

Using EasyScope X to retrieve Average Waveform Data

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Waveform averaging can be a useful method to decrease noise in a particular signal.

The SIGLENT SDS series of oscilloscopes can easily collect average waveform data using EasyScope X software.

NOTE: At this time, average waveform data is not able to be saved in CSV format via the front panel USB connection to a USB memory stick.

Initial Setup

- Download NI-VISA Runtime Engine that matches your operating system, if your computer does not already have the VISA library.

It can be downloaded from National Instruments: <http://bit.ly/2pw5gQW>

- VISA library installed. This is the communication library used by EasyScope X software to communicate with the instrumentation

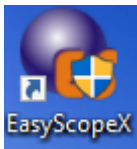
- Download EasySpectrum Software from the SSA3000X Product Page on the SIGLENT America website: <http://bit.ly/2okc8wG>

Connect and Collect

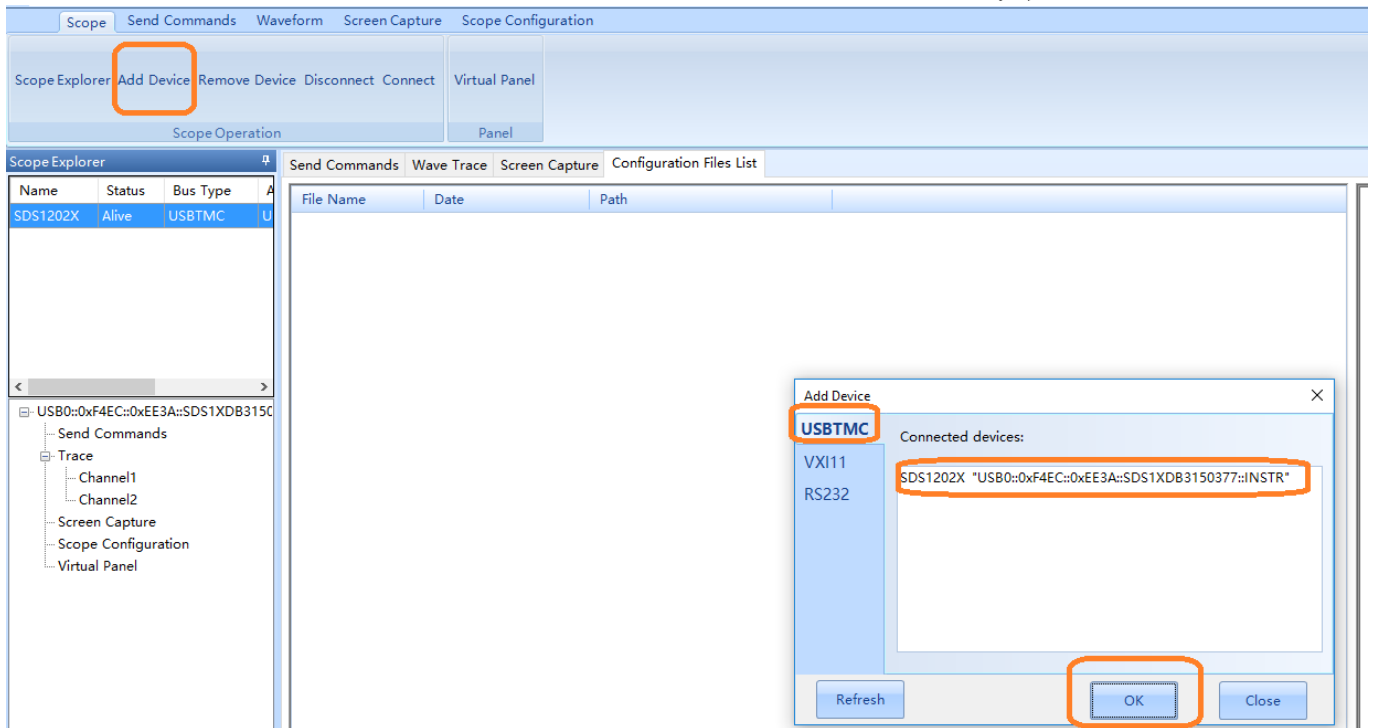
1. Connect the scope to the computer using a USB or LAN connection and power it on.

NOTE: This example uses a USB connection for communication between the scope and computer.

2. Open an instance of EasyScopeX by clicking on the desktop icon:



3. Add Device and select the session address for the instrument you wish to connect:



4. Configure the instrument to capture the signal of interest. You can perform this manually on the front panel, or you can use the Virtual Panel control.

Select Virtual Panel > Acquire > and press the button labeled Acquisition until the type = Average:



5. Select Waveform, and use the Play/Pause button to acquire the waveform of interest. Then, select Save > select the channel of interest > select the type of CSV to save > Press Save to open a file dialog box.

The screenshot shows the EasyScopeX software interface. At the top, there is a menu bar with 'Scope', 'Send Commands', 'Waveform', 'Screen Capture', and 'Scope Configuration'. Below this is a toolbar with various icons, including a play button (circled in orange) and a 'Save' button (circled in orange). The main area displays a waveform on a grid. On the left, there is a 'Scope Explorer' panel with a tree view showing 'Send Commands', 'Trace', 'Screen Capture', and 'Scope Configuration'. A table below the tree shows two entries for 'SDS1202X' with status 'Dead' and 'Alive' respectively, both using 'USBTMC' bus type. A 'Save waveform' dialog box is open in the foreground, showing 'CH1' selected, 'Total' 2800, 'Start' 0, 'End' 2799, and 'Step' 1. The dialog also has checkboxes for 'CH2', 'CH3', and 'CH4', and options for 'Show Properties', 'Show Column Header', and 'Show Time Column'. The 'Single CSV File' radio button is selected and circled in orange, along with the 'Save' button.

Name	Status	Bus Type
SDS1202X	Dead	USBTMC
SDS1202X	Alive	USBTMC

Save waveform dialog box details:

- Channel: CH1
- Total: 2800
- Start: 0
- End: 2799
- Step: 1
- Selected: CH1, CH2, CH3, CH4
- Options: Show Properties, Show Column Header, Show Time Column
- File Format: Single CSV File, A CSV File Per Channel
- Buttons: Save, Cancel



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