

## Introduction to Waveform Generator Technology

Date: 01/11/2016

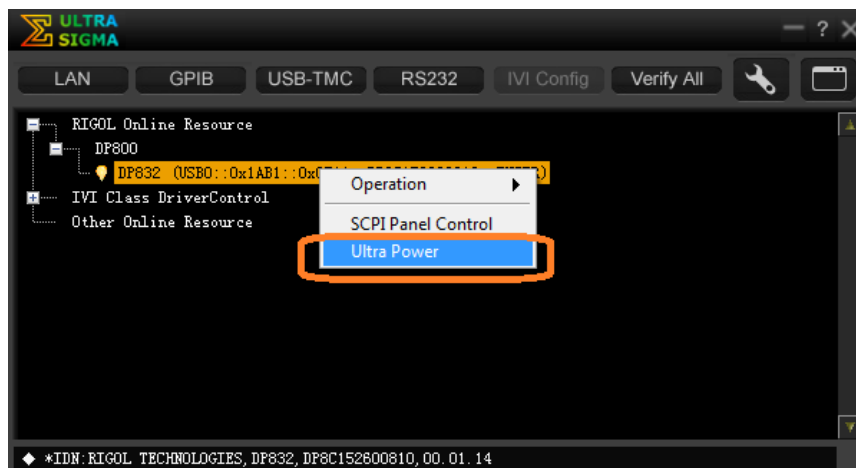
*Solution:* The Rigol DP800 and DP1000A Series power supplies can be controlled remotely using UltraSigma general communications software and the UltraPower Plug-In.

UltraPower allows you to remotely control and configure the power supply as well as monitor and graph the output history versus time.

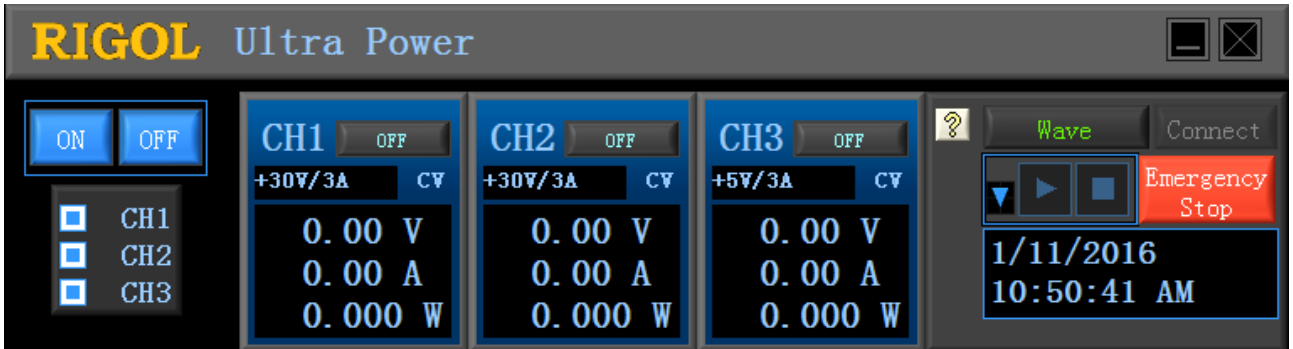
1. Download and Install UltraSigma and UltraPower (See the installation guide for UltraSigma and the Ultra Family of software for more details)
2. Connect the instrument via USB, Ethernet, or GPIB
3. Start UltraSigma by clicking on the UltraSigma icon:



4. Right-click on the instrument you want to control and select UltraPower



5. You should see a control panel similar to the one shown below (DP1116A)



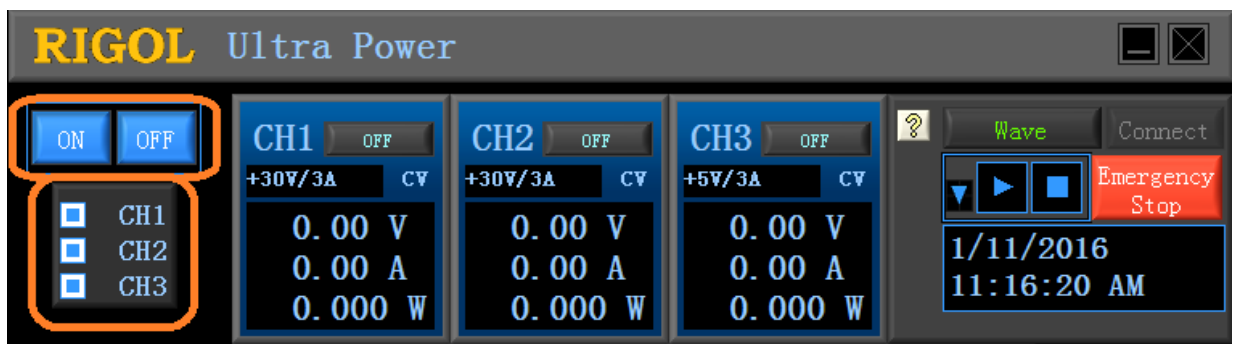
6. Place the mouse pointer within the Channel Control box and Right-click to expand the screen. This will allow you to see the individual channel controls as below:



- Just click on the textbox and enter the desired range using the computer keyboard. Here, we are adjusting the output setpoint voltage for CH1:



- You may also enable remote sense or source tracking, if either of these options are available on the power supply that you are controlling.
- Control the output state of any channel using any of the ON/OFF buttons. You can also control simultaneous outputs by selecting the main output control:

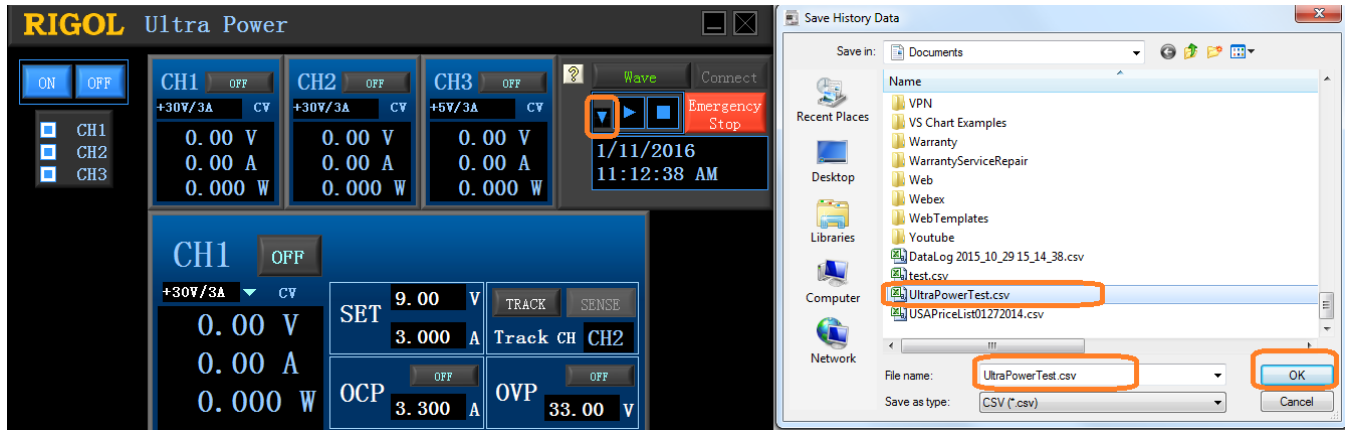


10. You can also see the trend of Voltage, Current, and Power with respect to time by pressing the Wave button:

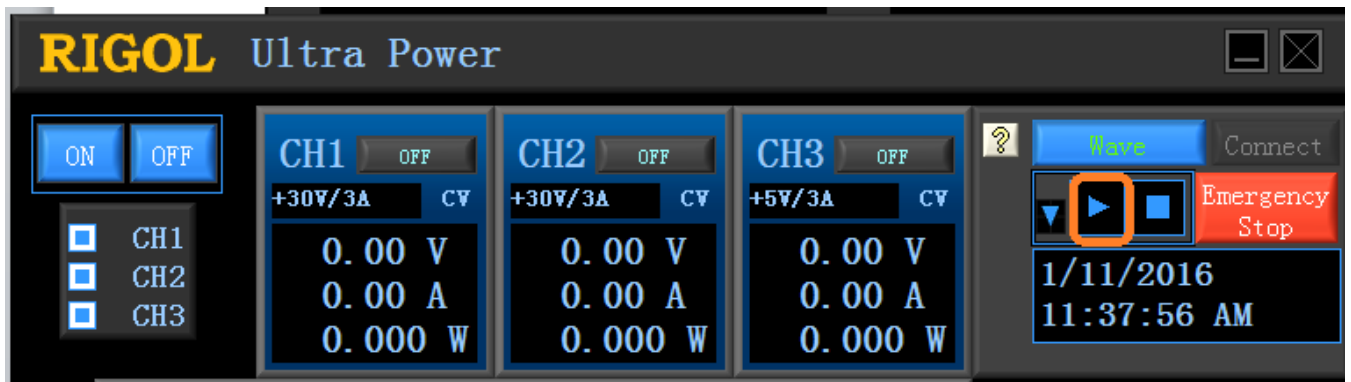


11. You can save data as a CSV file as well.

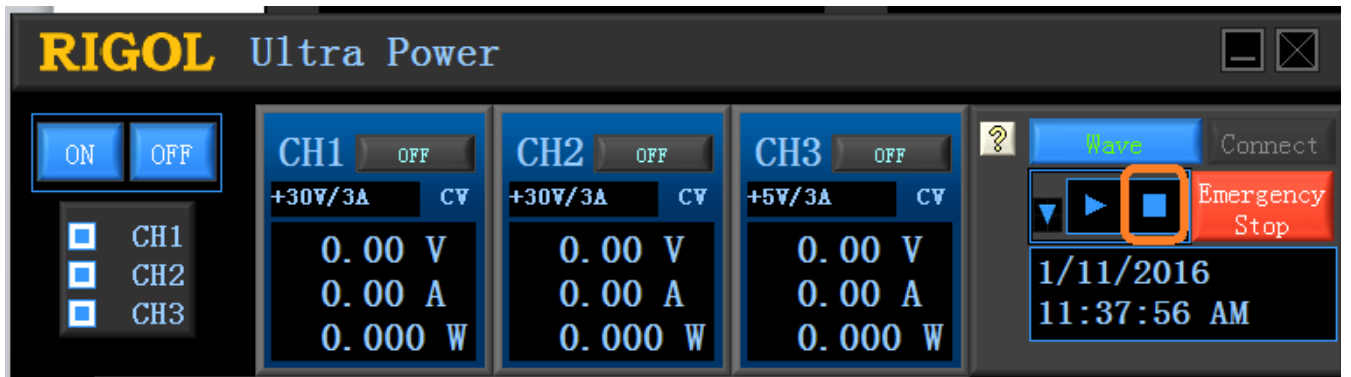
- Configure the output setpoints, OCP, OVP, and other values for all of the channels you wish to record
- Leave the Outputs OFF until the moment that you want to begin recording
- Create a file to store the recorded information by pressing the down arrow and name the file:



- When you want to begin recording, enable the outputs and start the waveform recording by pressing the “record” arrow:



- When you wish to stop recording, press the “stop” button





- You can then view the CSV data using a spreadsheet program like Microsoft Excel®:

	A	B	C	D	E	F	G	H	I
1	CH1 V	CH1 A	CH1 W	CH2 V	CH2 A	CH2 W	CH3 V	CH3 A	CH3 W
2	0	0	0	0	0	0	0	0	0
3	1	0.311	0.311	0	0.277	0.003	3	0.412	1.236
4	1	0.184	0.186	2	0.23	0.46	3	0.26	0.78
5	1	0.177	0.177	2	0.228	0.456	3	0.26	0.78
6	1	0.177	0.178	2	0.228	0.454	3	0.259	0.777
7	1	0.177	0.179	2	0.227	0.456	3	0.259	0.777
8	1	0.176	0.179	2	0.228	0.456	3	0.259	0.777
9	1	0.176	0.179	2	0.227	0.456	3	0.259	0.777
10	1	0.176	0.179	2	0.227	0.454	3	0.259	0.777
11	1	0.176	0.178	2	0.227	0.454	3	0.259	0.777
12	1	0.176	0.178	2	0.227	0.454	3	0.259	0.777
13	1	0.176	0.179	2	0.227	0.454	3	0.259	0.777
14	1	0.176	0.179	2	0.227	0.454	3	0.259	0.777
15	1	0.176	0.178	2	0.227	0.454	3	0.259	0.78

Find more information online [DP800 Family Information page](#)

For more information on our power supplies or other products please go to [rigolna.com](http://rigolna.com) or contact us directly at [applications@rigoltech.com](mailto:applications@rigoltech.com) or call us toll free at 877-4-RIGOL-1.

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