

QAM Snare Navigator Quick Set-up Guide– GSM version

v1.0

3/19/12

This document provides an overview of what a technician needs to do to set up and configure a QAM Snare Navigator – GSM version for leakage detection.

1- Turn-on the device

Turn on the Navigator by pressing and holding the power button. The Navigator's keyboard has three several types of buttons designed for simple navigation.

The ON/OFF/Standby button (1)

Keep pressed for two seconds to turn the unit ON



Hot keys (2) are the four buttons located just below the display. Their function is attached to menu selection items as indicated on the display. Navigation buttons (3) are used to highlight required menu items as well as for moving markers and cursors around the screen. In certain screens the numerical keypad can be used for directly highlighting the desired menu item.

Exit button (4) can be used to return to the previous menu, in some screens a hot key described as *Back* takes you one step back in the menu.

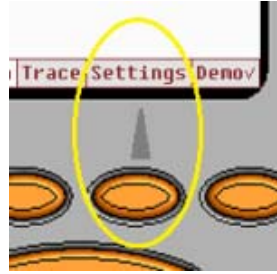
Numerical keypad (5) is used for direct input of numbers and accessing selected menu items. There are two non-number buttons in this group.

The *Space* button makes a space when entering text.

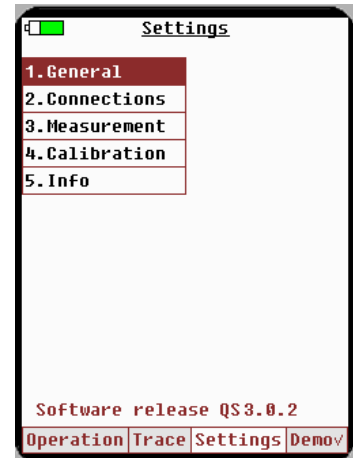
The *Clear* button deletes one character before the cursor.

2- Enter General Settings

Press the Settings hotkey.



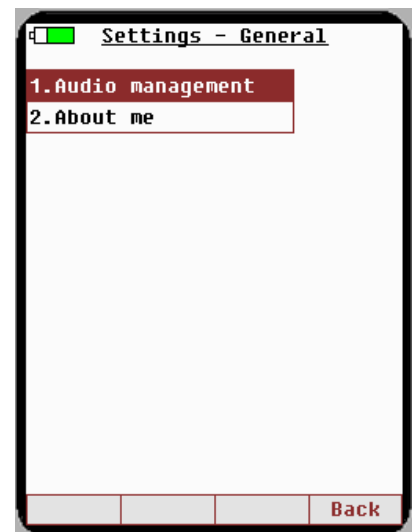
Then highlight **1.General** and press enter.

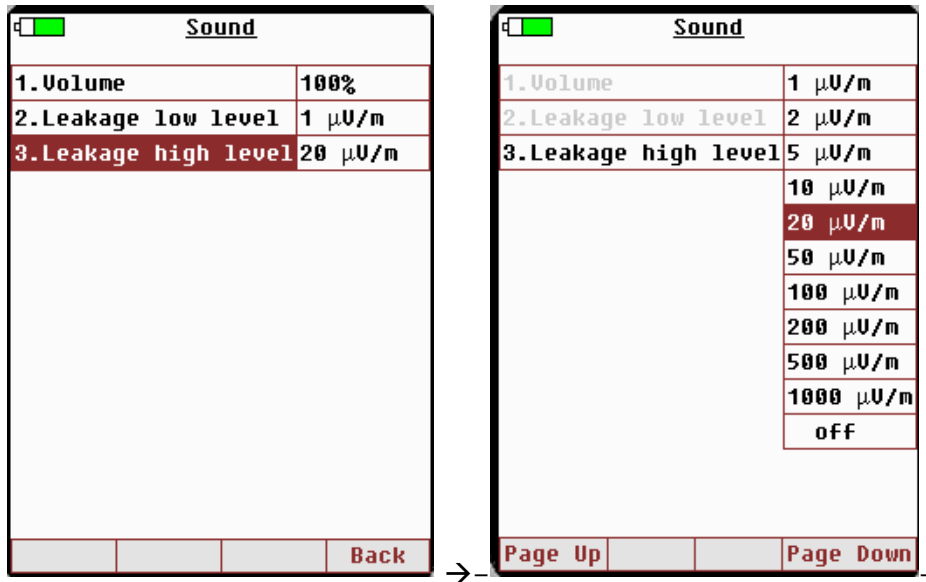


Configure audio settings

Audio management allows you to control the conditions upon which the device provides you with audio feedback when leakage is detected, and it allows for volume control. These audio controls are completely independent from and have nothing to do with how leaks are stored in the QAM Snare Server database. Highlight **1.Audio management** and press enter.

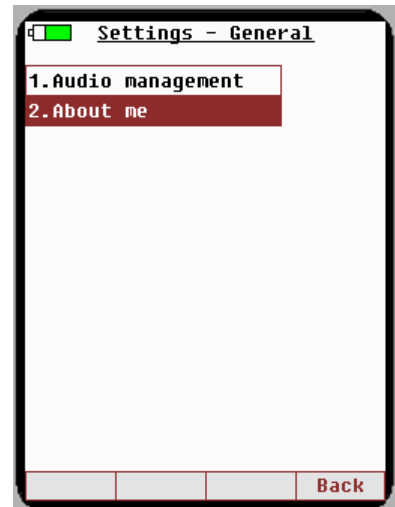
Two different audio settings are available, that alarm differently for different levels of detected leaks. Default setting for low level alarms is $1\mu\text{V}/\text{m}$, and for high level alarms is $20\mu\text{V}/\text{m}$, and default volume is 100%. If you would like to change these, or turn audio off - highlight 1,2 or 3 as shown below and press enter, or just enter 1,2 or 3 directly from the numeric keypad, and then pick the desired value from the list and hit enter *Note: the value associated with High must be higher than that associated with Low.*





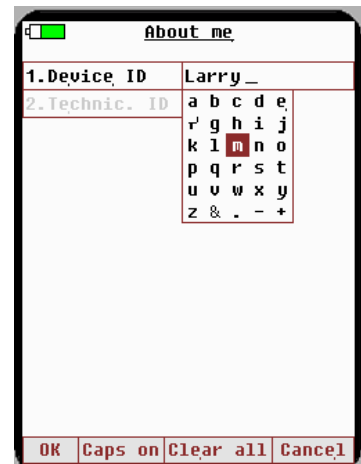
User identity settings – About me

The *About me* setting is very important, here both the name and ID of the user must be entered, and the Navigator will later automatically register the listed user on the QAM Snare Server. Highlight **2.About me** and press enter.



Then highlight **1.Device ID** and press enter, and then use the arrow navigation buttons to spell out the name of the user letter by letter. Each letter is selected after pressing the enter button creating the user name.

The letters must be entered individually using the navigation buttons. Each highlighted letter must be confirmed by pressing the enter key. You can toggle



between capital and lower case letter by pressing the hot key *Caps On/Off*. Digits can be entered directly from the numerical keypad. If a mistake is made use the *Clear* button on the numerical keypad to delete the single character before the cursor or clear all previous input by hitting *Clear all* hot key.

Once the text is complete, press the *OK* hot key.

Next, highlight **2. Technic. ID** – and repeat the process. **Both Device ID and Technician ID must be populated or data will not be properly stored in the server.**

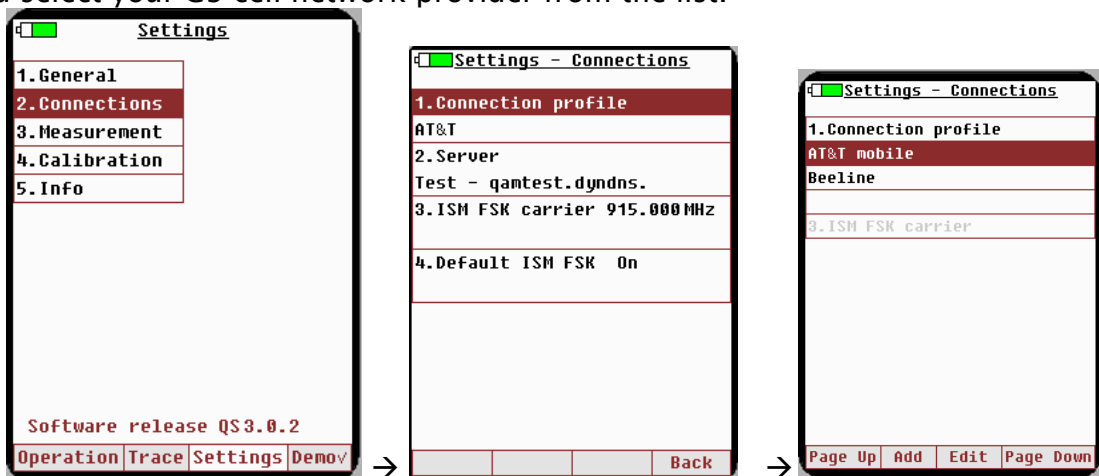
If a mistake is made in entering an ID, simply re–enter the information.

3– Enter Communications Settings

This menu item configures how the device communicates with the QAM Snare Server over GSM. Additionally the FSK carrier frequency is configured to work with a companion QAM Snare Isolator. Select **2.Connections**.

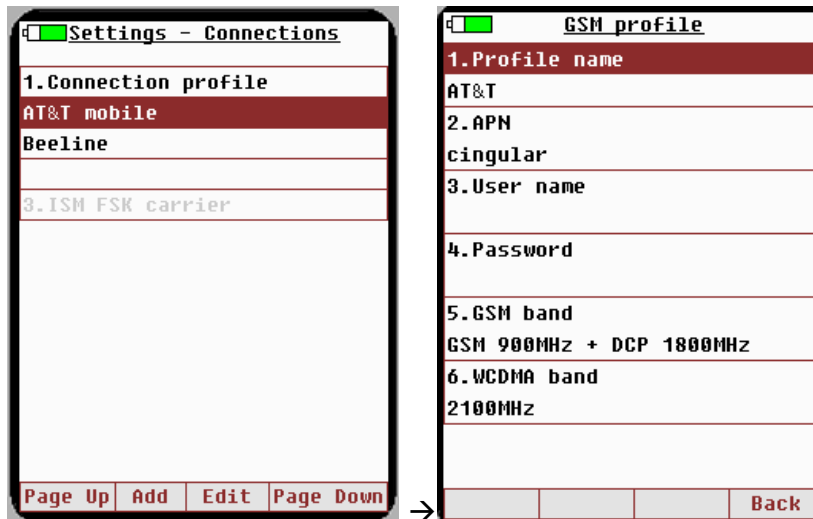
Connection profile selection – GSM

Your connection profile should be preinstalled in the unit, and it should match the SIM card provided by the wireless operator. If multiple carriers are listed, and the correct one not highlighted, simply select **1.Connection profile** and select your G3 cell network provider from the list.



Adding a new connection profile-GSM

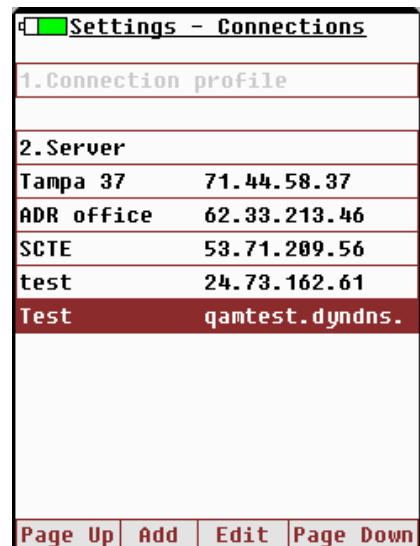
If at some point it becomes necessary to change to a different wireless carrier you must first open the unit up and change the SIM card. (Documentation on this process is available). Then click the **Add** hotkey to add details on the new connection profile. Consult with someone knowledgeable as to specifics of the cell network provider prior to entering connection details.



Selecting Server ID and IP

The QAM Snare Navigator connects to the QAM Snare server over an IP connection. In order to connect with the proper server, the server information needs to be entered into the Navigator. Select **2.Server** and then click on the **Add** hot key - then enter the server name and enter the server IP address or the URL host name (if DynamicDNS is being used)

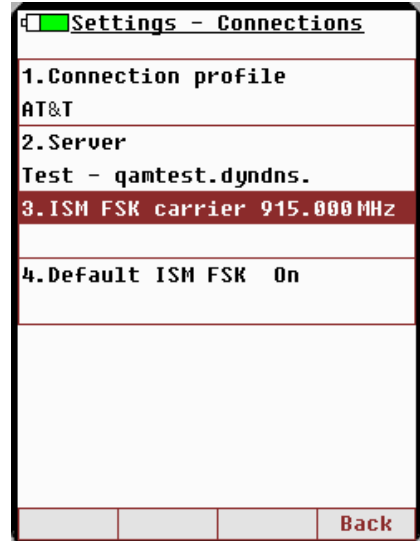
There may already be some preset Server names and IP addresses listed. If your server is preset, simply select it from the list and then press enter. The IP numbers are entered using



the numerical keypad. **Remember to ALWAYS enter three digits for each number between the dots.** For example, to enter 20 (twenty) always enter it as 020 (zero-two-zero). Editing entered data is possible only by clearing the fields with **Clear all** hot key and entering new text and numbers.

Entering ISM FSK carrier frequency

To locate the exact source of a leak, a QAM Snare Isolator is used. The Navigator communicates with the Isolator over an FSK carrier in the ISM band. The frequency of the Navigator and Isolator must be the same for the two units to properly communicate. Select **3. ISM FSK carrier** to make changes to the frequency, then press the **Clear all** hot key, then enter the same frequency using the numerical keyboard that the Isolator is configured for. If you experience communication difficulty, select a different frequency as there may be external interferences present.



4- Make all the antenna connections

The Navigator's top panel has the following connectors:



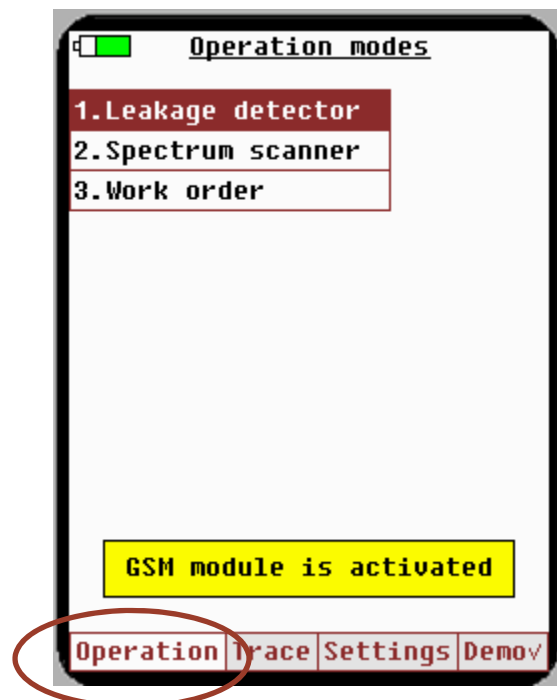
(1) ISM antenna SMA connector input used for transmitting signals to the QAM Snare Isolator

- (2) GPS antenna SMA connector
- (3) GSM antenna SMA connector marked as 3G on the panel
- (4) ANT input - F connector port for connecting leakage detection antenna, requires the use of a barrel type adaptor
- (5) The threaded hole in the housing is not used.

If two RF antennas are being used, it is necessary to use a splitter like combining device. This UV joiner can be connected to the ANT input, and the two antennas are connected to the low and high ports of the combiner. The longer antenna will always be the lower frequency antenna. If three antennas are being used a triplex combiner will be employed. Often, external filters are required to eliminate unwanted terrestrial noise. This external filter would be attached directly to the ANT input, or for multiple antennas on the appropriate combiner input.

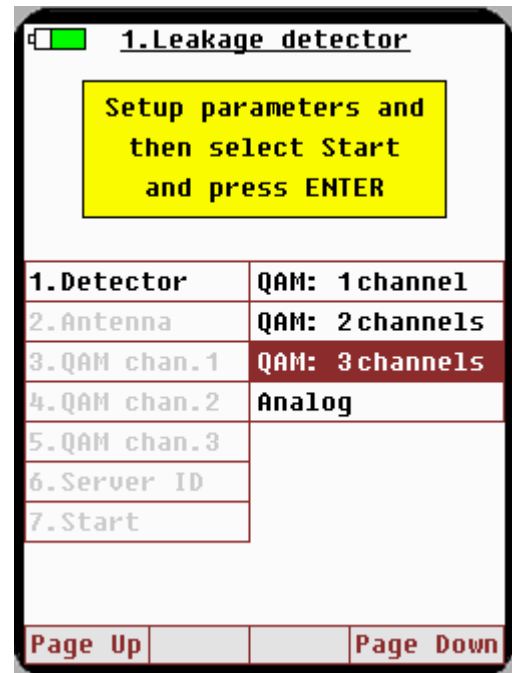
5- Start detecting leaks

Press the Operation hotkey to get to the Operating modes page. Then press 1. Leakage detector.



Select number of channels to simultaneously detect on

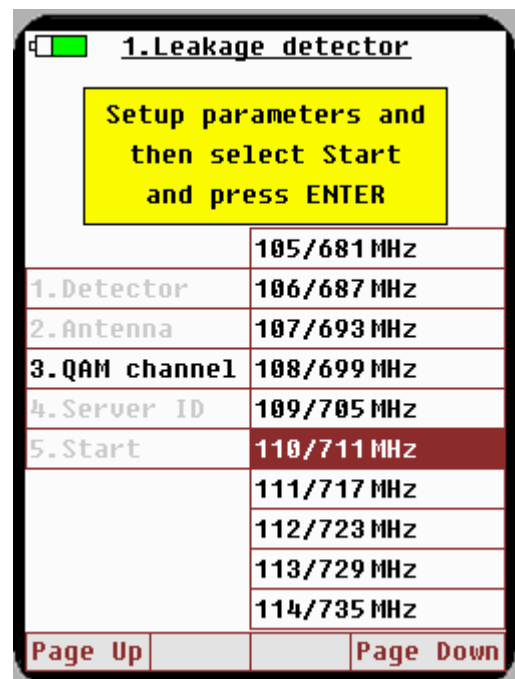
Select **1.Detector** to select the desired number of channels of simultaneous detection.



Select the specific QAM channels

Each server can simultaneously process up to four channels. Typically there are channels that have already been selected as being always available to use – these are referred to as Global channels. Ask a supervisor which channels to use, and then select **3.QAM chan. 1** to configure the first channel. Then scroll through the list to pick the desired channel – you can use the *Page up* and *Page down* hot key to make the process go more quickly, or just use the cursor up and down arrow.

If using two channels, next select **4.QAM chan. 2** and select the second channel. And if using three channels, select **5.QAM chan. 3**. And repeat the process.



Select the server ID

Once a server has been configured on the Settings page, it is available to be selected directly from the Leakage Detector page. The number of the selection for Server ID may change based upon the number of QAM channel selected for use. If your desired server is not shown next to the Server ID, press enter and select the correct one from the list.

1. Leakage detector

Setup parameters and then select Start and press ENTER

1. Detector	QAM: 2 channels
2. Antenna	Monopole
3. QAM chan.1	110/711 MHz
4. QAM chan.2	16/135 MHz
5. Server ID	ADR office
6. Start	

Back

1. Leakage detector

Setup parameters and then select Start and press ENTER

1. Detector	
2. Antenna	
3. QAM chan.1	
4. QAM chan.2	
5. Server ID	Tampa 37
6. Start	ADR office
	SCTE
	test
	Test

Page Up Page Down

Start

Lastly, press the Start button, and the unit will connect with the server and begin operation.

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