



# Siretta

Enabling Industrial IoT



## SNYPER-3G Spectrum

Cellular Signal and Network  
Analyser

## Quick Start Guide

Rev 1.6



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# SNYPER-3G Spectrum Overview

## What's in the Box?

As standard, the SNYPER-3G Spectrum comes with the following:\*

- » SNYPER-3G Spectrum signal and network analyser
- » Multi region power supply
- » Antenna
- » USB cable
- » Hard carrying case
- » Quick start guide

## Optional Accessories

- » liveSCAN directional antenna kit

\*For replacement parts, please contact your Siretta representative or call us on  
+44 (0)118 976 9000

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## General Description

The SNYPER-3G Spectrum is a high performance cellular signal and network analyser for all 2G and 3G networks, with a host of important features for the busy engineer and installer.

The SNYPER-3G Spectrum can perform a number of different functions to determine optimum antenna placement and direction, performance of existing installations of network operator. As an example, the SNYPER-3G Spectrum can determine the strength of a particular network and the optimum direction of the antenna using the liveSCAN feature.

The SNYPER-3G Spectrum has been designed to be as logical as possible, with a simple to use menu and operation system. Provided with a large high contrast LCD display, the SNYPER-3G Spectrum ensures all the information is clearly visible, and allows the presentation of considerable data at the same time.

The liveSCAN high performance directional antenna kits (sold separately) has been specifically designed to complement the SNYPER-3G Spectrum when performing live scans.

## Features

The SNYPER-3G Spectrum has the following features:

- » Measures and displays received network signal strength
- » Lock onto a single provider to perform real time liveSCAN
- » liveSCAN data provided as real time graphical display
- » Typically last 50 surveys stored on SNYPER-3G Spectrum
- » USB download of last 50 surveys to a PC
- » Large easy to read LCD display
- » Robust enclosure for rugged and continuous use
- » Long life rechargeable battery gives up to 48hours on one charge
- » Up to 15 hours continuous liveSCAN use
- » Battery can last up to 4 months in standby mode
- » Supplied in a convenient hard carrying case with mains charger, USB cable, antenna and quick start guide
- » liveSCAN high performance directional antenna kits (sold separately)

# SNYPER-3G Spectrum Diagram

Figure 1. Front view of the SNYPER-3G Spectrum



\*The SNYPER-3G Spectrum SIM slot located in the enclosure base is used for enhanced network services. A SIM is only required when performing a liveSCAN on a specific network operator. The SIM has to be active, but it will not use any data during the liveSCAN survey as it is only required for network functionality.

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# Powering the SNYPER-3G Spectrum

## Power On

- » The SNYPER-3G Spectrum needs to be charged using the mains adaptor for at least 2 hours before use. The SNYPER-3G Spectrum does not need a SIM card to perform network and signal tests.
- » Ensure the antenna is screwed firmly into place on the SNYPER-3G Spectrum and isn't loose.
- » To power up the SNYPER-3G Spectrum press the ON/OFF button. A welcome screen will be displayed briefly (as shown below in figure 3) before the main menu is displayed (as shown over page in figure 5 'Main Menu screen'.)

Figure 2. ON/OFF button



Figure 3. Power on message



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## Charging and Battery Status

Approximately 4 - 6 hours are needed to fully charge the unit using the default fast charging mode. The SNYPER-3G Spectrum battery provides up to 15 hours continuous liveSCAN use and up to 4 months standby mode.

Figure 4. Charging and battery status



### **Charging and battery status bar:**

During charging, the bar will increase and turn from red, to yellow, to green. The charge status LED will be red.

A full green bar indicates that the unit is fully charged.

During use, the bar will decrease and turn from green, to yellow, to red.

Recharging is recommended once the red bar is displayed on the SNYPER-3G Spectrum battery status bar.

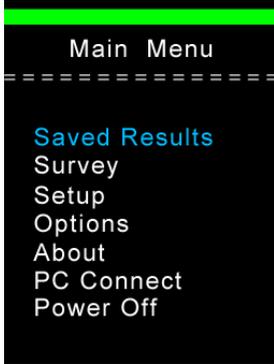
If the SNYPER-3G Spectrum drops below allowable low battery usage the unit will switch off and charging will be required.

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## Main Menu

The SNYPER-3G Spectrum main menu has 7 menus (as shown below in **figure 5**), these can be selected using the UP/DOWN buttons. Once the chosen menu is highlighted, click OK. Press the BACK button to return to the main menu.

Figure 5. 'Main Menu' screen



**Saved Results:** Reviews previously saved survey.

**Survey:** Used to perform a new survey.

**Setup:** Basic setups of the SNYPER-3G.

**Options:** User options for the SNYPER-3G.

**About:** Displays information about the SNYPER-3G.

**PC Connect:** Connects device to a PC as a memory stick to allow download of reports.

**Power Off:** Powers off the SNYPER-3G.

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# Survey Menu

## Performing a Survey

Step 1. Select 'Survey' from the main menu and press OK.

Step 2. Select 'GSM\UMTS Survey' and press OK. The survey will begin.

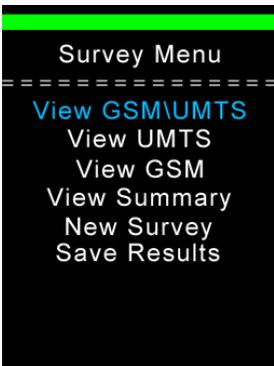
Figure 6. 'Survey' screen



**GSM\UMTS Survey:** Performs a survey for the GSM\UMTS network.

Step 2. Once the survey is complete, the screen will display a 'Survey Menu' as shown below. The 'Survey Menu' has 6 menus, these are selected using the UP/DOWN buttons. Once the chosen sub menu is highlighted, click OK.

Figure 7. 'Current Survey' screen

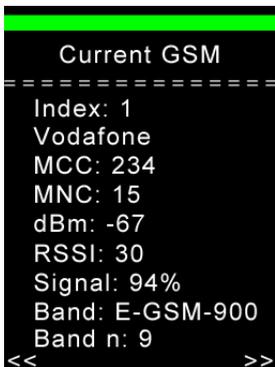


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## Viewing Survey Results

**Step 1.** Select the results that you require to be displayed by highlighting 'View GSM\ UMTS', 'View UMTS' or 'View GSM', press OK. The SNYPER-3G Spectrum will display all results with numbered cells from strongest to weakest. To switch between all signals found in the survey, use the LEFT/RIGHT buttons.

Figure 8. Displaying survey results



Press the back button to return to the 'Current Survey' menu.

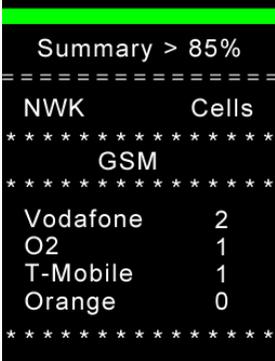
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## Summary Menu

Highlight 'Show Summary' and press OK. The SNYPER-3G Spectrum will display the number of cells by each network in frequency bands. Use the LEFT/RIGHT buttons to switch between signal strengths received on the device.

**NOTE** - Two listings may be shown for one network operator. This listing is created by the MNC and is two different MNC's both associated with the same network operator.

Figure 9. Displaying summary results



The screenshot shows a terminal-style interface with a black background and white text. At the top, a green bar is visible. Below it, the text reads "Summary > 85%". A separator line of equals signs follows. The main content is a table with two columns: "NWK" and "Cells". The table is titled "GSM" and lists four network operators: Vodafone (2 cells), O2 (1 cell), T-Mobile (1 cell), and Orange (0 cells). The table is framed by asterisks on the top and bottom.

NWK	Cells
GSM	
Vodafone	2
O2	1
T-Mobile	1
Orange	0

## New Survey

Highlight 'New Survey' and press OK. The SNYPER-3G Spectrum will begin a new survey and all previous survey results will be lost.

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## Save Results

Highlight 'Save Results' and press OK to save results to the SNYPER-3G Spectrum.\*

Once the survey has been stored, the SNYPER-3G Spectrum will return to the main menu.

**NOTE** - The SNYPER-3G Spectrum can store up to 50 survey results.

\*The SNYPER-3G Spectrum doesn't automatically save survey results, if you wish to save results from a survey follow the steps above. If you do not wish to save results from a survey, return to the main menu. Results which aren't saved will be immediately lost.

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## Performing a liveSCAN

**NOTE:** This operation requires an active SIM card to be inserted in the SNYPER-3G Spectrum. The SIM needs to be fully pushed inside the case using a screwdriver until a click is heard.

Any SIM card can be used as the liveSCAN will be performed for all networks, regardless of the SIM card inserted.

To perform a liveSCAN on your SNYPER-3G Spectrum, follow the steps below:

**Step 1.** From the 'Options' menu, set the SNYPER-3G Spectrum to **ADV: Advanced**. Highlight 'Save Settings' and press OK. liveSCAN is now enabled.

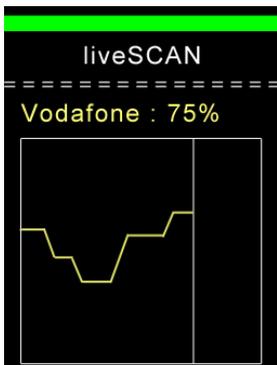
**Step 2.** Conduct a survey using an omnidirectional antenna.

**Step 3.** When the survey is complete view the results acquired. Use the LEFT/RIGHT buttons to find the survey results you wish to liveSCAN.

**Step 4.** Remove the connected omnidirectional antenna and connect a directional antenna, or the intended antenna for your installation (recommended).

**Step 5.** Press OK to initiate liveSCAN.

Figure 10. liveSCAN in progress



The default liveSCAN view shows the active signal strength as a

%, and the average of all readings taken (again as a %).

The vertical white line scrolls from left to right across the screen and indicates the current measurement position. The yellow line shows the actual and historical liveSCAN measurement data.

The active signal strength reading is shown at all times.

Press the BACK button to abort liveSCAN – the SNYPER-3G Spectrum will return to the Survey Results screen. A further liveSCAN can be conducted by selecting different cells from the survey results.

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## Downloading Data

**Step 1.** To download data from the SNYPER-3G Spectrum, connect the USB cable supplied to the SNYPER-3G Spectrum and PC.

**Step 2.** From the SNYPER-3G Spectrum 'Main Menu' select 'PC Connect' and 'Enable'. From the PC select 'Open Folder to View Files' and open saved files as required.

Figure 11. SNYPER-3G Spectrum data download set up

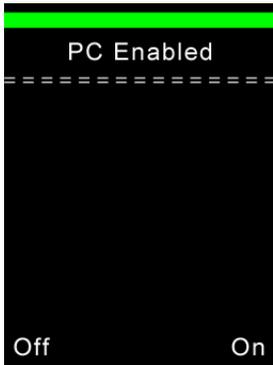
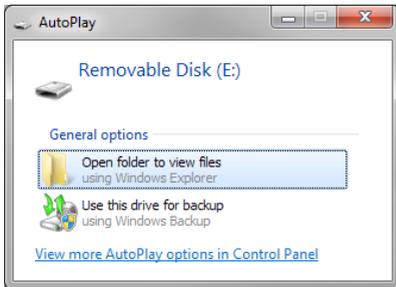


Figure 12. Downloading SNYPER-3G Spectrum data to PC



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## Power Off

After use, remember to power off the SNYPER-3G Spectrum. The SNYPER-3G Spectrum can be powered off in the following 2 ways:

- » Selecting the 'Power Off' option from the main menu. The SNYPER-3G Spectrum will display a power off message as shown below in figure 14.

Figure 13. Select 'Power Off'

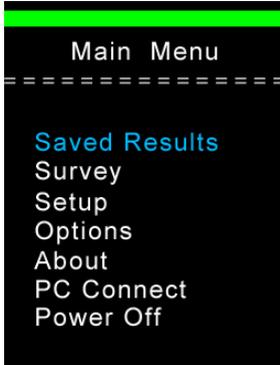


Figure 14. Power off message



- » Press and hold the ON/OFF button on the SNYPER-3G Spectrum for >2 seconds. The SNYPER-3G Spectrum will display a power off message as shown below in figure 16.

Figure 15. ON/OFF button



Figure 16. Power off message





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