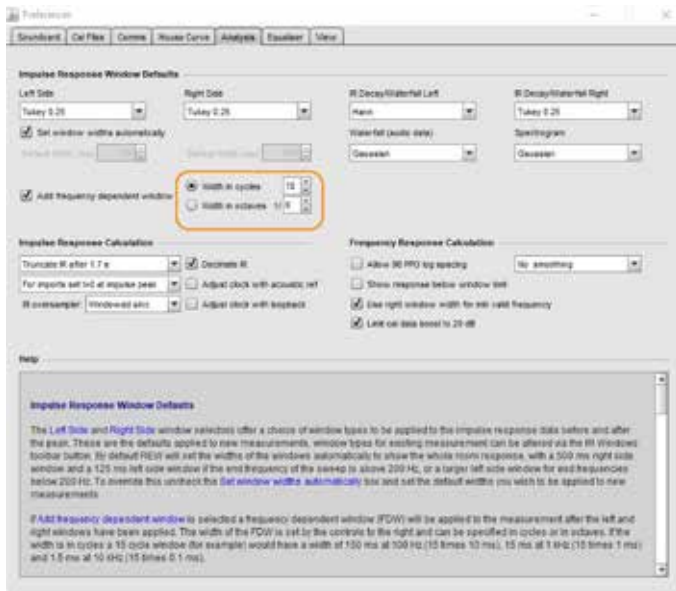# REW average measurements and impulse correction rePhase

Tutorial is meant to be use for speakers/ drivers integration in to your listening area. Taking measurements point mikrofon`s tip vertically ,towards sealing and use 90° calibration file for your mikrofon, resulting much better measuring results for REW.
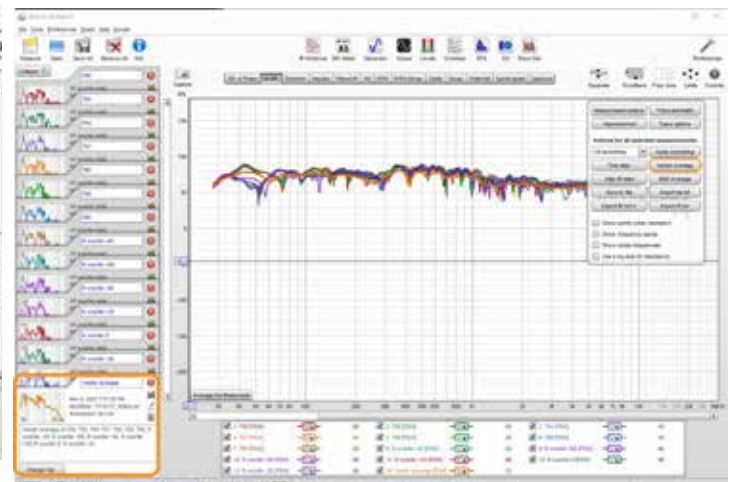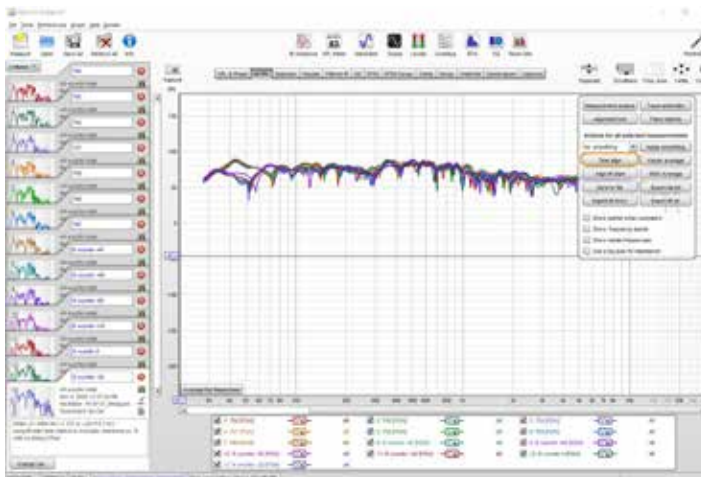
1.Preferences of REW.

1/6th octave smoothing and 15 cycles FDW to generate the correction filters and avoid 'micro-managing' the amplitude and phase corrections.
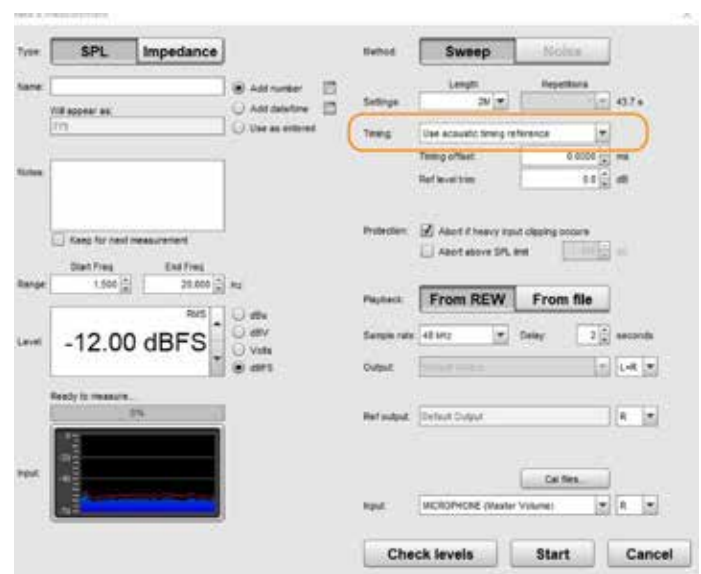
Timing reference activated.

2.Averaged measurements.

Take several meaningful measurements representing your listening area . Import all of them in to the REW .
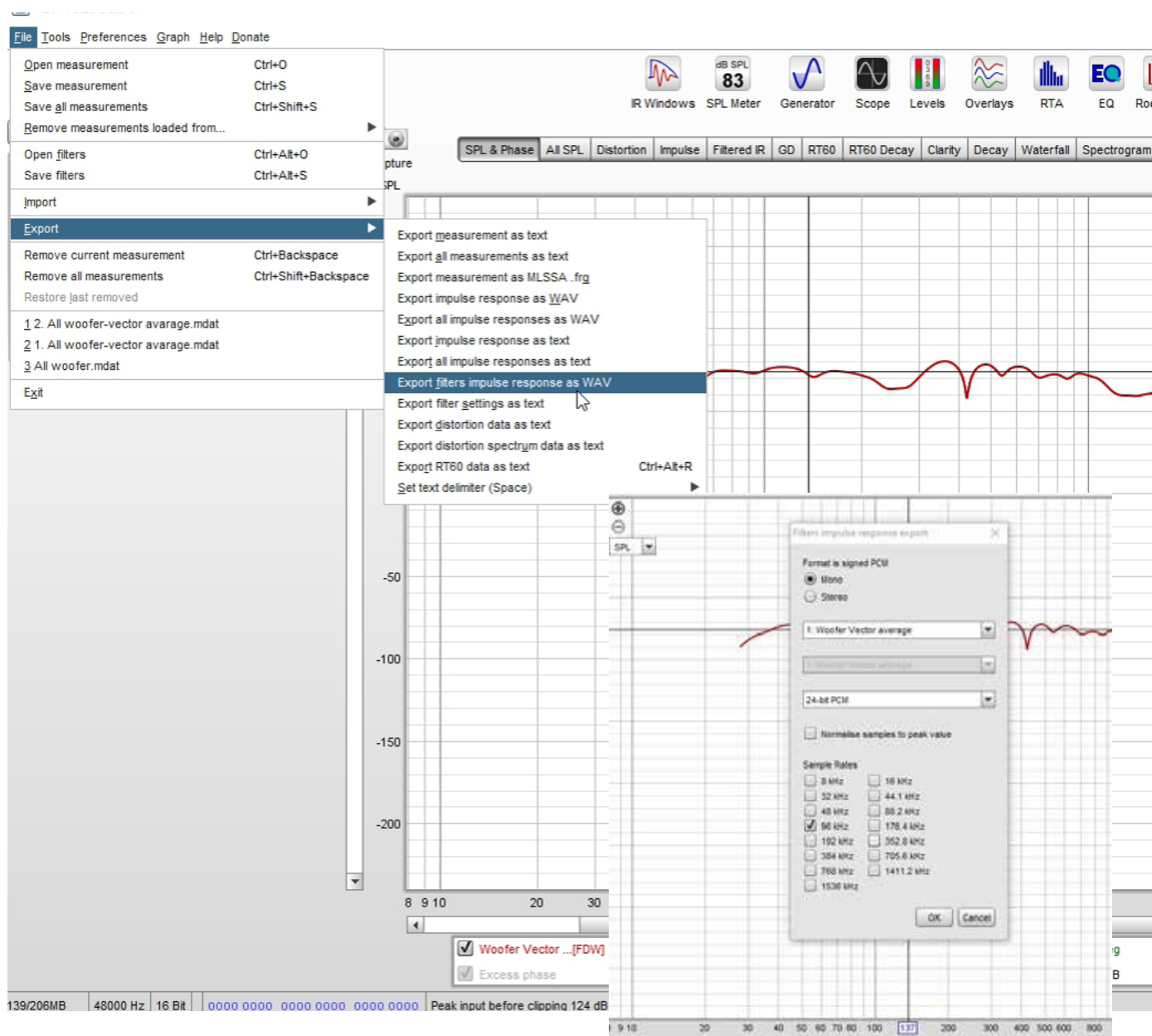"All SPL" -> "Control" -> "Time Align"-> "Vector average".

3.PEQ generated filter

We have ended up with REW generated " Vector average " measurement. Next is to make PEQ filter for " Vector average " measurement. At this point you would like to save PEQ filter to be used together with FIR correction in your DSP. Or exported PEQ filter before as an xml for RePhase to create a combined filter -step **6. Combined filter**
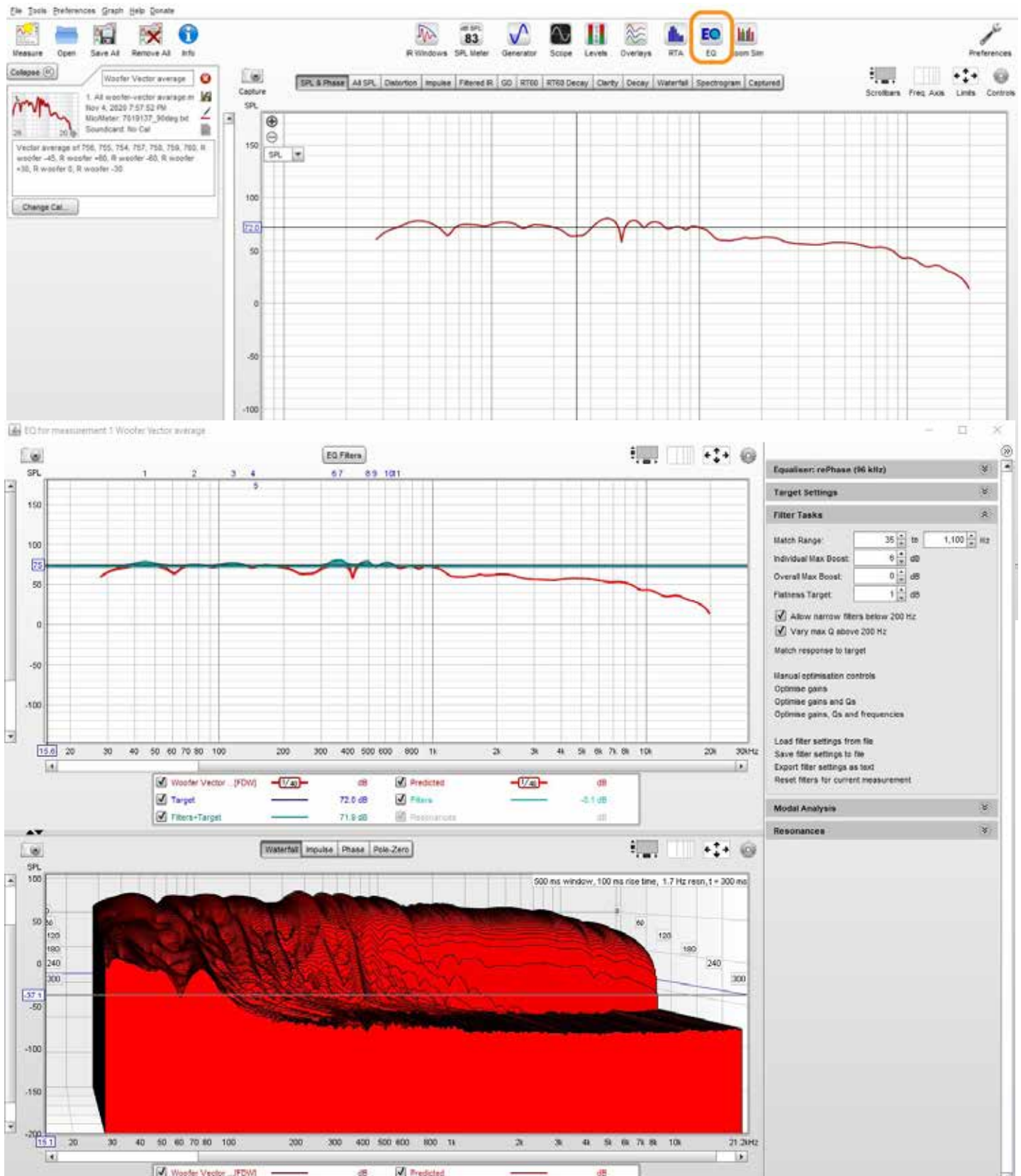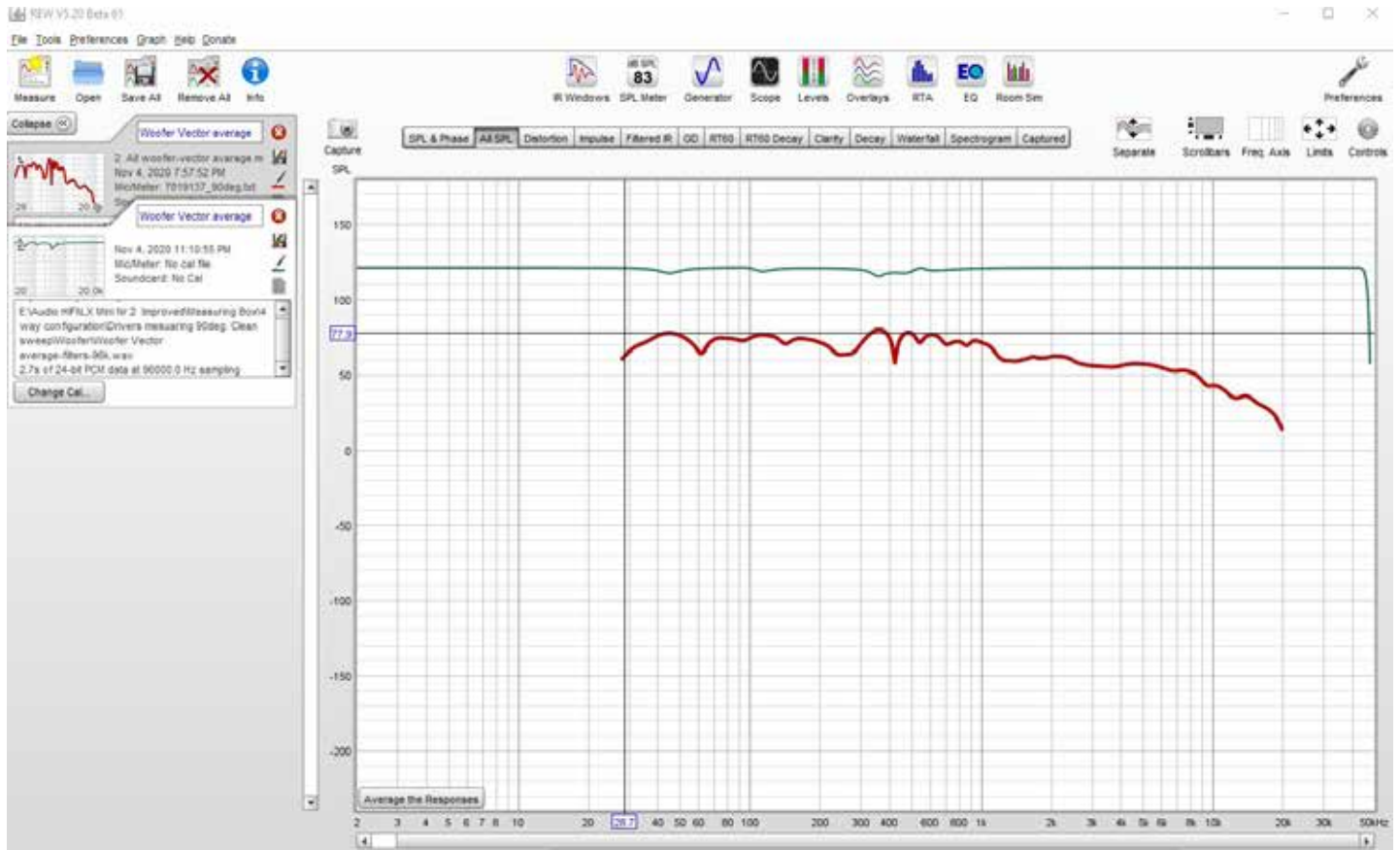
File-> Export -> Export filters impulse response as a wav file and save it .

Import wav file. Main REW window " All SPL". Controls--> File--> Import --> Import impulse response.
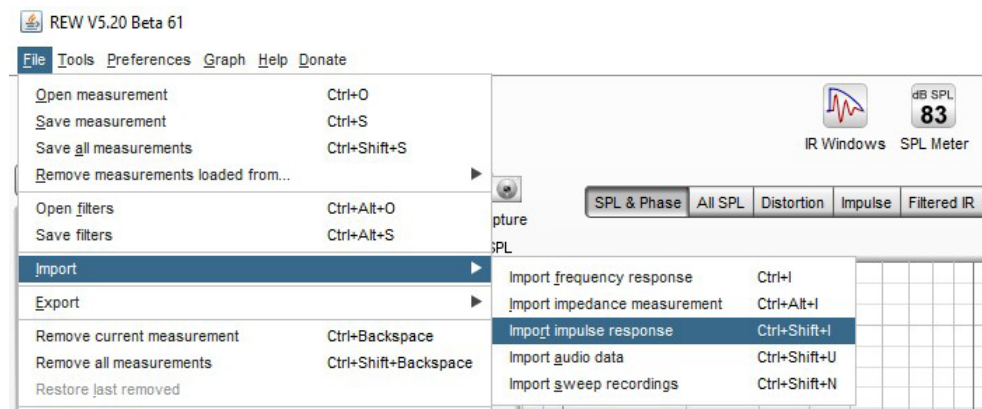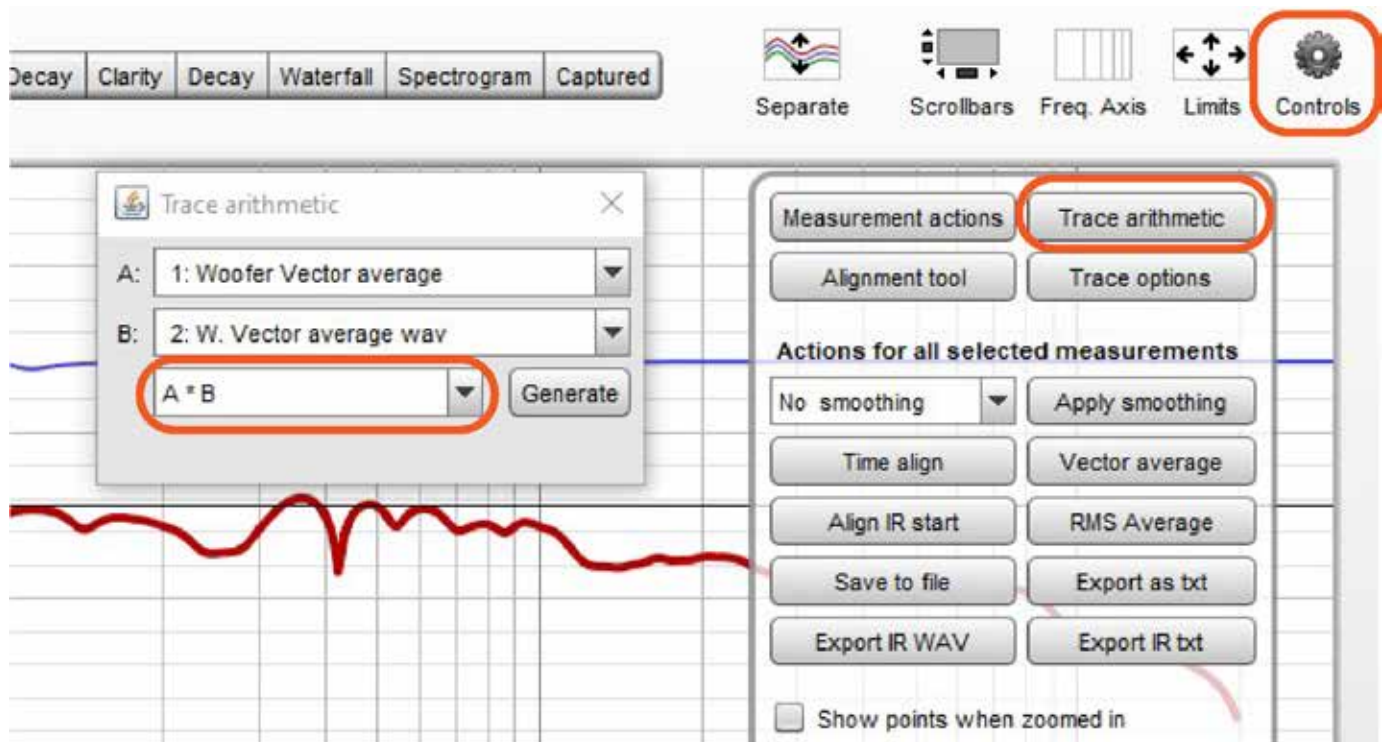
Result is " Vector average " and " Vector average .wav " measurements with in a main REW window "All SPS" tab activated.


4.Trace Arithmetic.

Controls -> Trace arithmetic -> Choose both measurements in windows A and B -> Choose A*B -> Generate

Controls -> Measurement actions -> A times B -> *then enter a negative* "SPL offset" *to match* "*Vector average*" *value* -> *when you are happy press* "Add offset to data".
The ultimate level does not matter for this only relative level so use the same amount for each channel. If the level not be reduced the measurement will end up at 150dB or more .
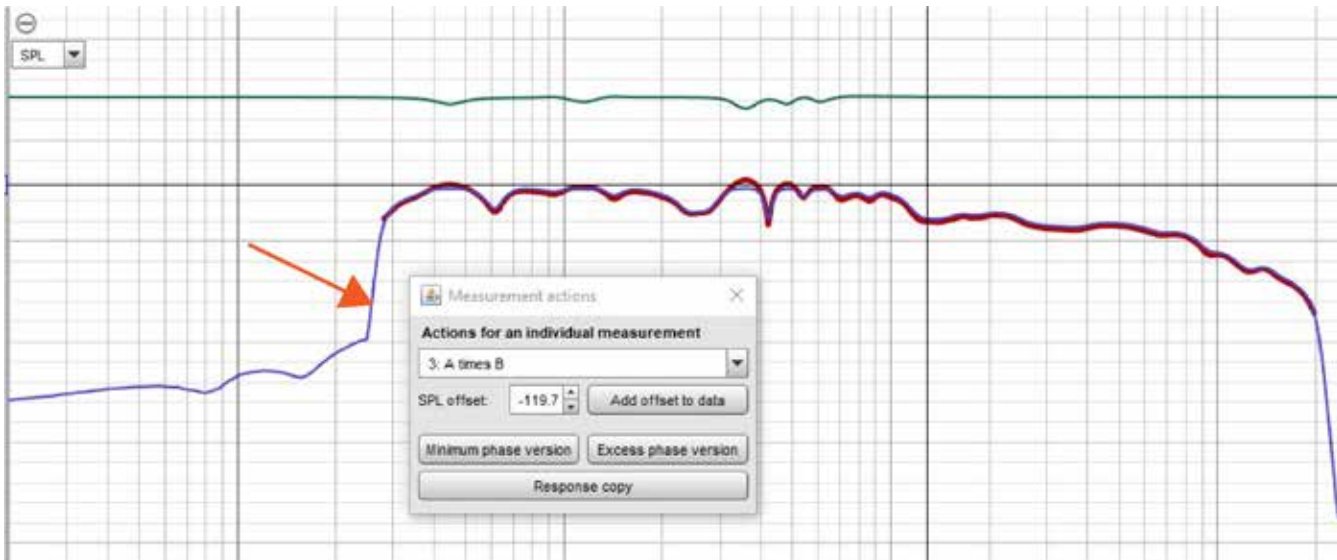
When press " Excess phase version". That will result to "A times B-EP" measurement .
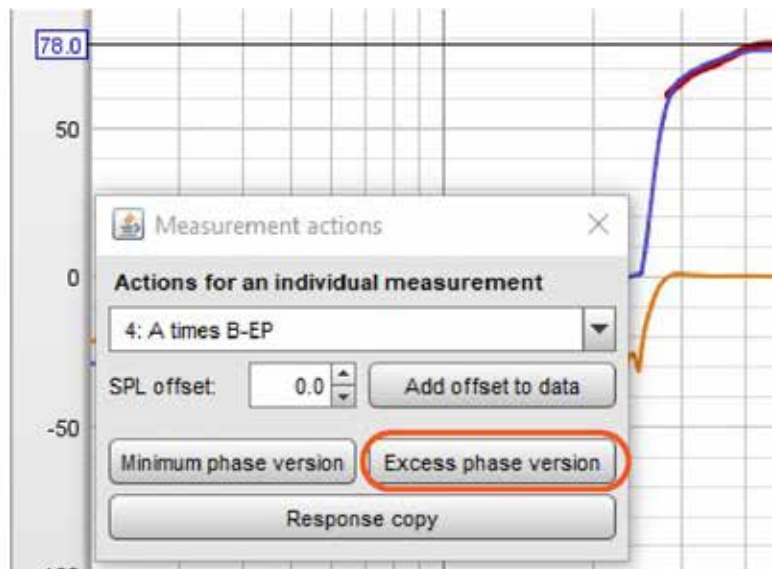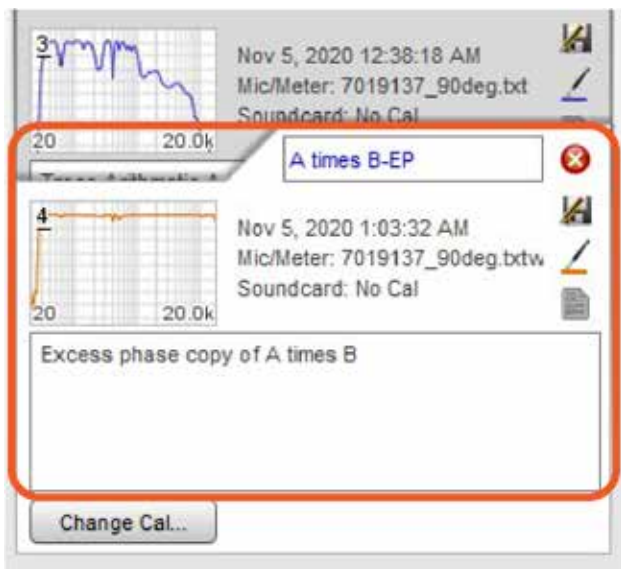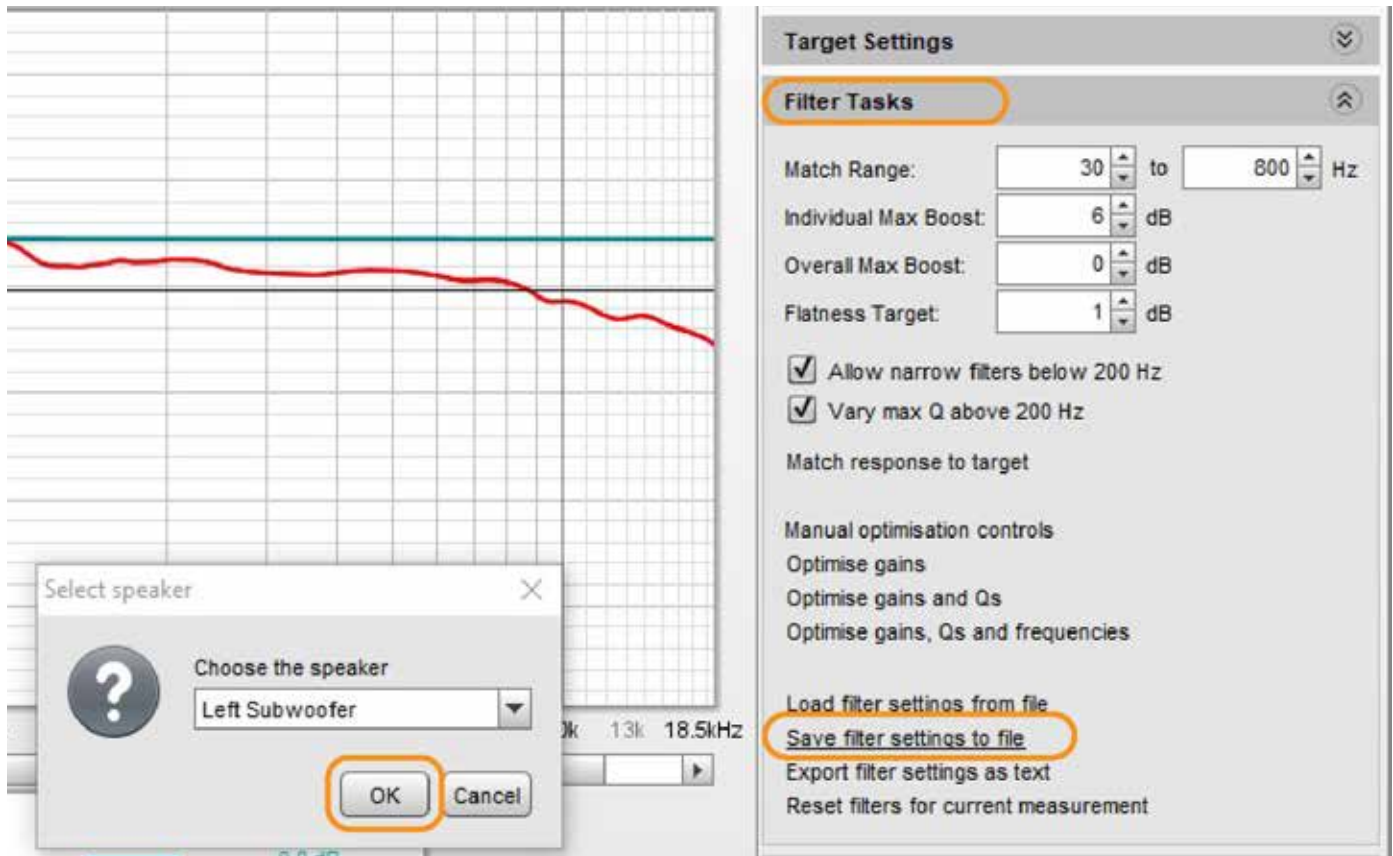

5.Finalization

Main REW window " All SPL".File>Export>Export measurement as text.
Import saved txt file to rePhase. Then from rePhase generate *.bin file be used in MiniDsp FIR filter.

6. Combined filter

Everything the same as in the first part of step **"3.PEQ generated filter".**
"Vector average " measurement. Next is to make PEQ filter for " Vector average ". Choose "Equalizer Rephase"-Filter Tasks-Save filter settings to file. Filtar will be saved as *.xml file

Open Rephase import *.txt file made in step **5.Finalization.** Then : Paragraphic Gain EQ -> Tools-> Import REW filter settings and import saved *.xml file
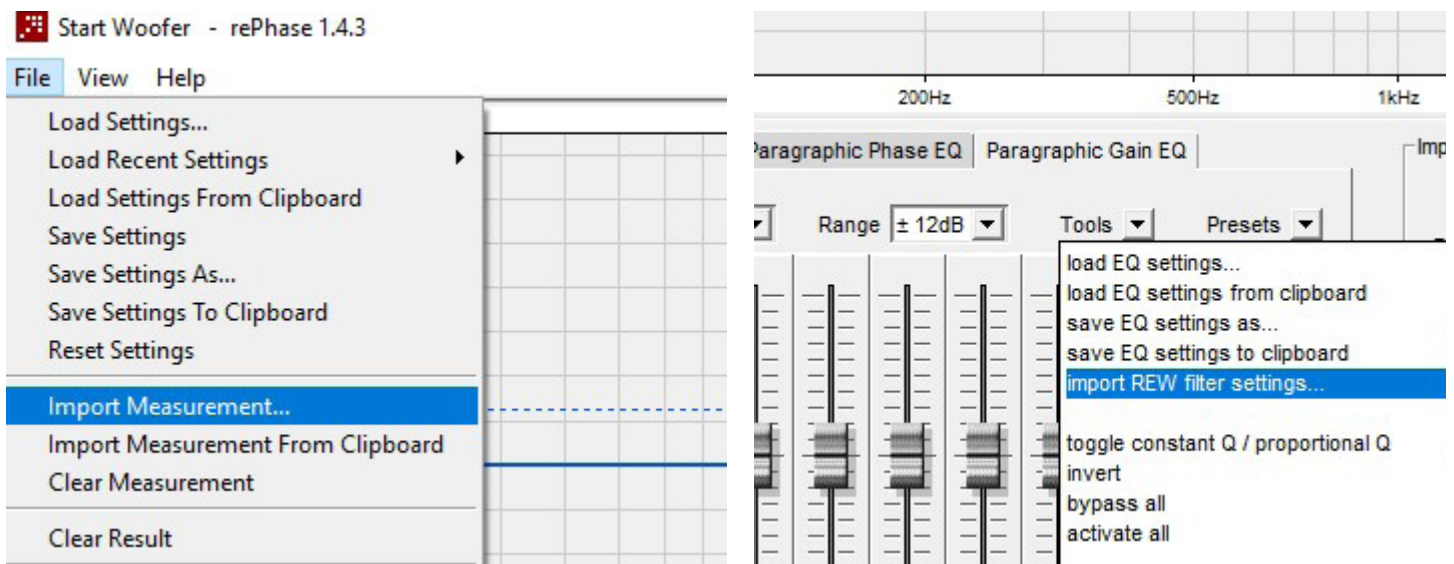
Finally "Generated" file in RePhase for your device.