Chroma Systems Solutions, Inc.

Programming an AC Source

from a file

61500 series AC Sources

Keywords: 61500 series AC Sources**,** Softpanel, Microsoft Excel file

Title:

Programming an AC source from a file

Product Family: **61500 Series AC Sources**

Scope

AC sources are wildly used in testing products for all different industries. In some cases being able to reproduce a custom waveform is helpful for qualifying a new product. This application note will explain how this can be accomplished with the use of the 61500 series Programmable AC Sources.

Solution

The 61500 series Programmable AC Sources allow for programming of custom waveforms and storing these in memory to be used over again. There are various ways this can be accomplished, but 2 of the easiest ways are explained in this document.

The first solution is the use of an application called Softpanels. This is a program that is provided by Chroma for the AC Source to allow the user full functionality of the source through a simple to use graphical interface. The waveform can be created using the waveform editor, or by loading it from a saved file. Loading the waveform file from the Softpanel interface is pretty simple but does require that the file be 1024 points in length for a complete cycle that is trying to be reproduced. If the file does not contain 1024 points of data, you will need to manipulate the data to provide the additional points. This data file should be saved as a Microsoft Excel file. To load this file from the softpanel follow the steps below.

From the main screen select Waveform Editor from the tabs along the top of the screen.
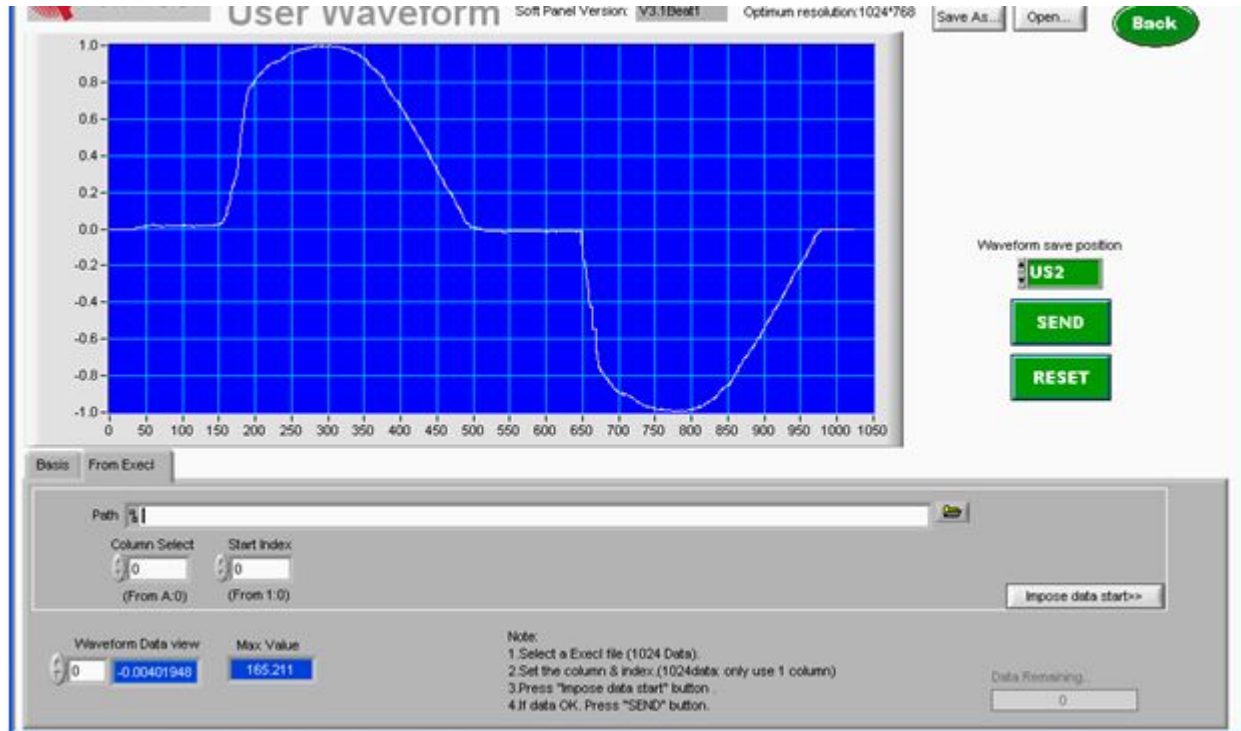

From the editor screen select "From Excel" right below the graph.
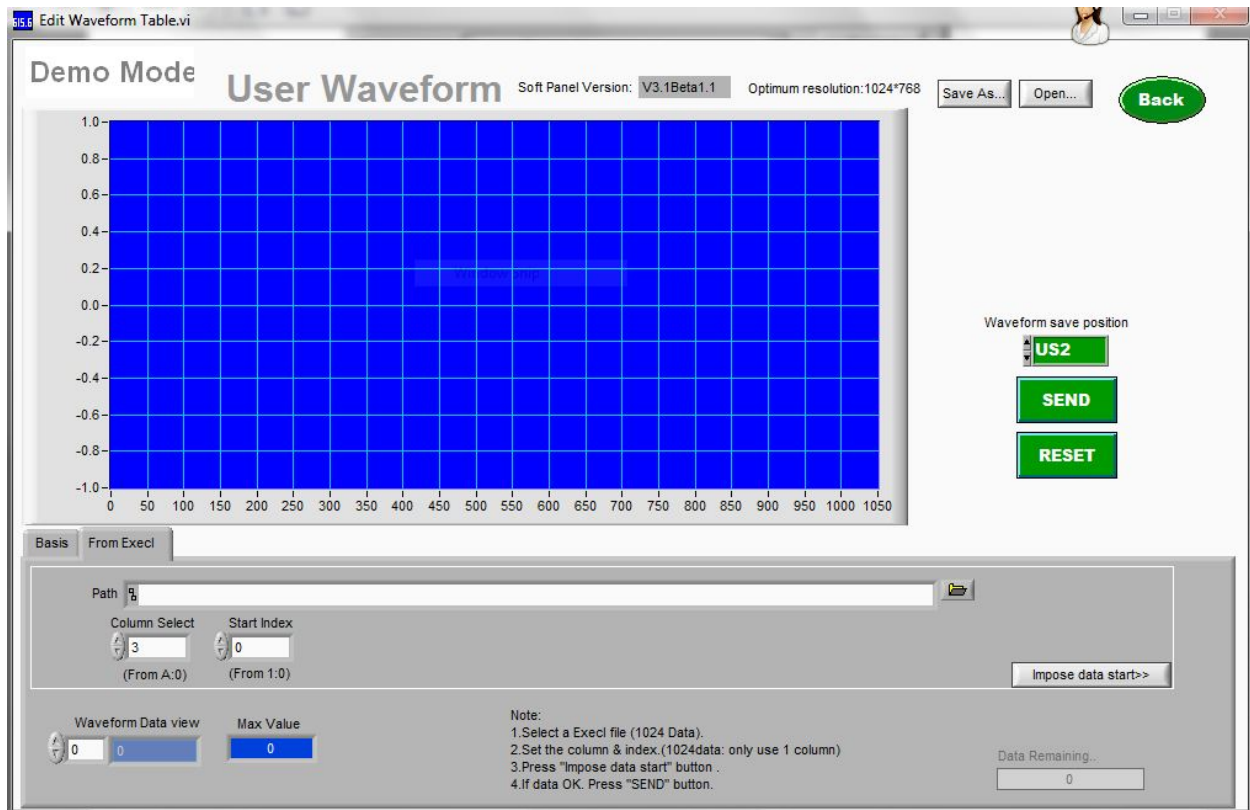
Select the starting column and the Index (row) in which the data is present and then select "Impose Data Start" located toward the right of the screen.

Once the data has been imported the graph will appear on the screen.

Select the location you wish to store the waveform (US 1 – 6) and click on the "SEND" button. The custom waveform will be stored in this location.

Click on the "BACK" button at the top of the screen to return to the main screen.

From the "Waveform A" tab on the main screen select US. A box will appear, choose the number of the location, where the waveform was stored. By applying a voltage and frequency the waveform will be generated with the parameters you choose. NOTE: The waveform will not be displayed in the graph of the main screen. It can be confirmed at the output of the AC Source with an oscilloscope.

The second option is to use a terminal program and the command language to send the file to the AC Source from a PC. This is accomplished using the TRACE command and entering the data points to be stored to the specified location. This command is specified in the user manual for the AC Source. The command will be as follows:

TRACE US(X) n1, n2, n3, ... n1024

(X) = location to store waveform and will be a location from 1 to 6.

n = the data point to be stored. You must enter all 1024 points.

Conclusion:

The 61500 series Programmable AC Source comes in a few different size ratings to fit a variety of applications. With the addition of the Softpanel software it can make you test solutions easy and repeatable for all your testing needs. Storing custom waveforms adds a layer of flexibility to your testing and allows for using one supply for multiple applications. For more information on the AC Source Softpanels refer to an application note "Software Simplifies Testing to Military and Aerospace Standards".