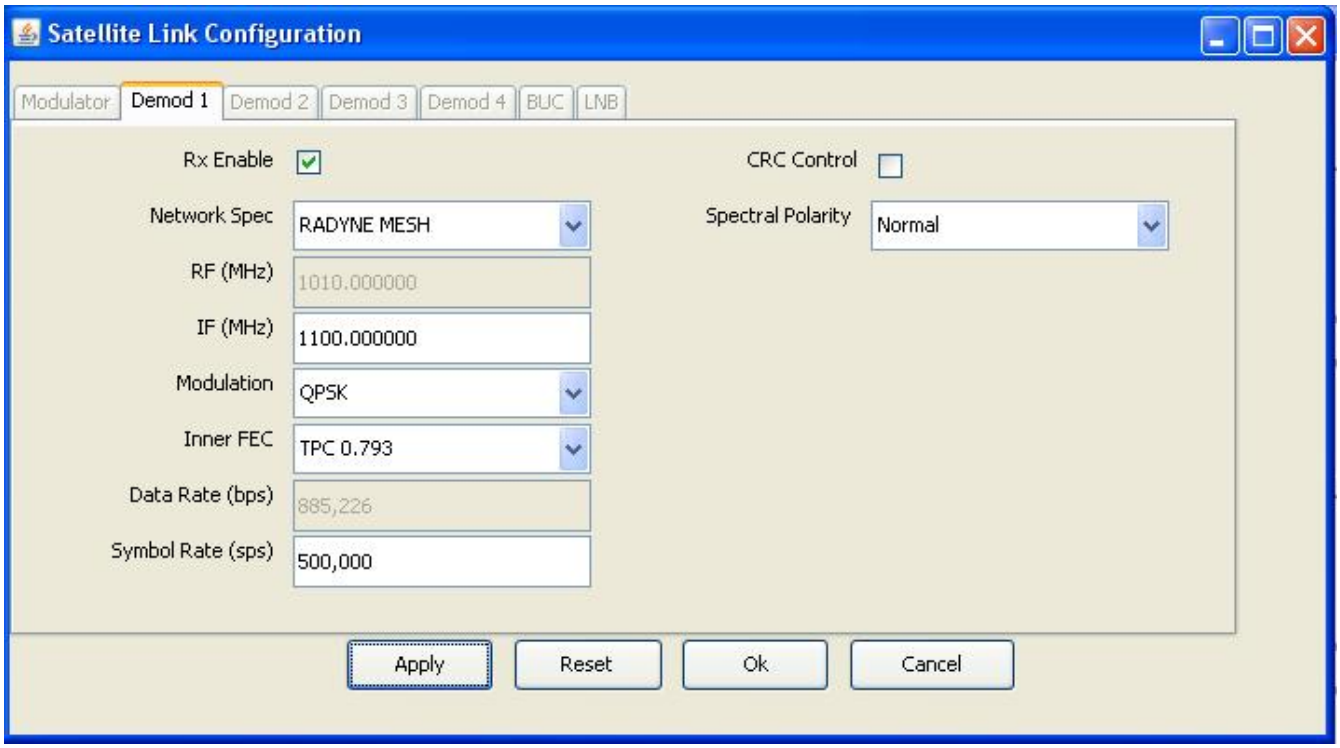

Figure 4-4 Demodulator 1 Tab Edit Mode

4.3 BUC and LNB Configuration

To setup the BUC and/or LNB, select the corresponding tab on the satellite link configuration window. Enter the LO and LO Mix. Click on the Enable button to activate the DC Supply and Frequency Reference to the BUC or LNB. They are individually controlled with Checked meaning that they are enabled, unchecked meaning that they are disabled.

Once satisfied with the new settings, click on the Apply button to have them take effect.

WARNING!!

Care must be taken to insure that the DC Supply Enable in Disabled when connecting the SkyWire Gateway to external equipment that cannot accept a DC voltage input, such as a Spectrum Analyzer. Failure to do so may result in damage to the external equipment.

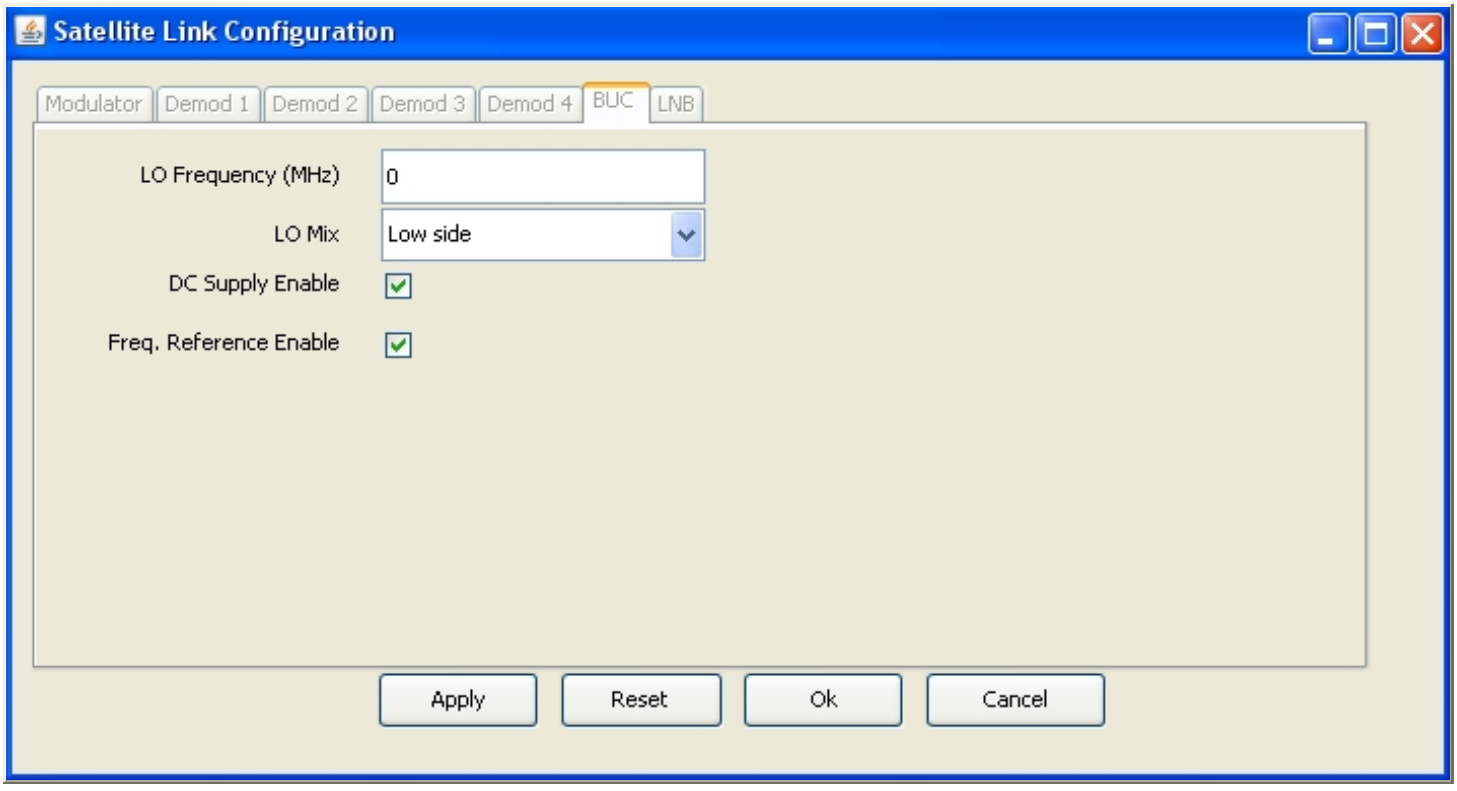

Figure 4-5 BUC Tab Edit Mode

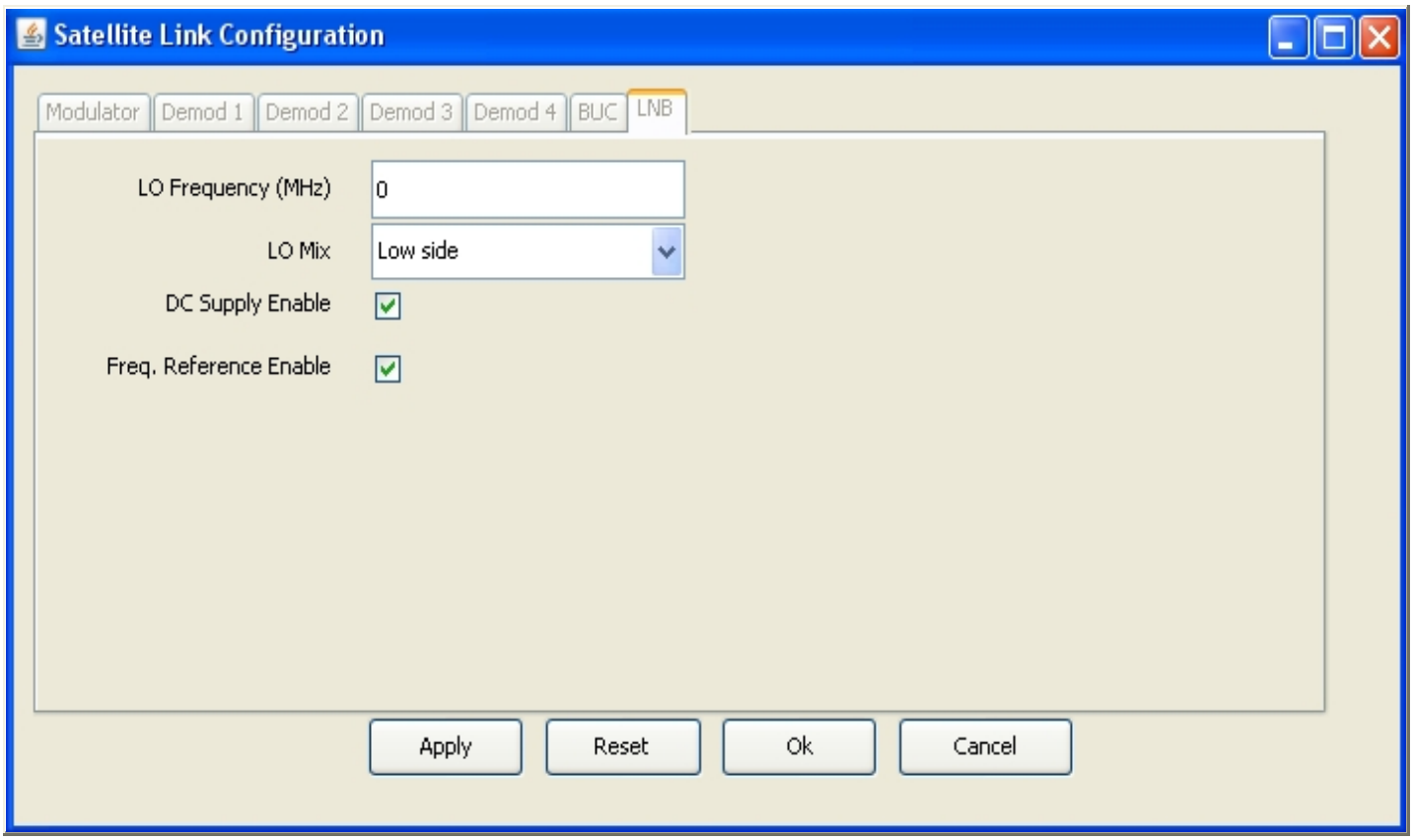

Figure 4-6 LNB Tab Edit Mode

4.4 Terrestrial Interface

Daisy chain, flow control, and quality of service are all accessible from the terrestrial interface window. Select Fair Weighted traffic to insure even the lowest priority traffic gets some bandwidth

Default settings for the terrestrial interface are:

M&C Control Port

In-Band Control	:	Disabled
Daisy Chain	:	Disabled

Ethernet Data Port

Flow Control	:	Enabled
Daisy Chain	:	Disabled

Quality of Service

Type	:	Normal
Queuing	:	Fair Weighted

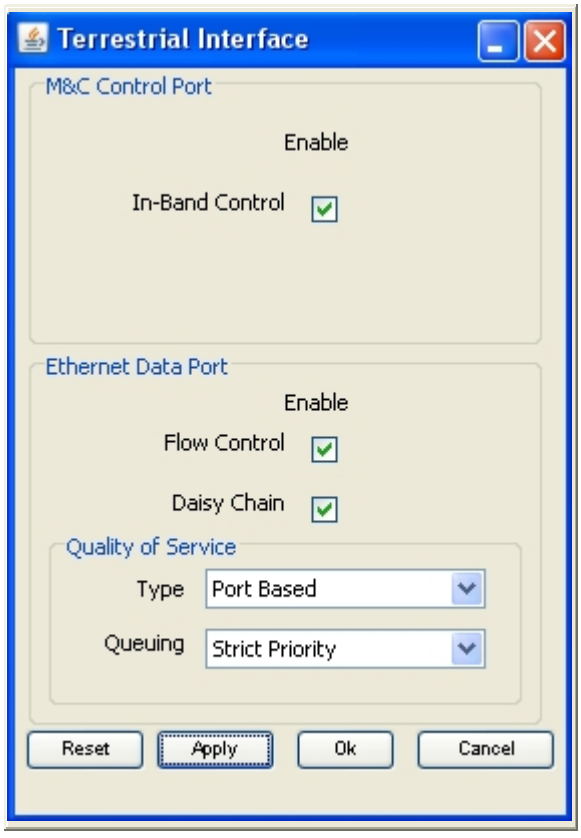

Figure 4-7 Terrestrial Interface Edit Mode

5.0 SkyWire Network Configuration

From the main menu, select Network Configuration and click on an installed demodulator. If only one demodulator is installed, click on “Demod1” selection. The following window will appear.

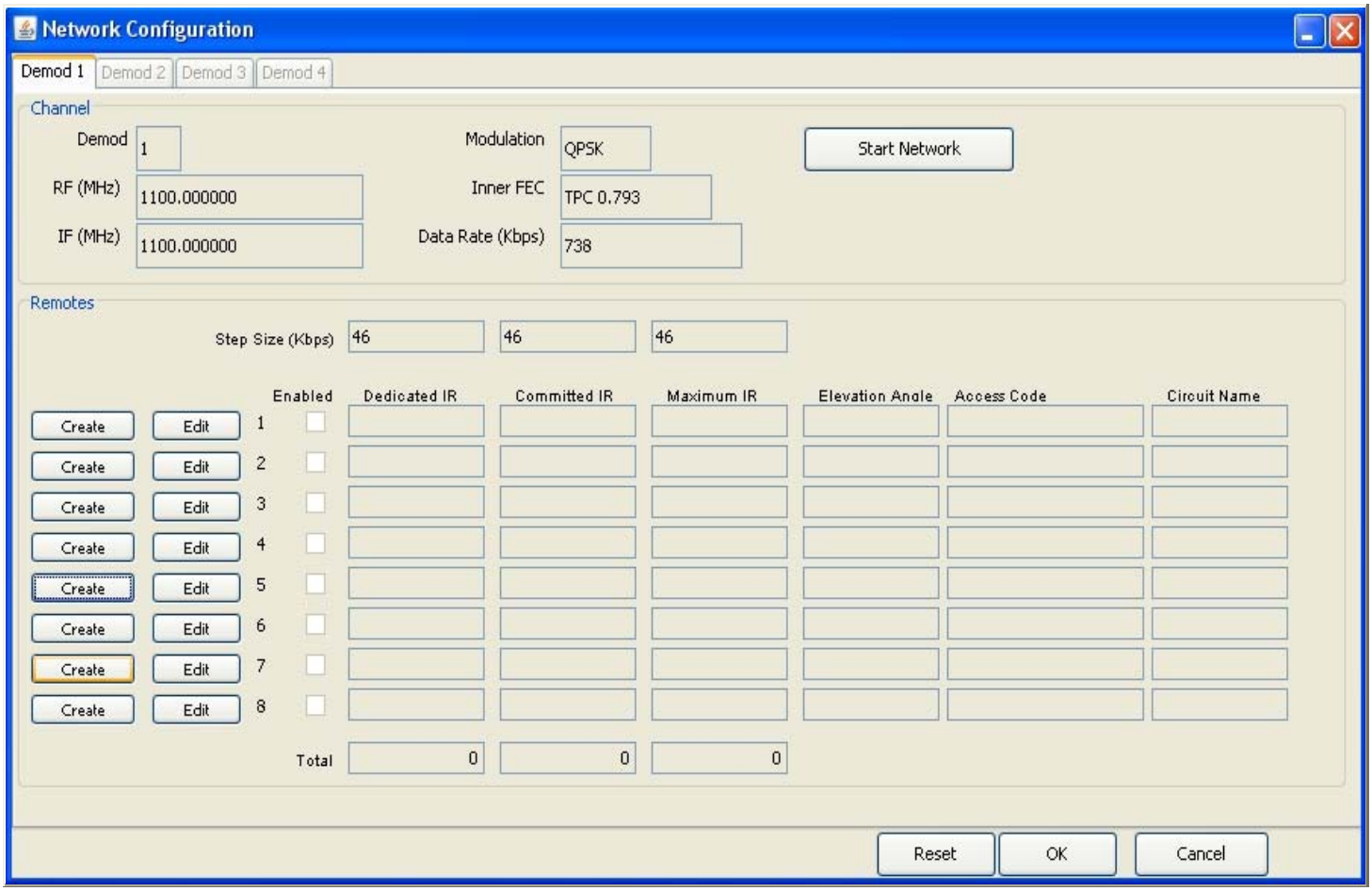

Figure 5-1 Network Configuration – Brand New Network

To configure the local SkyWire Gateway to join the network as remote 1 for example, click on the “Create” button to the left of remote 1 then click on the “Edit” button.

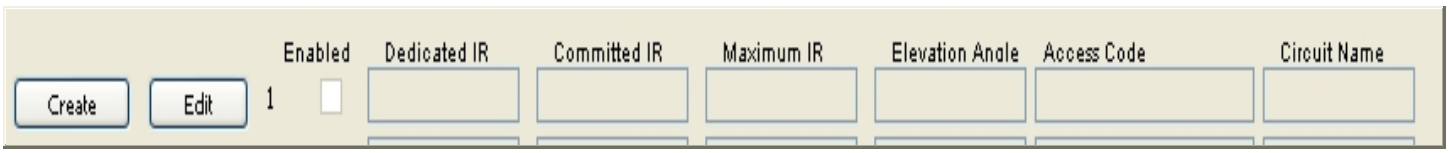

Figure 5-2 Remote Network Configuration

NOTE

Take note of the step size value listed in the Remotes panel. Enter settings for the dedicated IR and committed IR that are multiples of the minimum allowed step size. Entering a value of Zero for the Maximum IR disables the Max IR function and allows a remote to burst up to the maximum data rate of the carrier.

The following range checks are performed on the values.

Dedicated IR <= Committed IR <= Maximum IR

In section 4.1, we took note of the Gateway Identification number. Please enter that value in the "Access Code" field.

To complete the configuration, specify the antenna elevation angle, circuit name, and then apply the new settings. The circuit name will allow you to easily track remotes on the Demodulator Summary Status screen. The circuit name will appear as a tooltip when the mouse is hovered over a remote's graphics bar.

An elevation angle of 270° should be used when performing tests in the laboratory.

Click on the button at any time to cancel.

Figure 5-3 Remote Network Configuration Edit Mode

Repeat the process for all SkyWire Gateways that need to join this network. Figure 5-4 shows a fully loaded network and figure 5-5 shows a summary status view of a configured network.

Once configured, click the Start Network button to form the Mesh Network.

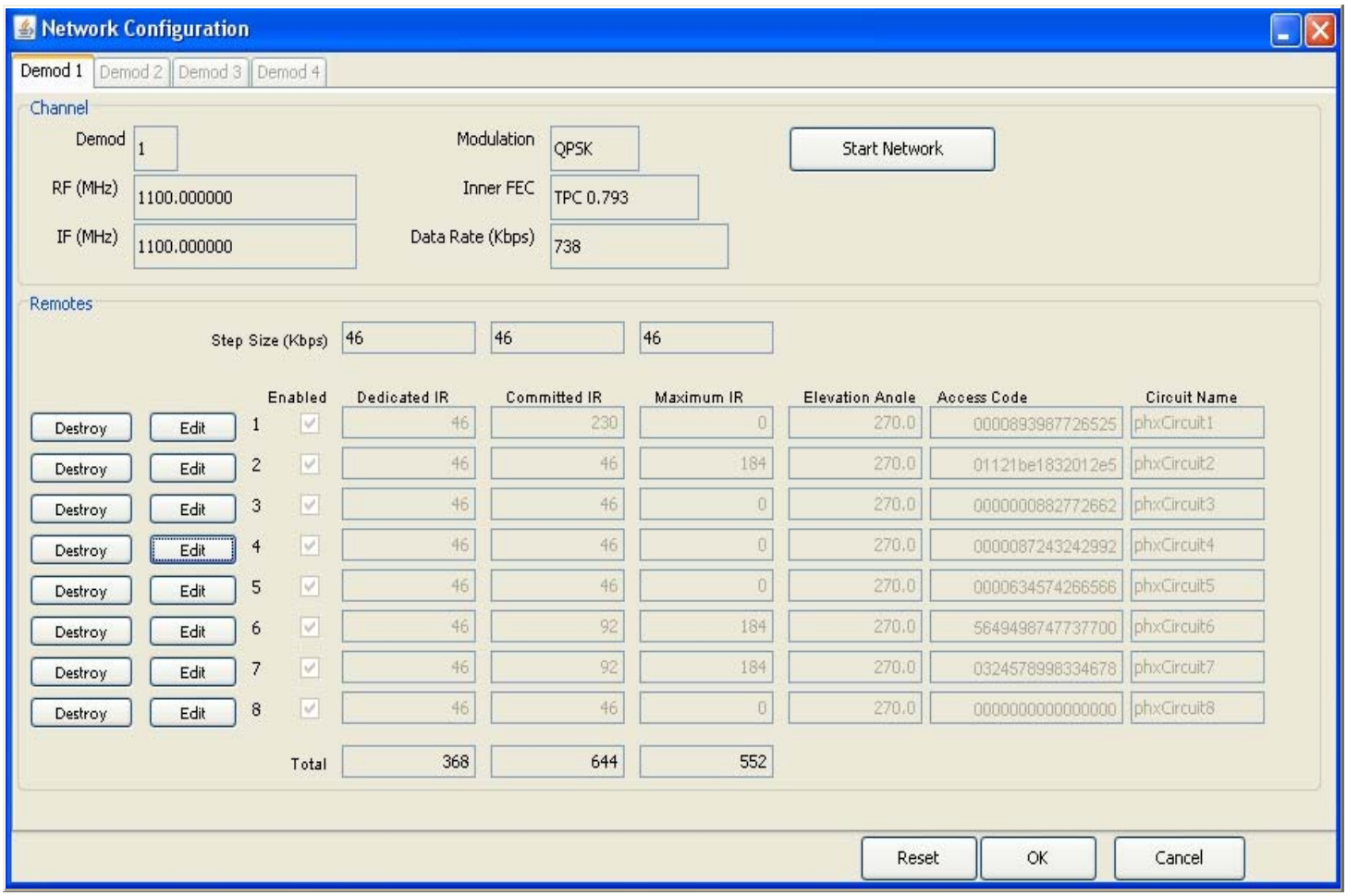

Figure 5-4 Configured Network – Remotes Created and Enabled

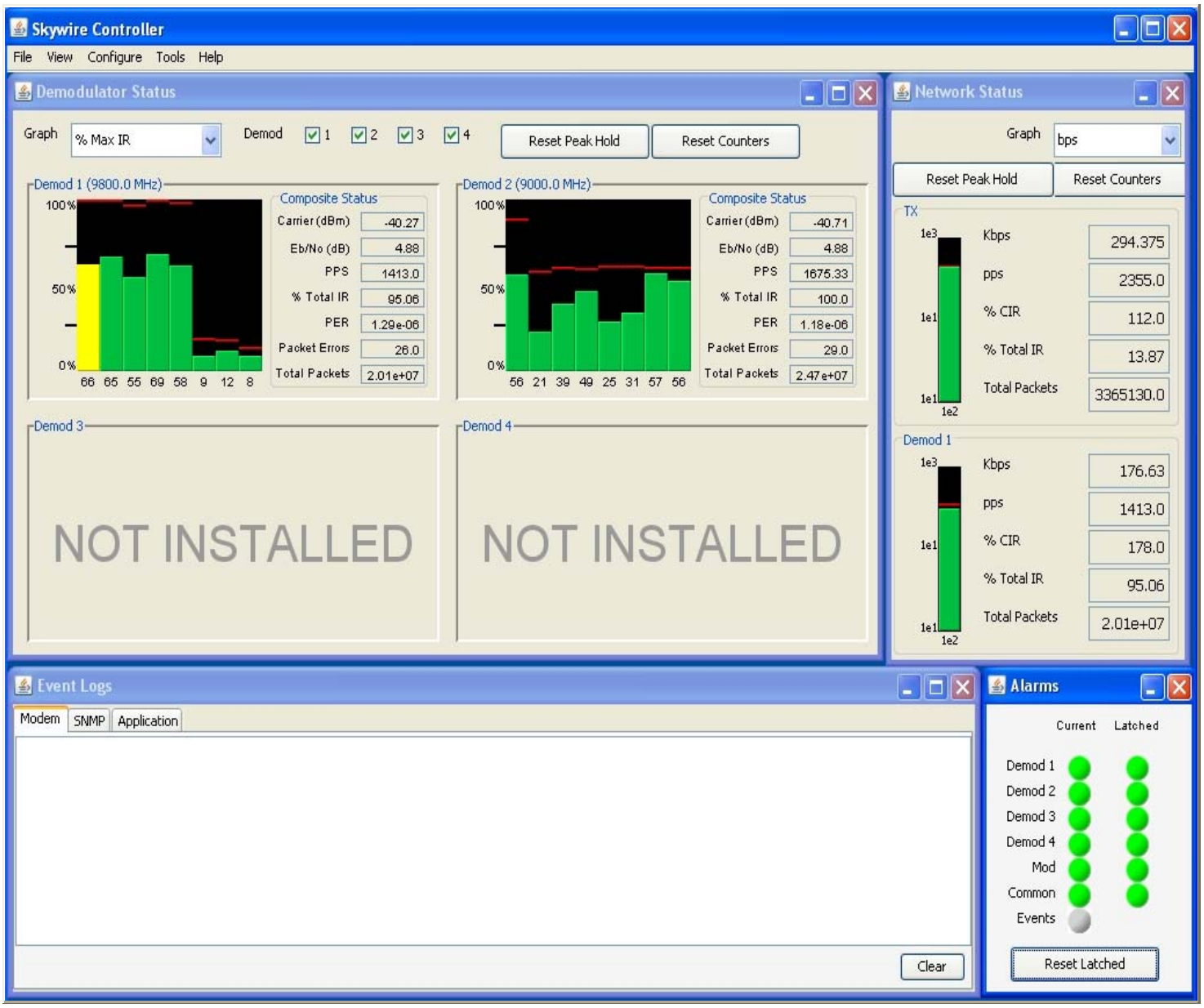

Figure 5-5 Configured Network – Summary View