

Product	SMP3-Streamer Option
Description	V.1.6 New Features
Date	22 March 2023

## **SMP3-STREAMER OPTION v.1.6 NEW FEATURES**

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## 1. INITIAL COMMENTS

Our new SMP3-Streamer Option is designed to perform testing for human exposure according to automotive standards.

This system is according to GB T/37130 Standards and also according to other standards including OEM car manufacturers worldwide.

The main benefits of this system remains intact:

- Simultaneous time domain and frequency domain measurements
- Real time results with no postprocessing required
- Selectable and independent limits for time and frequency measurements
- Multiple probes in parallel capability, with real time results on screen
- Manual or specific test time defined by the operator
- Easy export to excel
- Firmware & Software updates with new capabilities at no cost.

The software included with this option, SMP3-Streamer, is in constant evolution following comments from our customers.

This document shows some of the improvements included in version 1.6:

- Time domain graph
- FFT graph in absolute value or % respect selected limit
- Combined time domain graph with field level and speed
- Define label for the measurement
- Improved data into excel report

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## 2. TIME DOMAIN GRAPH

Some of our customers expressed the interest in seeing the time domain graph and not only the results.

New version 1.6 allows the customer to show time domain graph or not through a configuration box.

This graph is shown in % with respect to the limit selected for the time domain measurements.

Total values are still shown on top of the screen for real time results.

Next image shows the frequency domain and also the time domain graphs shown simultaneously.

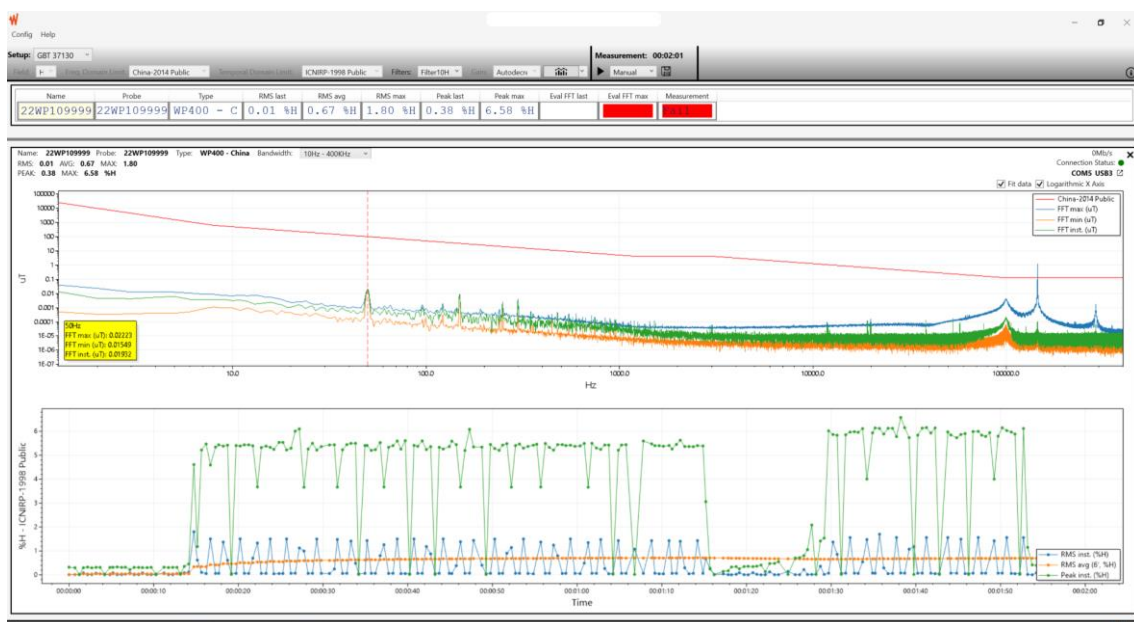


Image #1a: FFT and Time domain graphs simultaneous with FFT fail result.

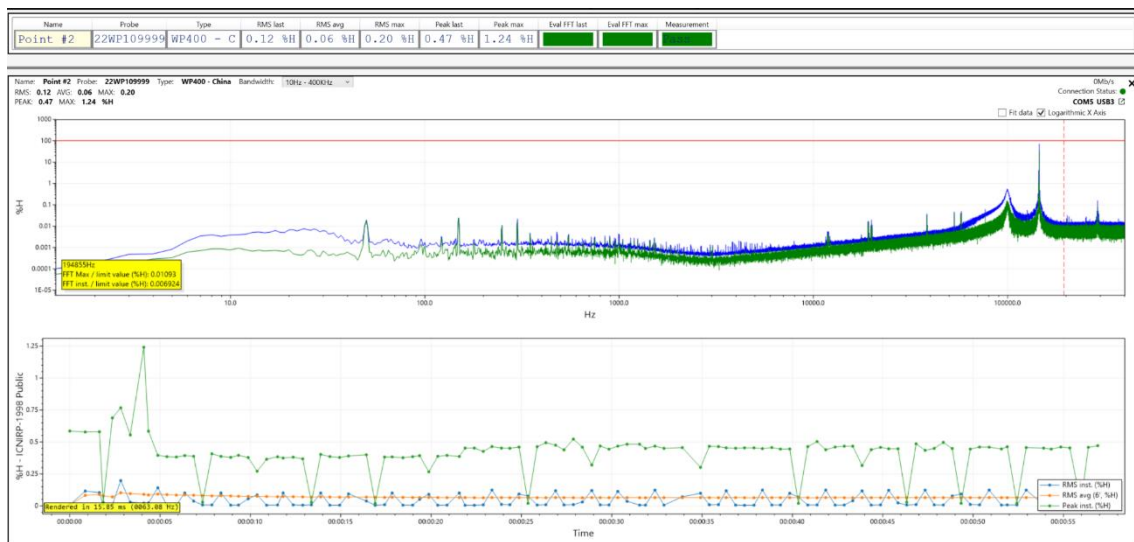


Image #1b: FFT and Time domain graphs simultaneous with PASS result.

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### 3. FFT GRAPH in % RESPECT TO LIMIT

Also configurable, the customer can change the FFT graph (frequency domain) from real value graph to % respect to the limit.

With the % graph, you can easily see at each frequency the measured values directly compared with the selected limit.

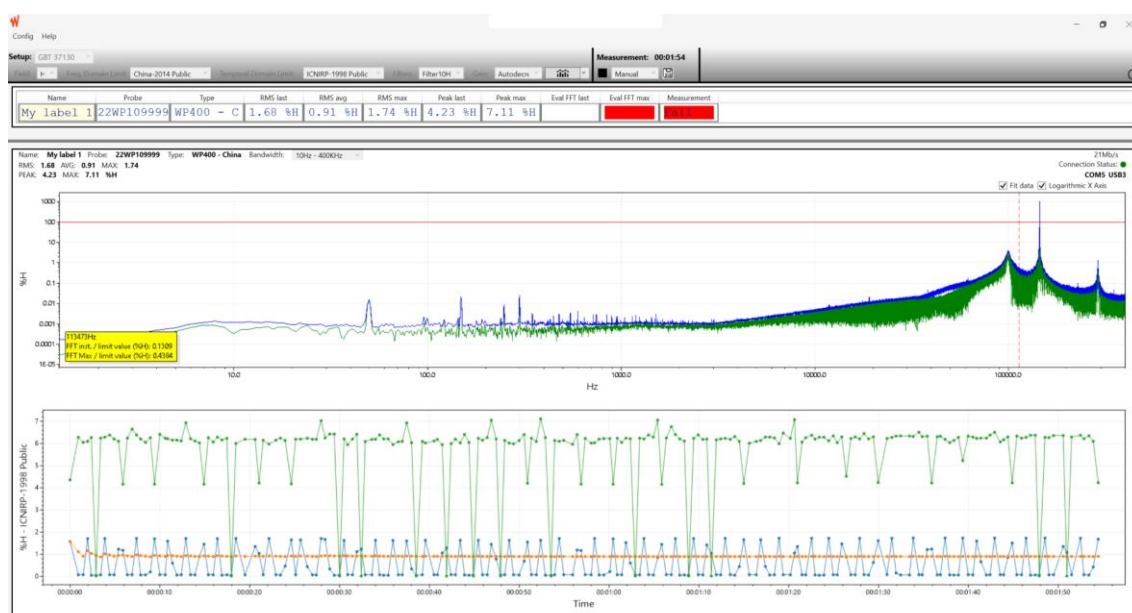


Image #2: FFT graph in % respect to the selected limit.

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#### 4. COMBINED TIME DOMAIN SPEED + FIELD LEVEL GRAPH

Another new feature is adding the speed value (KM/h) in combination with the field measurements. This graph is shown in the time domain graph and it is only available if the SMP3 meter has the GPS option included and for outdoor measurements where there is GPS signal.

If GPS option is not included or there is no GPS signal (indoor testing), this graph will not show correct values.

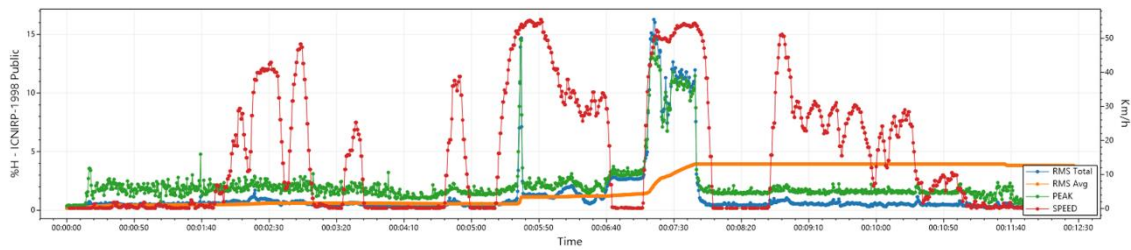


Image #3: Combined Time domain graph with field level (%) + speed (Km/h)

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## 5. LABEL GRAPHS

During measurements now it is possible to modify the measurement label. This will allow the customer to label the spot measured for easier postprocessing process.

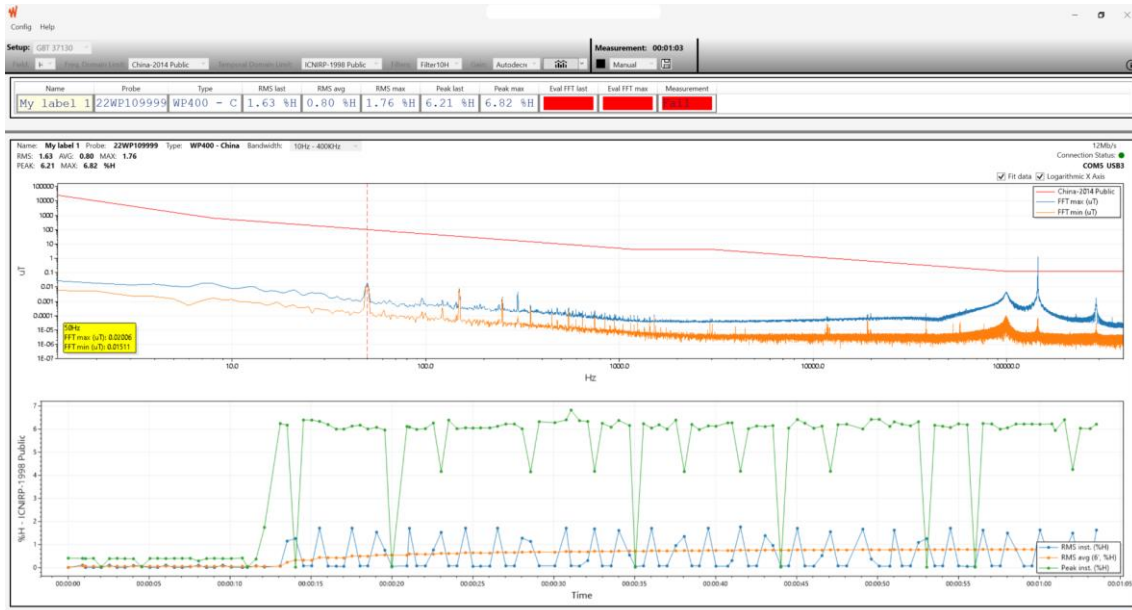


Image #4: Modified measurement label to “My Label 1”.

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## 6. INDEPENDENT ZOOM VISUALIZATION

The version 1.6 allows independent analysis of FFT and Time domain graphs. Zoom capability is independent from one graph to the other.

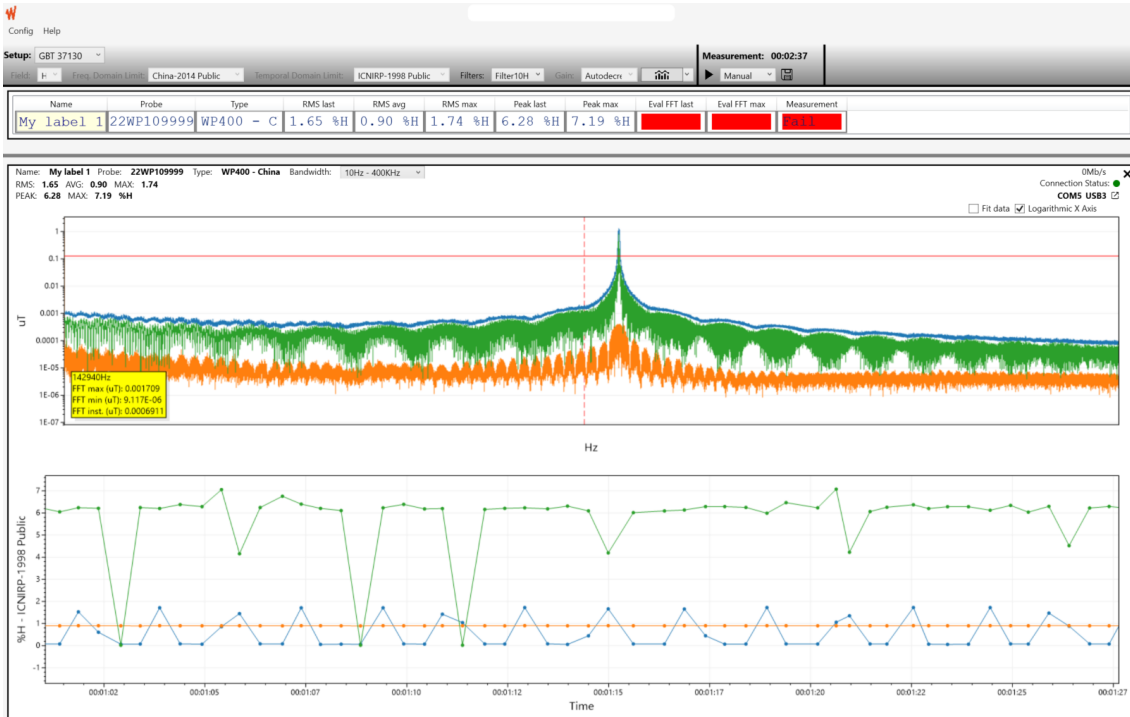


Image #5: Independent zoom for FFT and Time Domain graphs

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## 7. NEW INFORMATION IN REPORTS

With the new features, we have also added additional information into the excel report generated for better and more complete information about the measurements.

### 7.1. Summary Tab

Summary tab remains the same, showing a summary of the measurements for a single SMP3 meter or multiple SMP3 meters in parallel.

This tab shows the result for the performed measurement, indicating if measurements are below limits (green background) or above limits (red background) for time domain and frequency domain.

This also shows the final result; Pass or Fail.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	START DATE	2023-03-23 16:50:38														
2	FINISH DATE	2023-03-23 16:53:15														
3																
4	NAME	PROBE	PROBE TYPE	HP FILTER	GAIN MODE		TIME DOMAIN LIMIT	RMS AVG	RMS MAX	PEAK MAX	UNITS		FREQ. DOMAIN LIMIT	EVAL FFT MAX	TEST RESULT	
5	My label 1	22WP109999	WP400 - China	10Hz	AutoDecrease		ICNIRP_1998_GENERALPUBLIC	0.904989004	1.73577404	7.194712162	%H		CHINA_2014_PUBLIC	Fail	Fail	
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7																
8																
9																
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11																
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Image #6: Report summary tab example



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## 7.2. Time domain tab

Time domain tab now includes the time domain graph automatically.

Shows total results and all measurement values during the test time used.

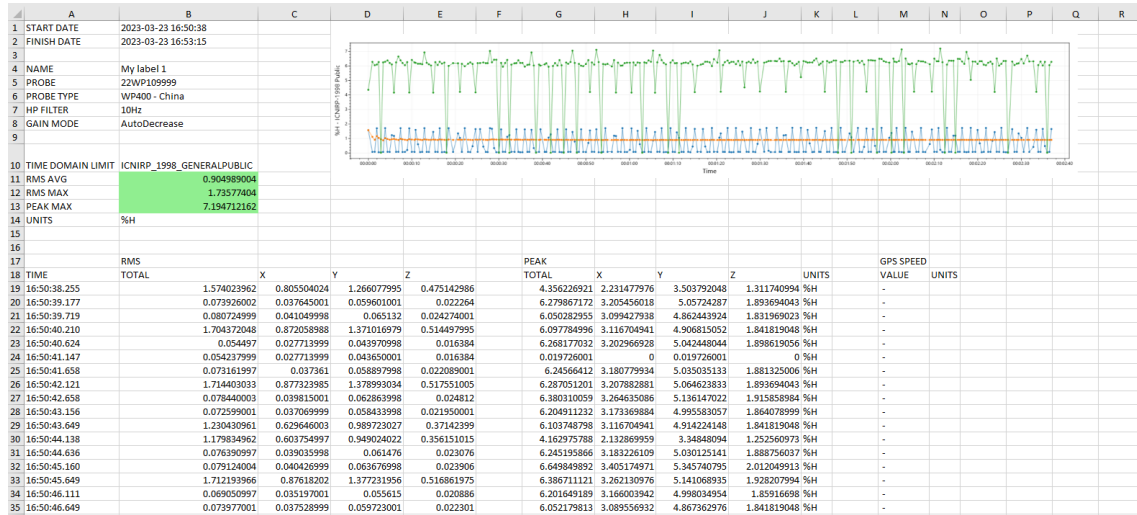


Image #7: Report Time Domain tab example

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### 7.3. Frequency domain tab

The frequency domain tab includes more information useful for the operator.

It includes information about worst case measurement values:

- **Max Value:** Higher measured level, its frequency and the limit value at this frequency.
- **Delta Max Total:** Shows the worse measured level compared with the limit, at what frequency the measurement is closer to the limit value or worse value above the limit. Specifies the difference with respect to the limit level at this frequency.
- **Max Total %:** Shows worse case in % respect to the limit, its frequency and the limit value at this frequency.

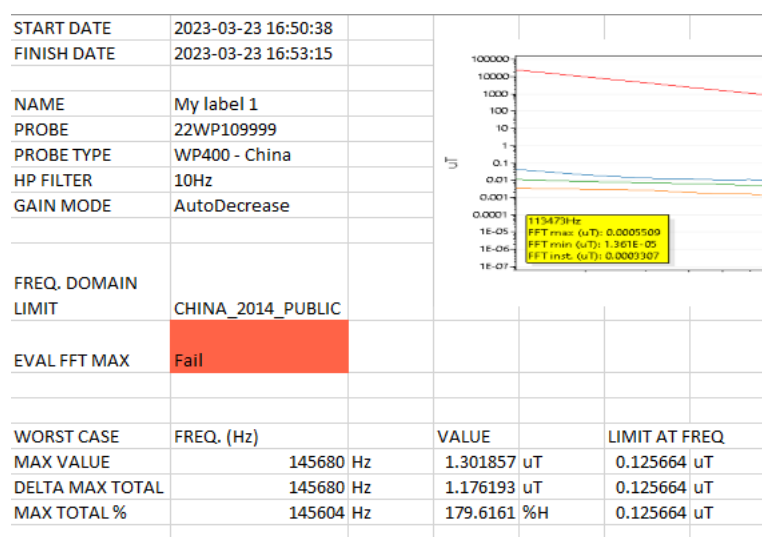


Image #8: Report Frequency Domain worse measurements info

The same tab shows all levels from the FFT graph, including the limit value at each frequency, the difference respect to the limit in absolute value (uT) and the % respect to the limit.

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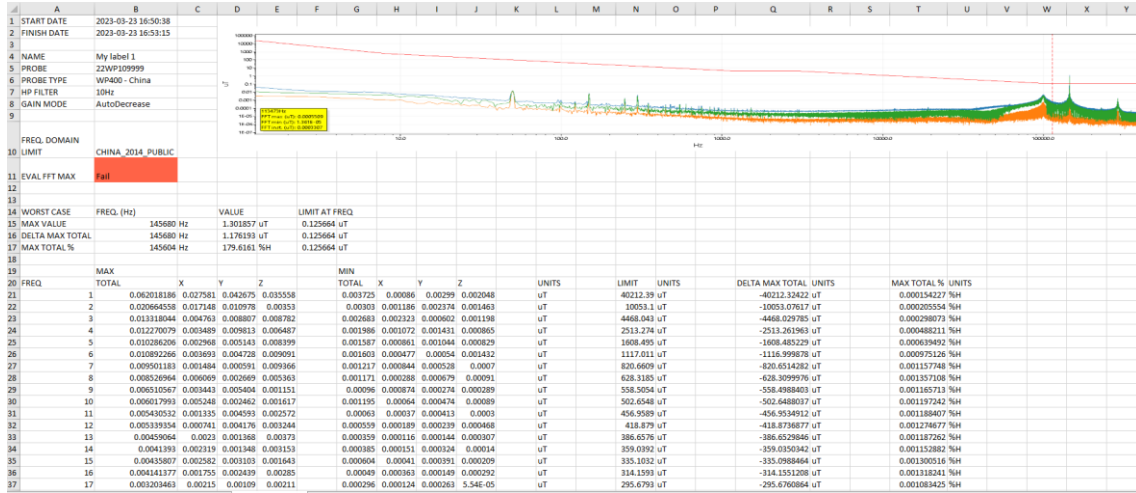


Image #9: Report Frequency Domain tab example