

How to compare multiple signals of sensors or measurement points

Application Note

1 Introduction

This document shows how to use the Sequoia IT software FTAnalyzer in order to compare multiple signal from multiple sensors or from multiple measurement points.

Basically there are two ways to compare signals: online and offline method.

Both method can be applied to data acquired from a sensors device or to data coming from a file device (see paragraph 3.6 *File device* of *FastTracer Use and Installation Manual* for more details).

2 Online method

The online method compares the signals using the FTAnalyzer user interface:

1. open a time or frequency view for each connected sensor
2. rearrange the open views in order to better compare them
3. start the data acquisition by pushing the *Start/Stop* button

For a better comparison of a specific time range, stop the acquisition and slide the views to the correct time (not possible with frequency views).

See paragraph 3.4.1 *Graphics area* of *FastTracer Use and Installation Manual* for instruction on how to rearrange graphic views.

See also paragraph 3.5.3 *Triggered: event synchronized measures* of *FastTracer Use and Installation Manual*.

The online mode requires adequate computing capacity and, depending on the number of sensor, the right number of USB ports. A bigger screen can also be helpful.

The following picture shows the comparison of the same vibration acquired with two sensors.



3 Offline method

The comparison of the signals in the offline method is demanded to an external program such as Microsoft Excel, OpenOffice Calc or Matlab.

The main steps of this method are:

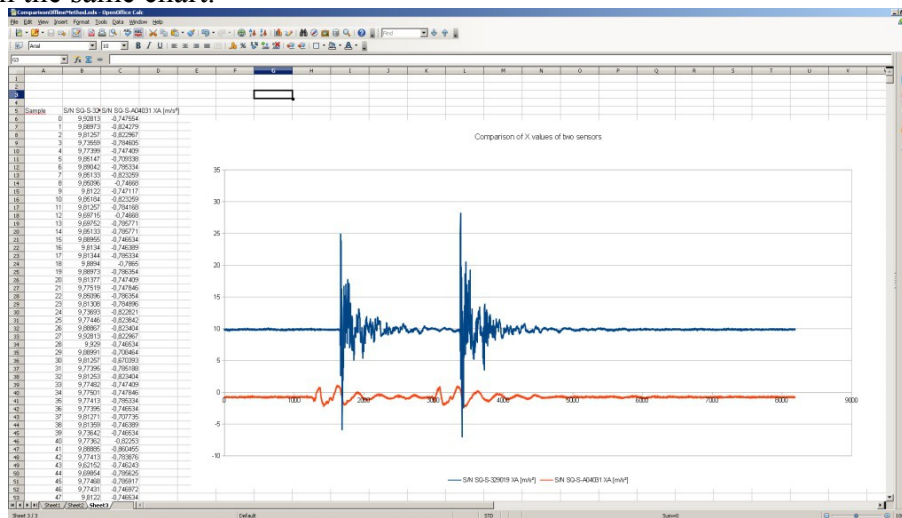
1. acquisition of data
2. export of data
3. comparison by using an external program

Four type of data export are available by right clicking on a time view selection:

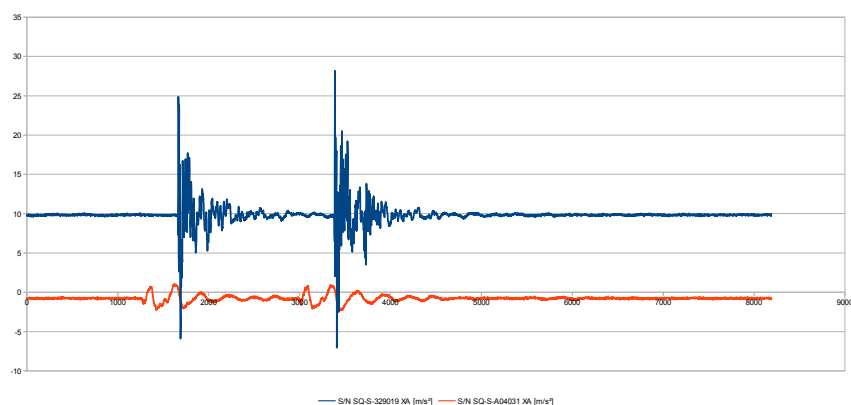
- export to text file...
- export to spreadsheet...
- save oscilloscope image to file...
- print oscilloscope image

See paragraph 3.7 *Export to text file: measure export* of *FastTracer Use and Installation Manual* for more details on how to export data.

The following pictures show the comparison of the same signals as shown in the previous online method. Exported data were imported in OpenOffice Calc and X-axis signals of the two sensors were plotted on the same chart.



Comparison of X values of two sensors



4 Conclusion

For more information read the FastTracer *Use and Installation Manual* or contact Sequoia IT:

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