System Requirements
SA0314 Spectrum analyzer:

System requirements Windows XP, 7, Vista or 8:

1 GHz or faster 32-bit or 64-bit processor

1 GB RAM

10 MB hard disk space \

1. Getting Started

   Insert DVD into the computer.

   Drag and drop the folder (RFI_SA0314) to you desktop RFI_SA0314

   Open folder RFI_SA0314 and double click RFiSpecAn0314.exe

   RFiSpecAn0314.exe is a C# program; you may need to update your .net in Microsoft if you get the error message

Updating .net in Microsoft

http://www.microsoft.com/en-us/download/details.aspx?id=30653

Connect hardware

Insert the SA0314 into an USB connector on your pc and wait for the device driver to load you will hear 2 double beeps.

The first double beep when windows detects a new device and the second double beep when the device is ready

The serial # of the SA0314 will display in the upright corner of the sa0314 software.

If you are running multiple SA0314 you can assign different sa0314 to different application running at the same time.
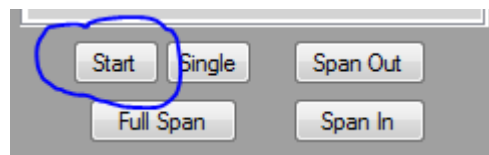
Left click start

This starts the sweep the frequency sweep and will repeat until told to stop.

Operation

The initial parameters are Full Span, 813KHz bandwidth, reference level @ -20db, trace 1 enabled, LNA ON, markers off,10db/Div

Under the frequency tab you can adjust the start, stop, center, and span manually but mouse control is easier.

 Default reference level is for quick mouse control.

Left click the mouse on the display and pull down to the left this resets the display if in a zoom display mode to the default reference level with a 100 db total scale. If 1 db/Div is selected then the db/Div will be the minimum that can be displayed with the window size you have selected. Span will not affected
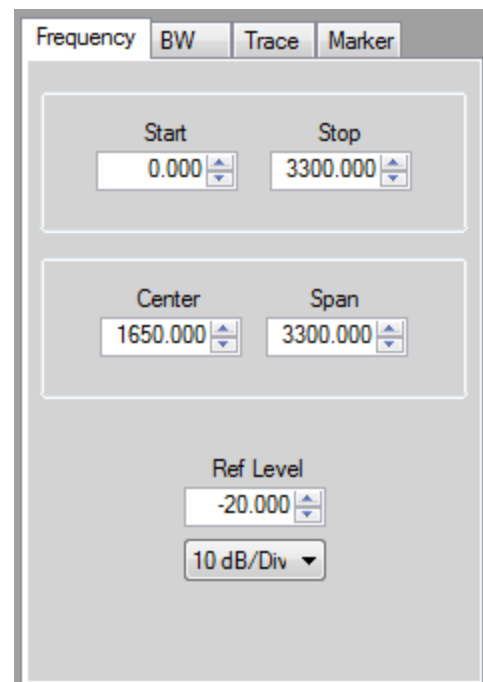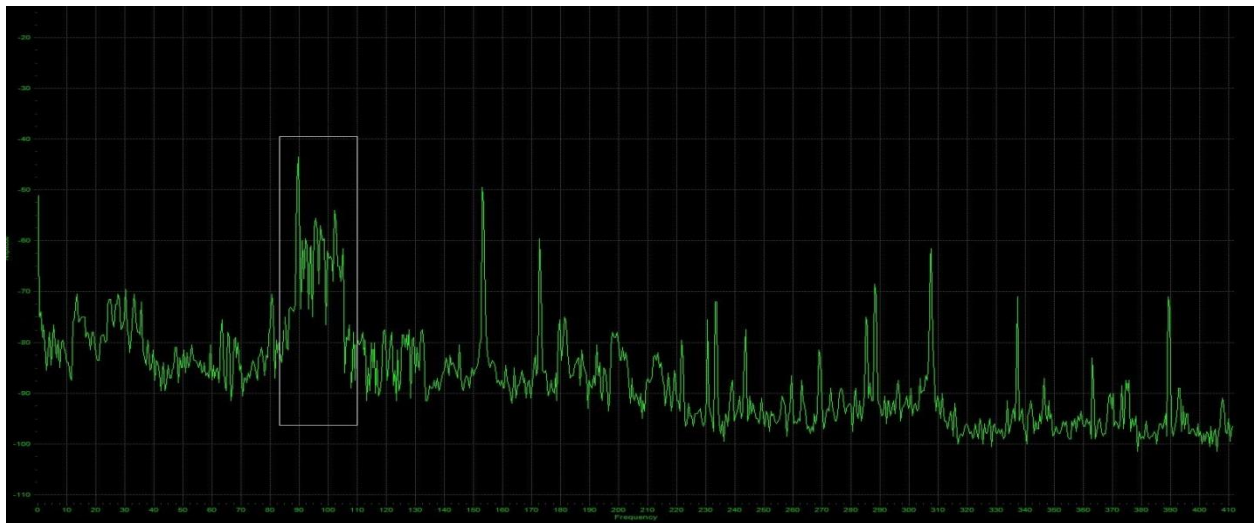
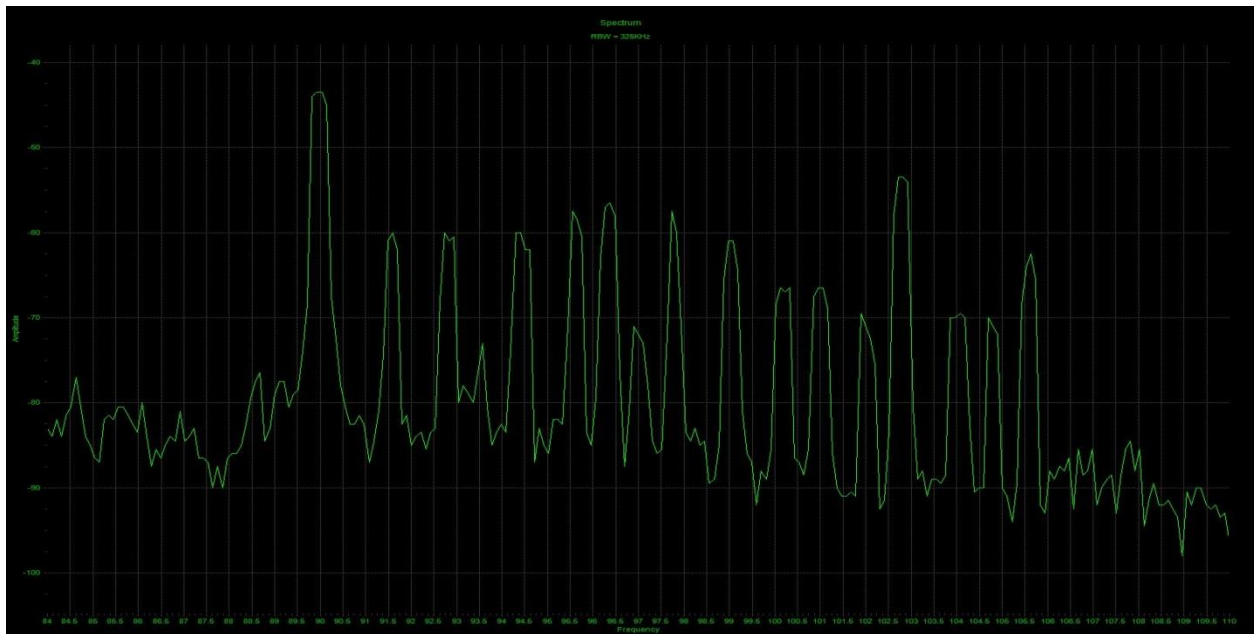# Changing Frequency, span and reference level with the mouse.

Use the left mouse button and draw a box around the signal interest

(Start the box in the upper left then pull box down to the lower right)

Then release the left mouse button

The display will adjust Frequency, span and reference level to the box you drew.

Moving the display area.

Right click and hold the mouse button while moving the mouse will move the display in frequency and reference level.

(The span will change only if the start and or the stop are at the min or max value)

6. Span In and Span Out will change the start and stop frequency around the center frequency that is displayed.

Stop	Single		Span Out
	Full Span		Span In
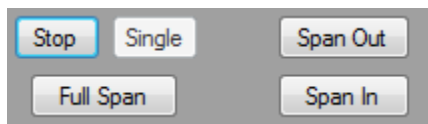
Bandwidth

Resolution bandwidth can be changed with the pull-down menu (58,68,81,102,116,135,163,203,232,271,325,406,464,542,650,813)KHz.

Changing the bandwidth automatically turns off BW Auto.

Bandwidth Average is similar to Video Bandwidth on an analog Spectrum analyzer.

Step Delay will change to larger numbers for smaller bandwidths. This is a necessary delay to receive the full power of the signal in smaller bandwidth. The Step Delay can be reduced to decrease sweep time with reduced accuracy.

BW Auto selected allows the software to change bandwidth depending upon the span of the display.
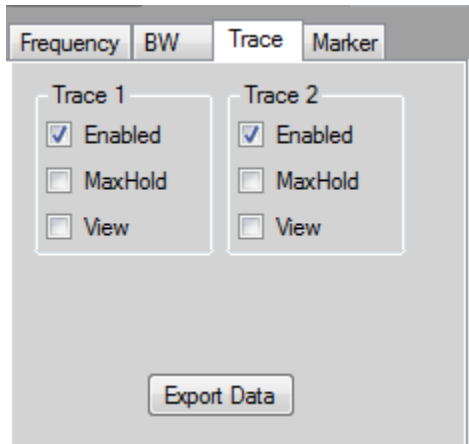
IF Gain can be adjusted for maximum sensitivity for signals that a very weak.
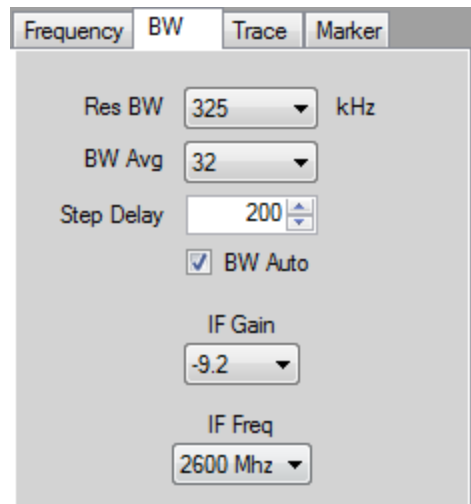
IF Frequency of the SA0314 can be changed if there is a strong signal at the IF frequency that is interfering at the current IF frequency of the SA0314.
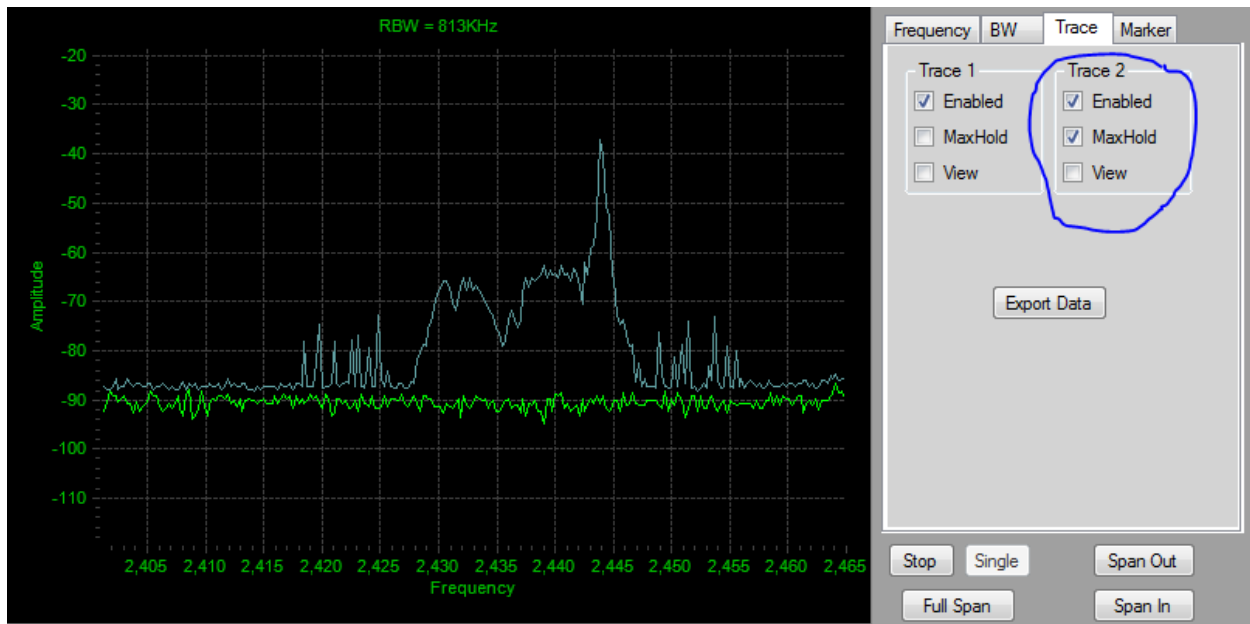
Traces

Trace 1 is green and trace 2 is light blue. Export data creates a text file for importing into graphing software.
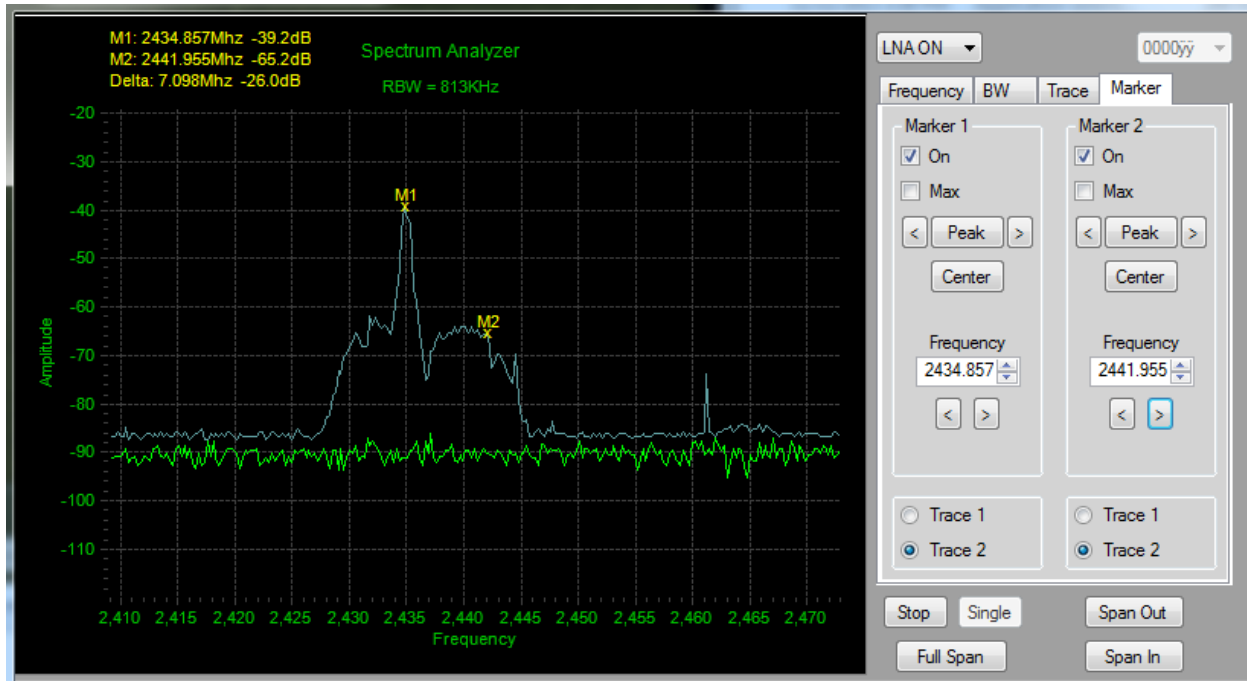

Max Hold will hold the selected trace maximum signal.

View stops updating the selected trace.

Markers

Markers are used to find amplitude at a frequency.

Two markers can be used to find frequency and amplitude delta.

To find the amplitude difference between two signals first enable both markers. You can use peak find on ether marker. Use the <> on ether side of peak to find the next peak or use the <> below frequency to step to the next frequency. After both markers are at the desired frequencys the delta can be read below the M1 and The M2 data in the upper left corner of the display.

Center is used to center the display at the marker frequency. If you are using max hold and the frequency of the display changes then a full redraw of the maxhold will erase the old maxhold display.