



Spectrums

in NetView

Version 1.0

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SPECTRUMS

To receive the spectrum data for receivers, use NetView software:

1. Connect the receiver and PC.
2. On the receiver's tab click *Spectrums*.
3. If the measurements were done yet, the last graph will be shown.

All previously made measurements are available, to see them use the navigation buttons in left bottom corner.

There is the reason to make the measurements with 60 Hz ASIC parameter. This parameter can be set on the *Receiver* tab: *Parameters* ▶ *Advanced* ▶ *Asic Parameters*.

Spectrums

How to receive the spectrums

1. How to receive the spectrums

To receive the current measurements of the interference, enter the title, specify the *Samples to Average*. Click *Get Spectrums*.

The construction of graph begins. In the status field the status of the process will be shown:

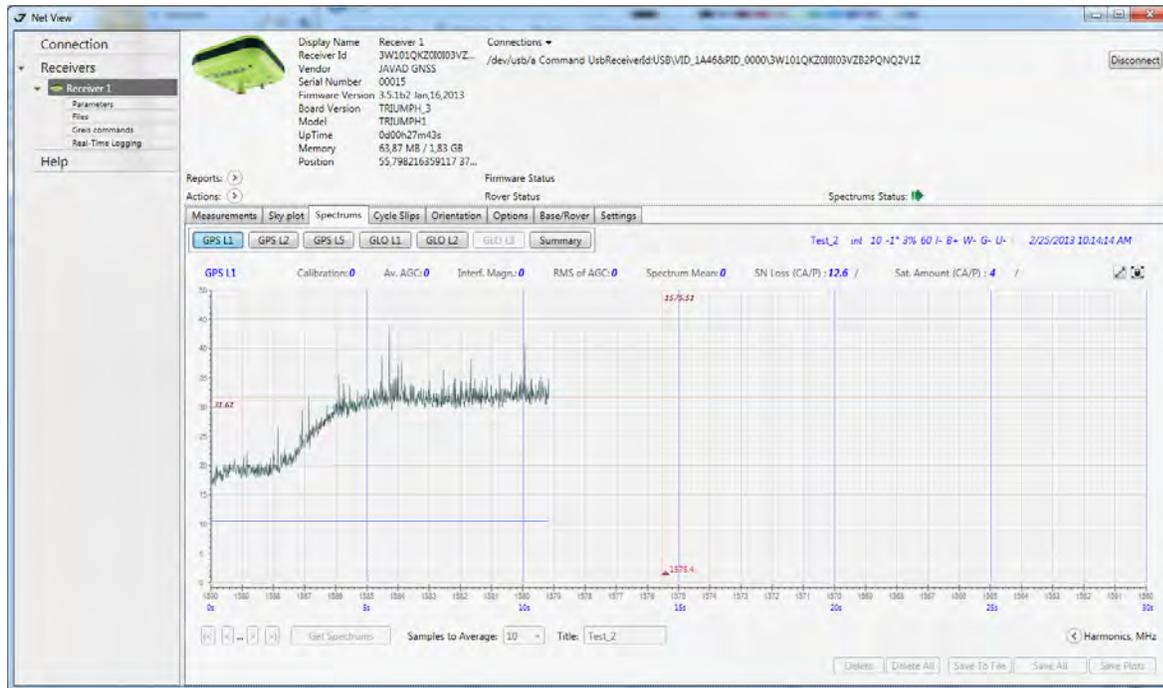


Figure 1. Graphic construction

The data about interference is collected simultaneously for all GNSS bands (max 6: GPS L1, GPS L2, GPS L5, GLO L1, GLO L2, GLO L3). Use the buttons to switch between the bands.

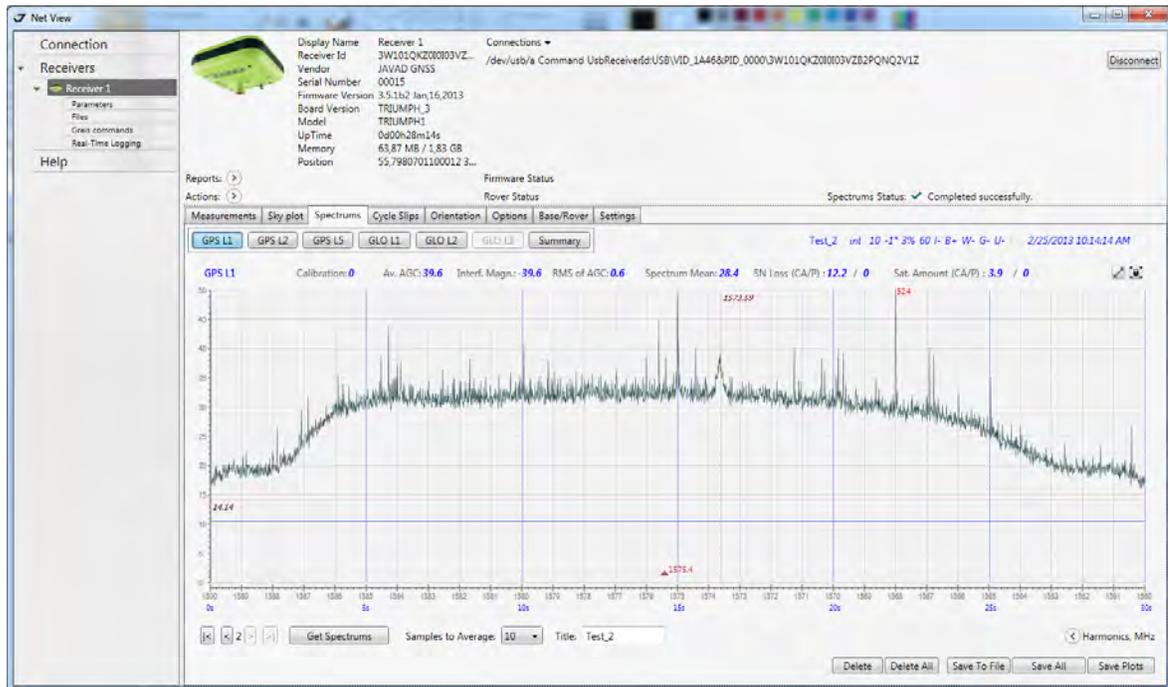


Figure 2. The data is successfully received

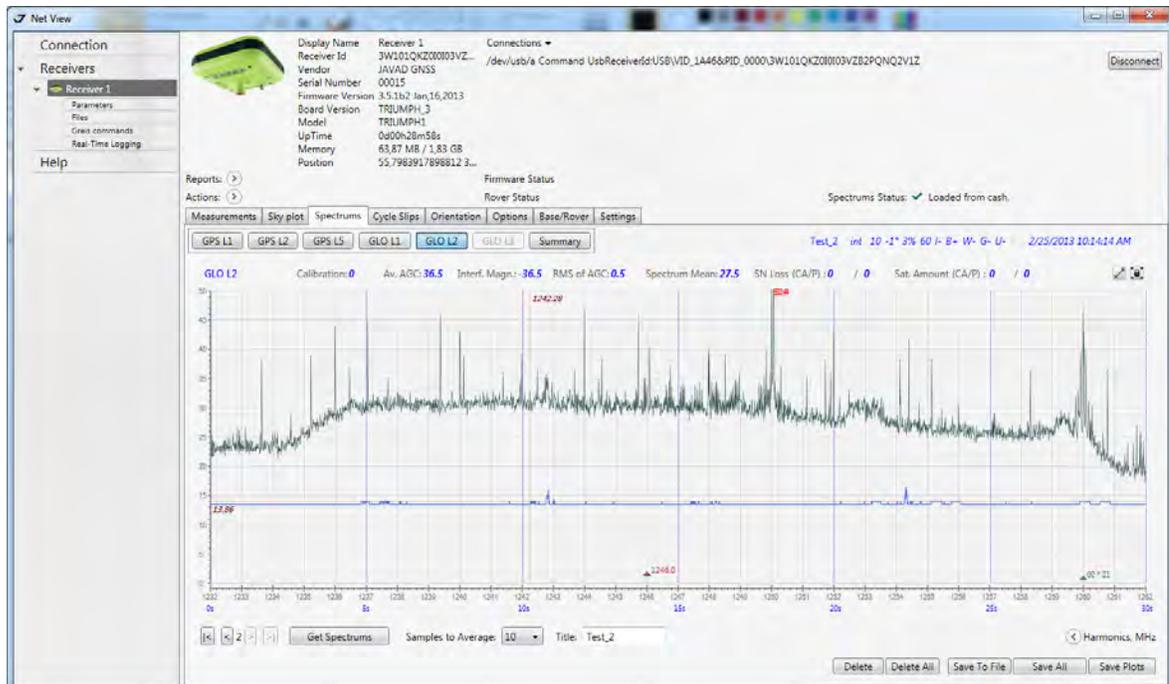


Figure 3. GLO L2 spectrum

The following data can be displayed on the graphs:

- Black line - shows the spectrum output.

Spectrums

Working with the graphs

- X axis - the carrier frequency in MHz. For each GNSS band the values are different (for black axis).
- Y axis - amplitude, dB. (for black axis).
- Red triangle - mid frequency.
- Blue line - shows the value of the system voltage (AGC)
- X axis - time in seconds (blue numbers for blue graph)
- Y axis - amplitude, dB (for blue graph).

Above the graph the values of calibration and statistical data are shown.

Red numbers at the top of the graph are the signatures to the points of the spectrum, which amplitude exceeds 50 dB.

2. Working with the graphs

- Right-click to select the region:

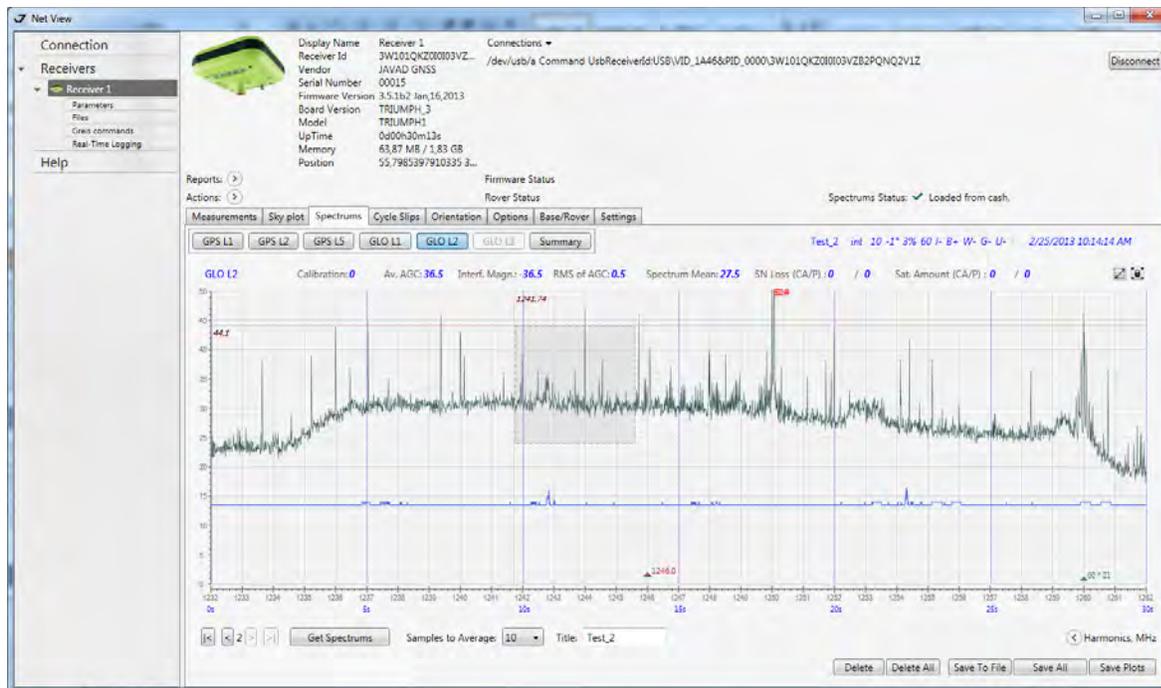


Figure 4. Selecting the region

- Zoom in and out with scroll;

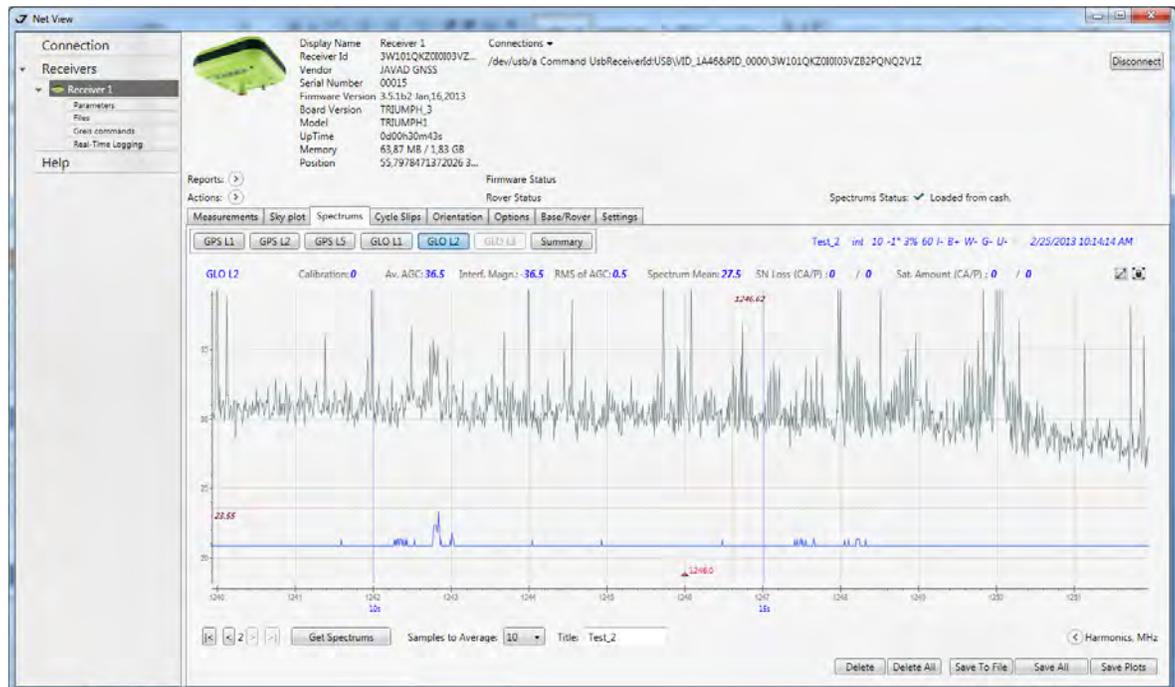


Figure 5. Enlarged graph

- With the left mouse button move the graph.
- Axis X width, from 0 to 50 Y width - use the left button on the top;
- Both axes width the right button;
- Graph in separate window - double click.

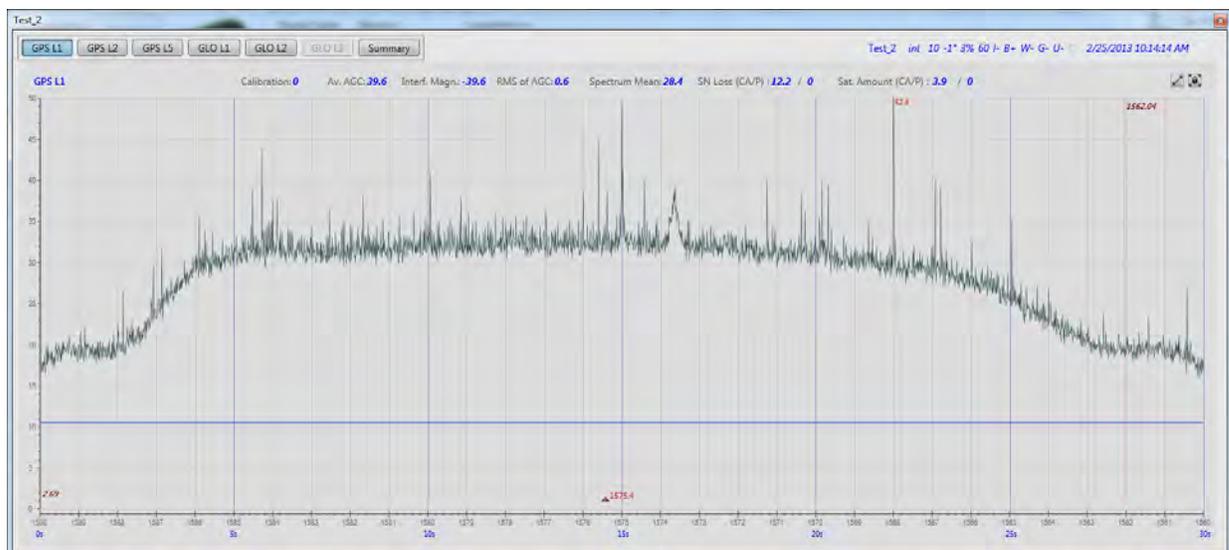


Figure 6. Graph in separate window

Spectrums

Statistics and additional data

The labels for harmonics of selected frequencies can be applied.

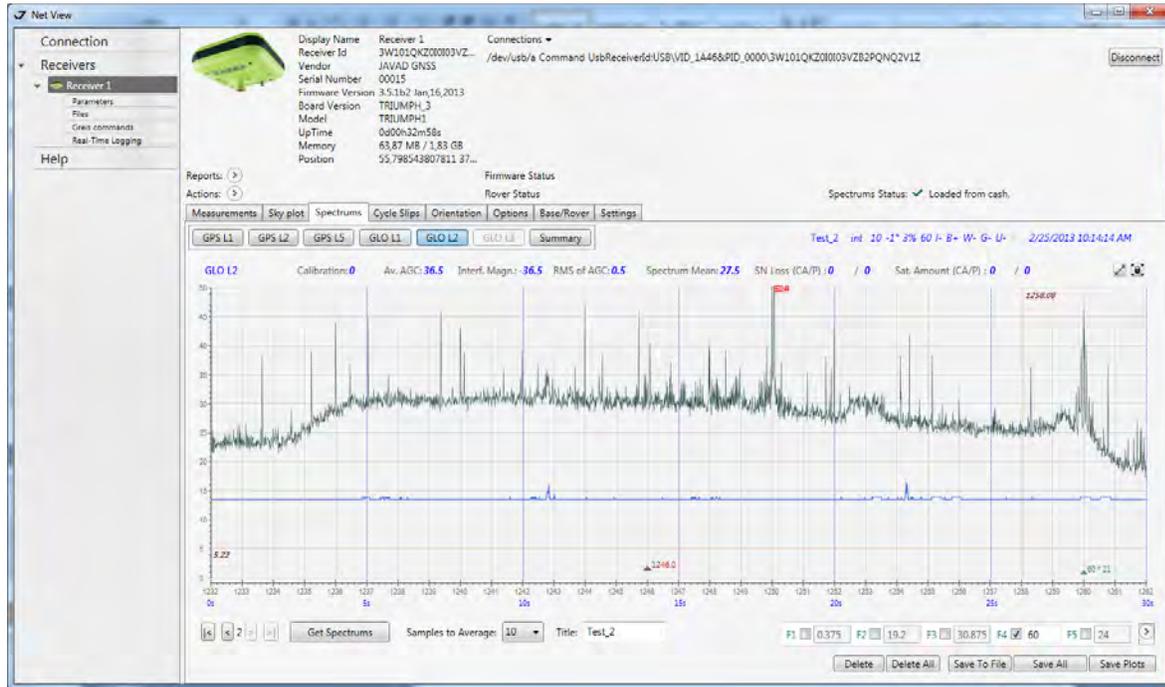


Figure 7. Labels for the harmonics

3. Statistics and additional data

Above the graph the statistics and calibration data are displayed:

- *Calibration* - AGC calibration;
- *Av Agc* - AGC average during the measurements;
- *Inter Magnitude* - interference magnitude, calculated from the average values and calibration of AGC;
- *RMS of Magnitude* - AGC RMS
- *SN Loss* – average loss in signal / noise ratio;
- *Sat Amount* - the average number of satellites for CA and P codes.

Click *Summary* button, to see the statistics for all bands.

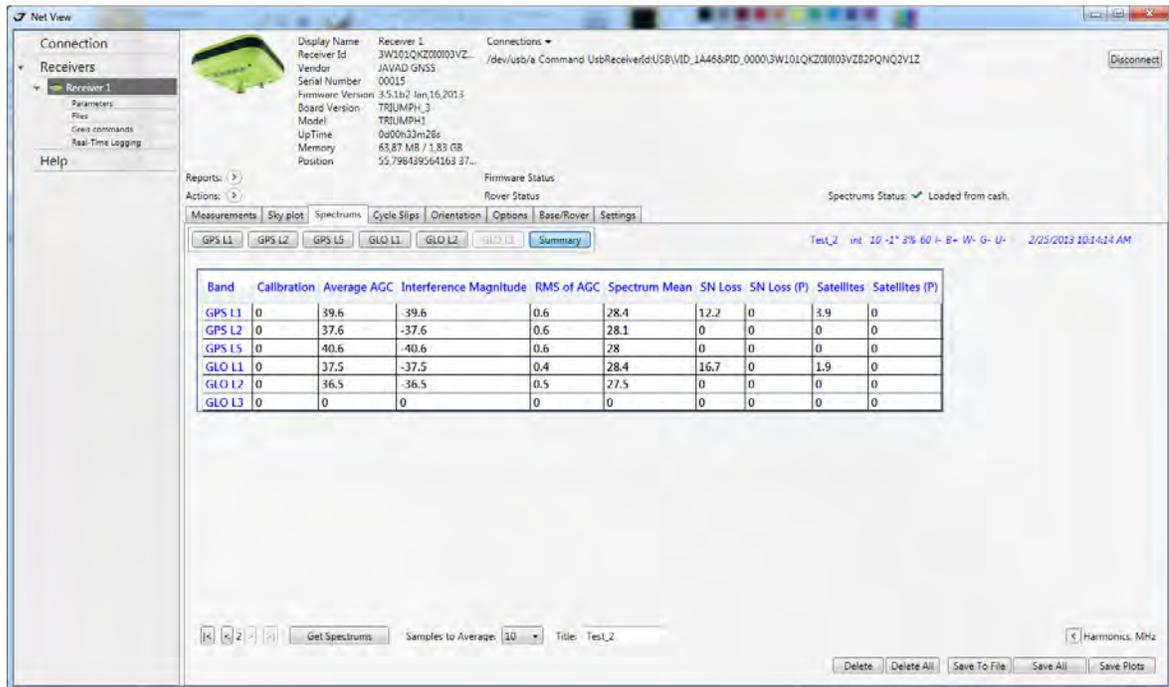


Figure 8. All bands statistics

In the upper right corner is shown the receiver status during the spectrum measuring. It lists the following:

- Name of the test
- Position the antenna
- The number of measurements for averaging
- Elevation mask
- ASIC frequency
- AGC
- I - Anti-Jamming mode (+ enabled; - off)
- Status of communication module (if the module is not available for the receiver it is gray): (+ enabled; - off):
 - B - Bluetooth
 - W - Wi-Fi
 - G - GSM
 - U - UHF / FH
 - C - Communication Board (for TVS)
- Time

You can save the spectrums with additional information or only graphics and delete them.

Spectrums

How to save and delete spectrums

4. How to save and delete spectrums

To save or delete the spectrums, use the buttons:

- *Delete* - Deletes the spectrum graph (all bands);
- *Delete all* - Deletes all graphs for the receiver;
- *Save to file* – Saves the spectrums with the additional information to the special file (all bands);
- *Save all* – Saves all spectrums to the selected folder;
- *Save graphs* – Saves the graphs in *png* to the selected folder (all bands).



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