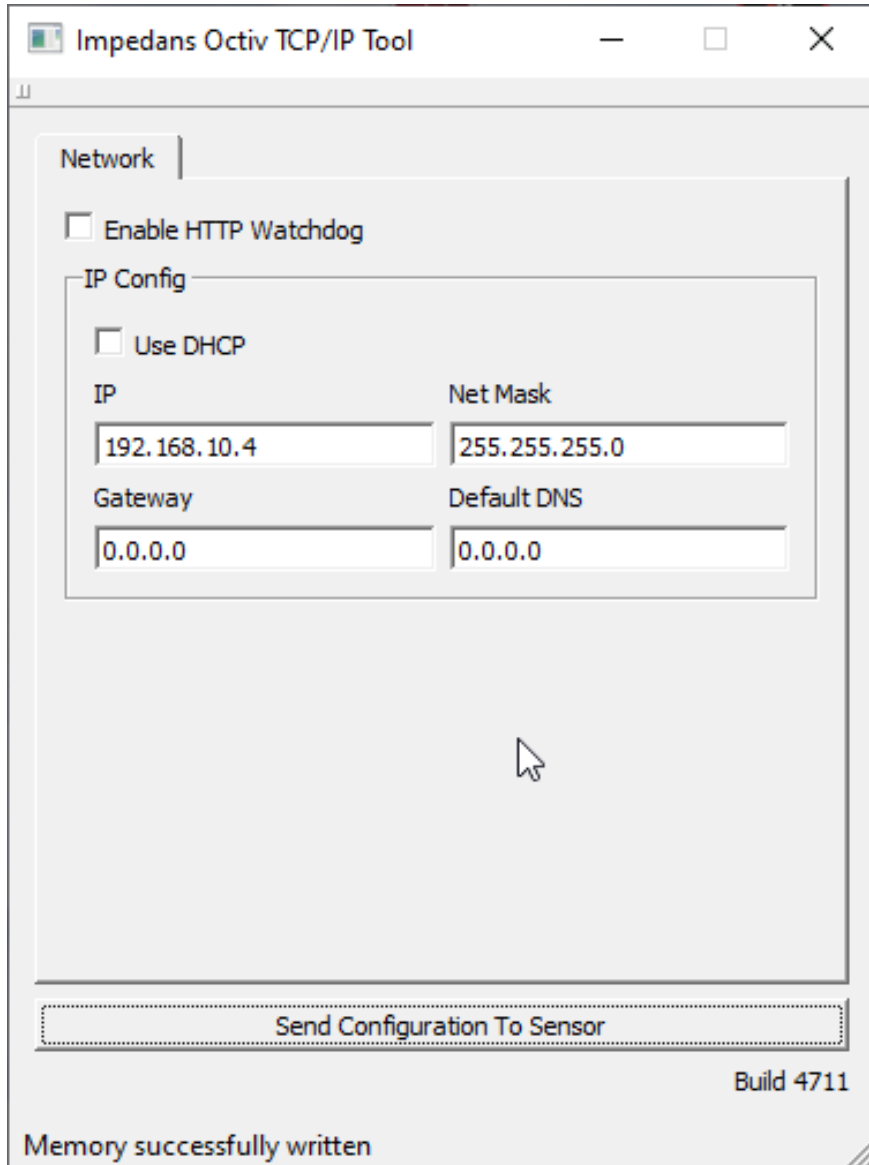


# Industrial Octiv

## Quick Start Guide for Software Usage

# Connecting to the Sensor



If connecting to the Sensor via Ethernet, first you should give the sensor a static IP address using the “OktivIpConfig” program that comes bundled with the software (Note this is done over USB and the Oktiv software itself cannot be open).

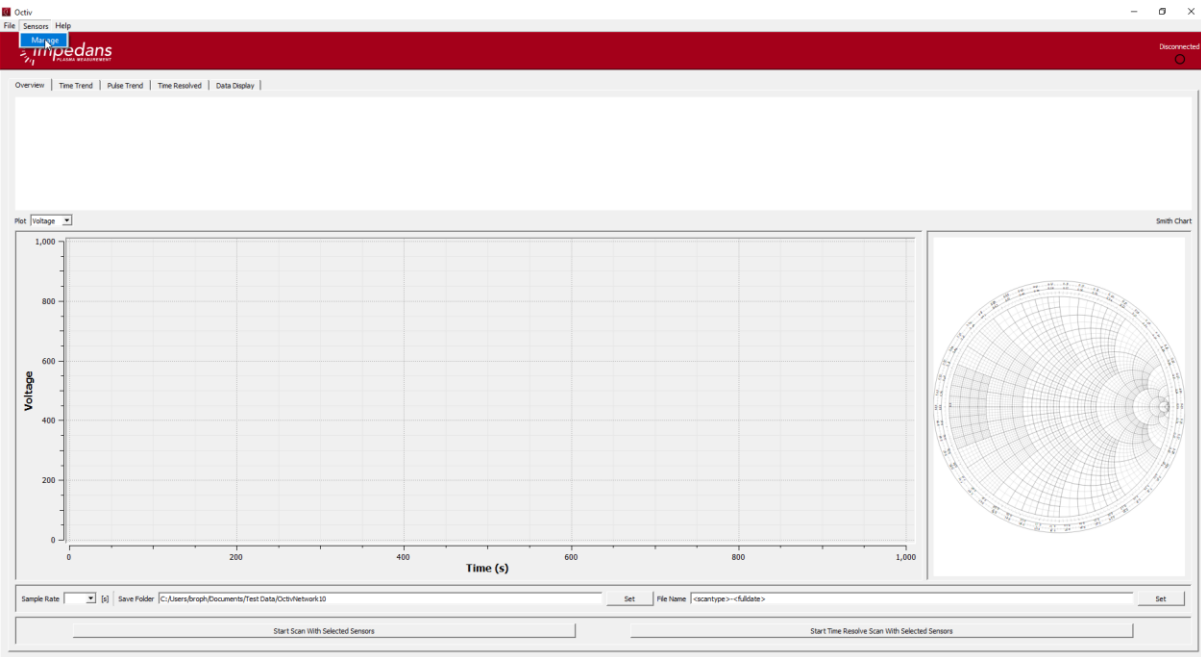
Once the IP address, Netmask, Gateway and DNS have been input, click the ‘Send Configuration to Sensor’ button. After a few second ‘Memory successfully written’ should come up in the bottom corner.

The IP address, Netmask etc will be determined by if you are connecting directly to your laptop or over your local network.

At this point the sensor needs to be power cycled (unplug the power cable and plug it back in).



# Connecting to the Sensor



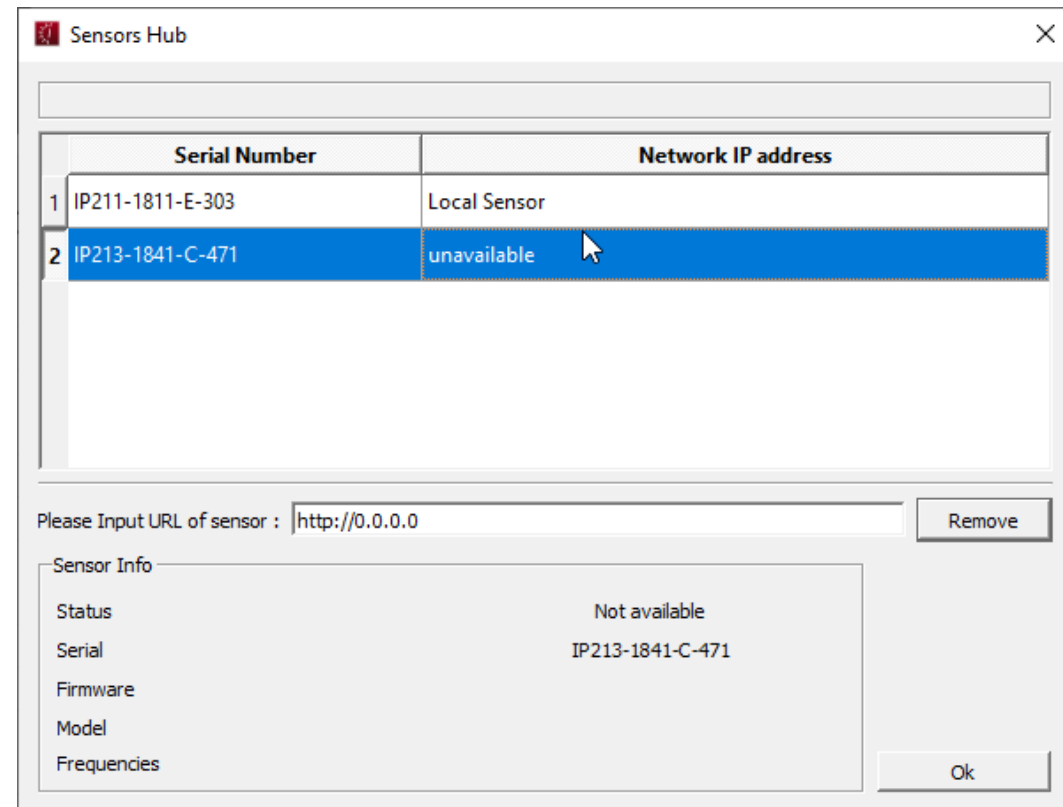
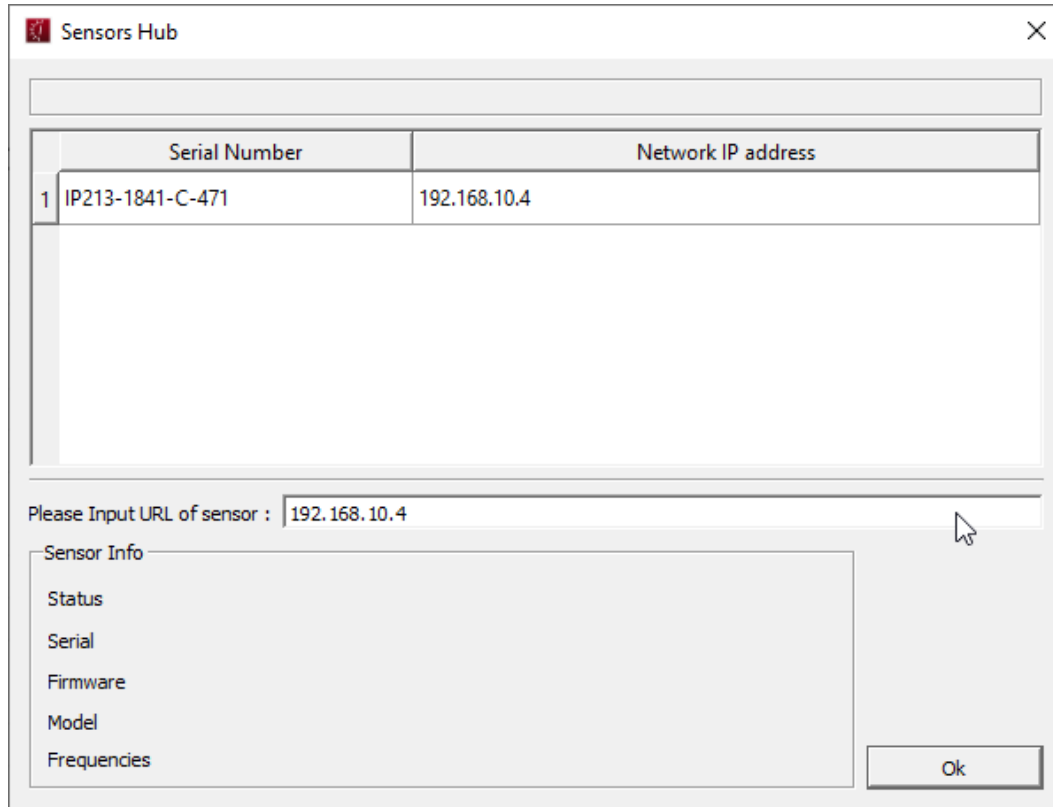
The screenshot shows the 'Sensors Hub' dialog box. It has a title bar with the text 'Sensors Hub' and a close button. Below the title bar, there are two columns: 'Serial Number' and 'Network IP address'. Below these columns, there is a text input field labeled 'Please Input URL of sensor : ' with the value '192.168.10.4' entered. To the right of this field is a 'Connect' button. Below the input field, there is a 'Sensor Info' section with a list of items: 'Status', 'Serial', 'Firmware', 'Model', and 'Frequencies'. To the right of this list is an 'Ok' button.

In the Octiv software click 'Sensors' then 'Manage' to open the 'Sensors Hub' page. This page shows you all sensors you are currently connected to and allows you to connect to your sensors via ethernet.

Input the IP address that you previously sent the sensor in the box beside 'Please Input URL of sensor:' and click 'Connect'



# Connecting to the Sensor



Once you have connected to the sensor the sensors Serial Number and Network IP address is shown. Multiple sensors can be connected via Ethernet once you have their IP addresses.

If connecting via USB, the sensor should automatically be picked up by the software in which case the 'Sensors Hub' page will show it as 'Local Sensor' under the Network IP address

If the sensor is not able to be detected (network is down/sensor is powered off) then the sensor will come up as 'unavailable' – which can be removed by clicking on the sensor then the 'Remove Button'



# Setting up the Time Trend Page

The screenshot shows the Impedans software interface with the following configurations:

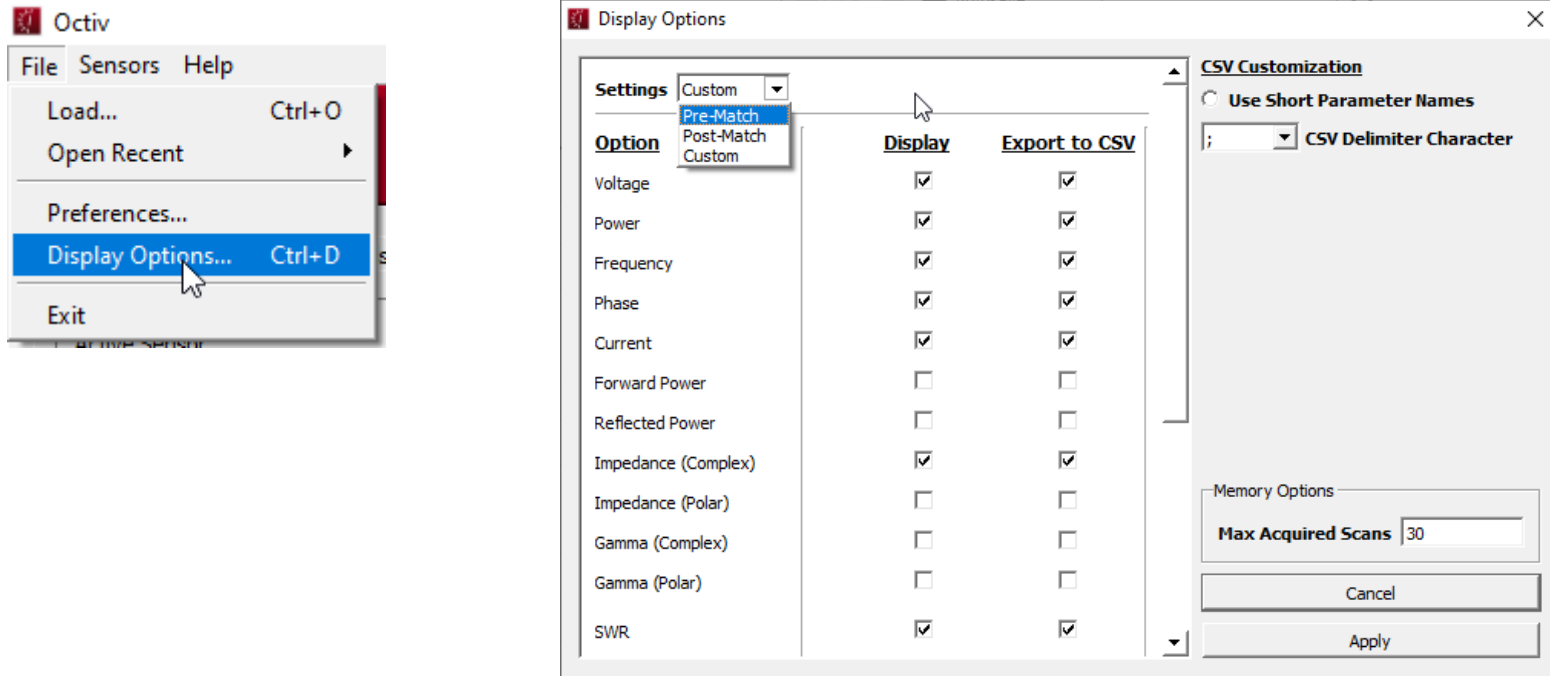
- 1. Sensor Configuration:** Active Sensor: IP211-1811-E-303. Number Of Harmonics: 15. Frequency: 13.56 MHz.
- 2. Scan Configuration:** Scan Duration: [blank]. Sample Rate: 0.1 [s]. Ion Flux: .
- 3. Scan:** Start Scan, Stop Scan, Autostart, Wafer Lot, Wafer Number, Save File, Autosave (checked).
- 4. Parameter View:** Displayed Frequency: 13.56 MHz. Parameters: Voltage (0.00 V), Power (0.00 W), Frequency (0.00 MHz), Phase (0.00 °), Current (0.00 A), Impedance (0.00 + 0.00j Ω), SWR (0.00). Buttons: Harmonics, Smith Chart, Meter View, Wave Form.

The Time Trend page will be the main data collection page for this trial.

1. Choose the frequency, and choose 15 harmonics from the dropdown menu
2. Set the Sample Rate to 0.1 (10 Hz) and leave the Scan Duration blank (continuous monitoring)
3. Set an autosave location (see next slide) and an automatically generated file name
4. Displays the selected parameters for the current frequency. Those shown here are good recommendations for those to be used post-match (see next slide)



# Selecting Parameters



Under 'File' and 'Display Options' you can select what (8) parameters are monitored in the parameter view (shown in the previous slide).

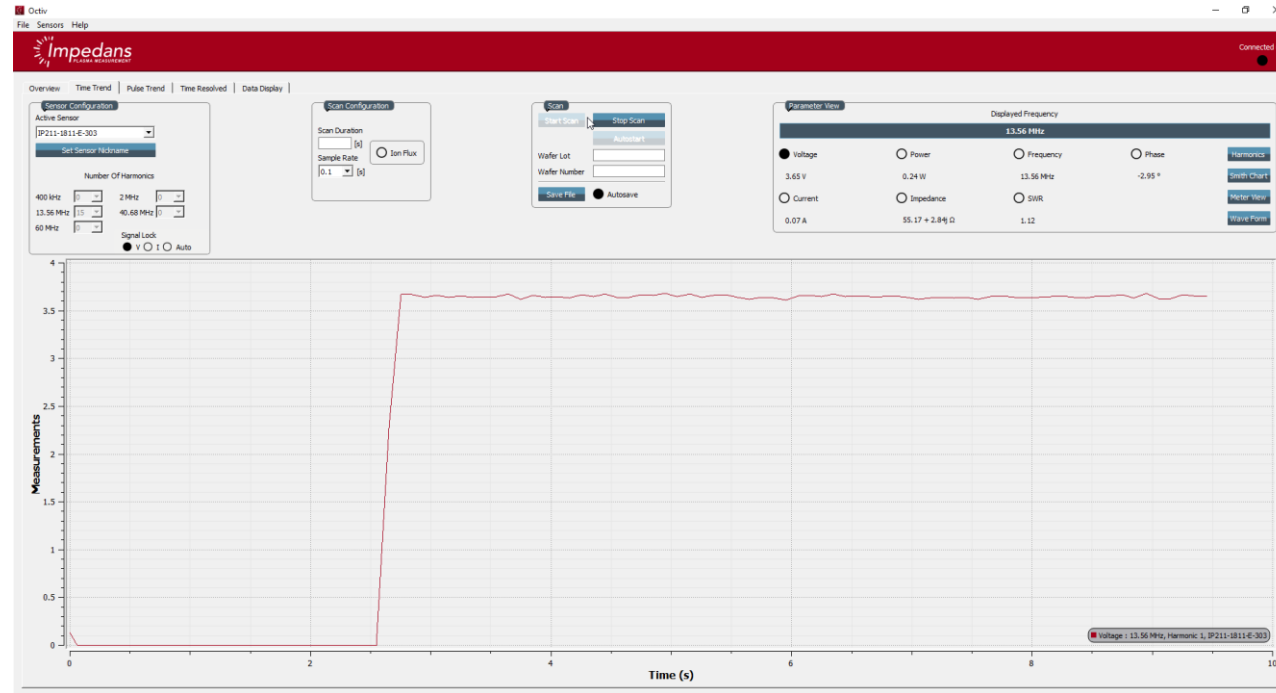
Under 'Settings' suggested parameters can be founded depending on if the Oktiv is 'Pre' or 'Post' match although a Custom selection can also be made.

The parameters that are exported to the csv are also selected as well as the delimiter used in the csv file.

Note for European customers the comma (,) should not be used as this will cause a conflict with your use of the comma for decimals



# Quick Scan



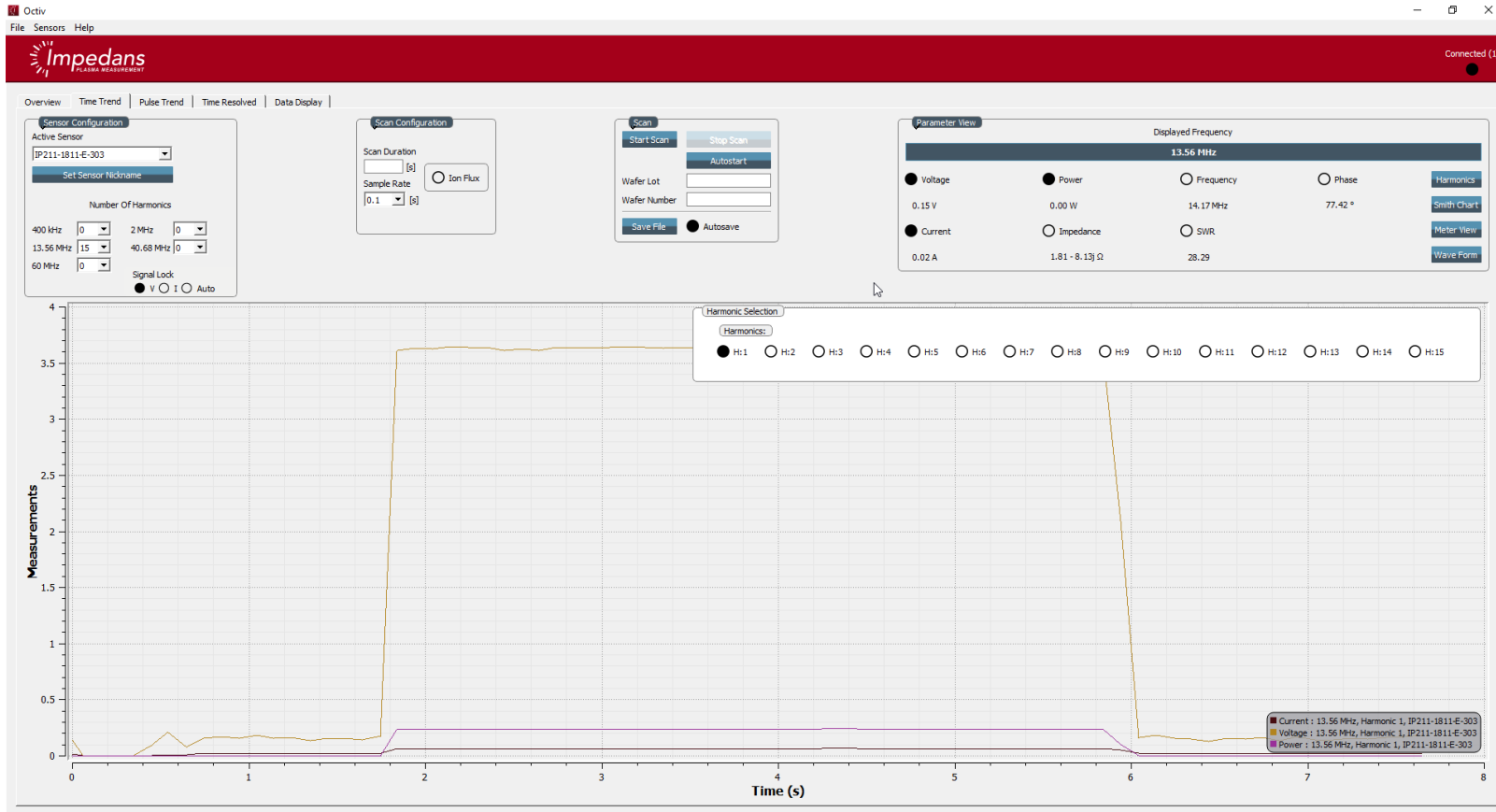
Initially it is suggested that a few manual scans are taken in order to find what is the typical signal level for a given process.

This is done By clicking 'Start Scan' at which point the data should start accumulating (and the 'Start' Scan' button becomes greyed out but making the 'Stop Scan' button is activated).

The data accumulation can then be stopped by clicking 'Stop Scan'. The data can then be saved using the 'Save File' button.



# Plotting Parameters



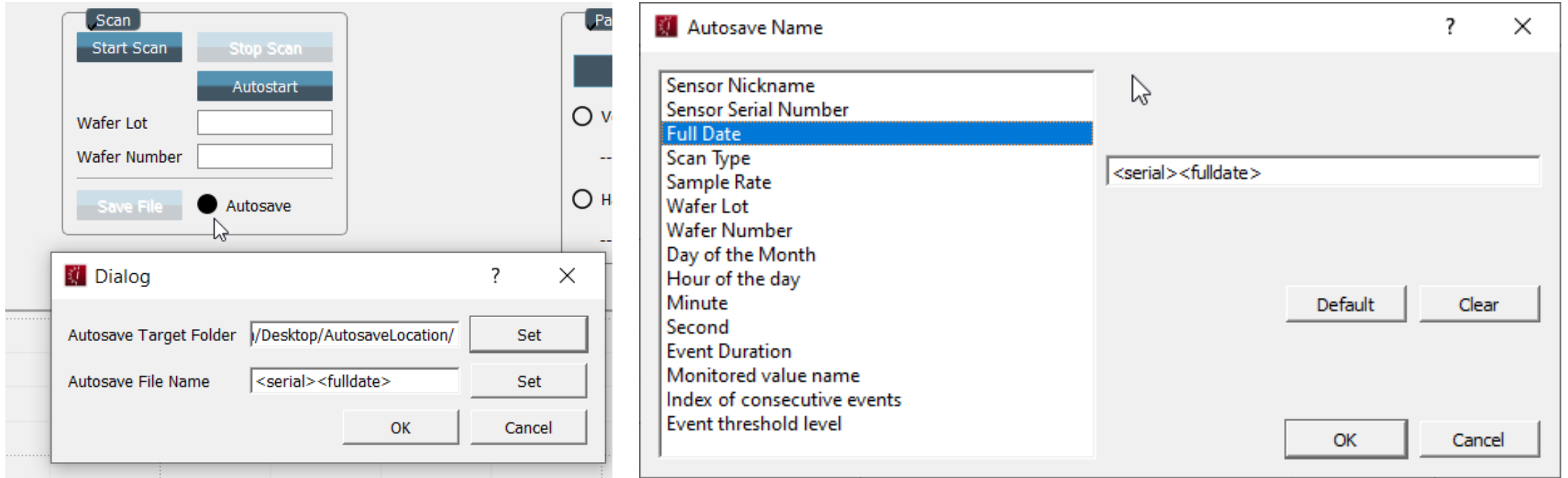
When running a scan you can change what parameters are currently being plotted by clicking on the circle next to the parameter and then selecting which harmonic (depending on which parameter is selected) you wish to plot.

Multiple parameters can be plotted simultaneously as shown above





# Setting up the Autosave function



Double click on the black circle beside Autosave to set the autosave directory. This should not be the default location, but instead somewhere like MyDocuments or the Desktop, where admin rights are not needed to save a file.

For the “Autosave File Name”, click Set and double click on “<fulldate>”. This will save all files with the date and time that the process started.

If you will be running multiple sensors then you can distinguish the different saved files by including the ‘serial’ number in the saved file name.



# Autostart for 24/7 Monitoring

Scan

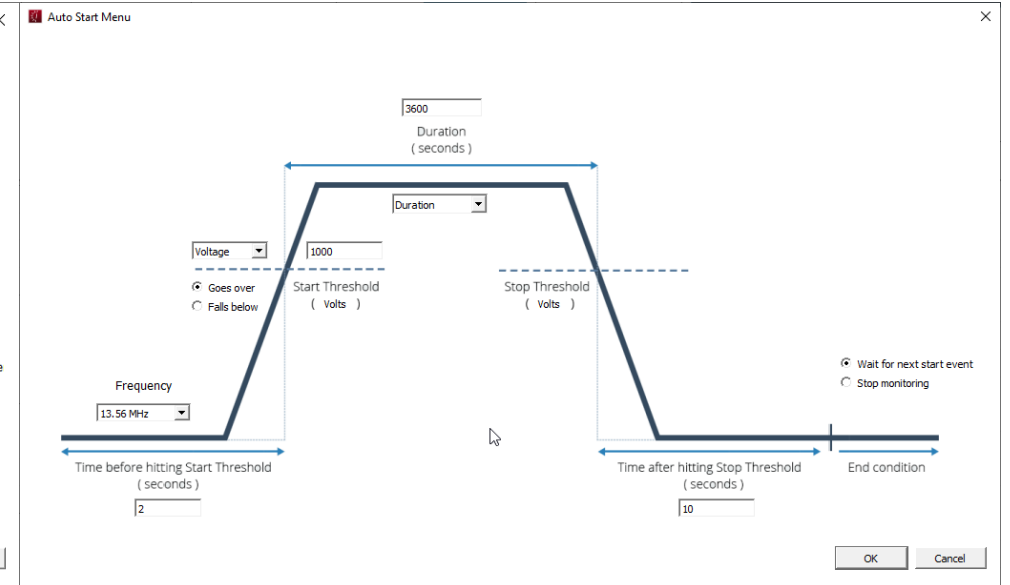
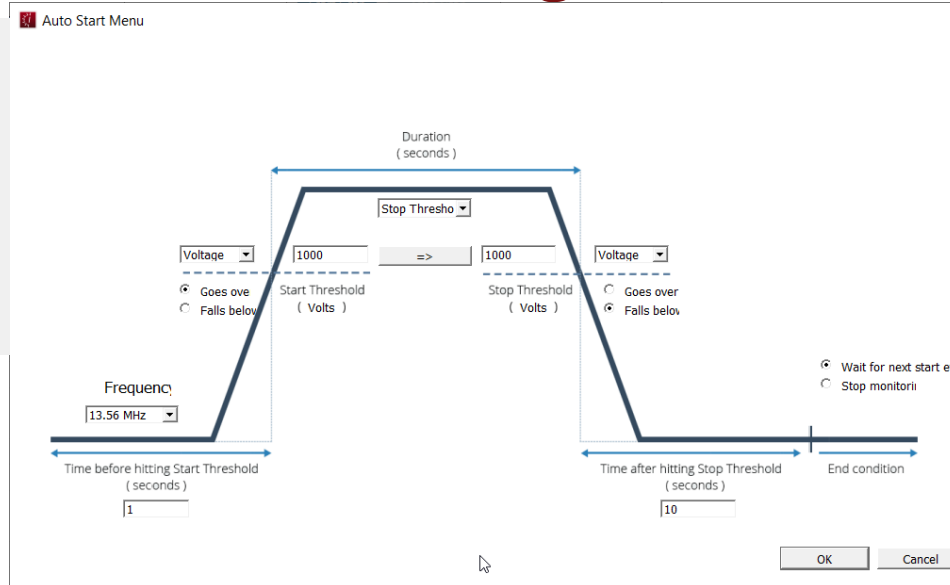
Start Scan Stop Scan

Autostart

Wafer Lot

Wafer Number

Save File Autosave



For continuous (24/7) monitoring of a chamber the 'Autostart' feature should be used. This continuously monitors the chosen Frequency's trigger (Voltage, Current or Power) until the Threshold value is reached.

All parameters are then monitored until either the signal falls below the second threshold value or for a fixed period of time depending on if 'Stop Threshold' or 'Duration' is selected. 'Duration' should be selected if the process is going to more than several hours.

The software then saves all the parameters and waits for the next event (trigger going above the threshold). If this occurs within the 'Time after hitting Stop Threshold' then it will continue monitoring and save them as one file. This is to allow for multi-step processes or for plasma fluctuations that cause the trigger to change dramatically.



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