# Acourate-Option PRC preringing compensation

The amount of ohase correction is defined in macro 4 by the parameter 'Excessphase Window'. Dependent on a given situation by room and speakers these parameters may be difficult to find. Sometimes there is nearly no parameter setting that avoids the occurence of preringing in the step response.


Several iterations with macro4 and testconvolution are required but still the result is not satisfying. In most cases only smaller values and thus less phase correction will help. The behaviour is not predictable, it is changing from room to room and from speaker to speaker.

The PRC option helps to improve the behaviour. The test convolution also displays the group delay. The chart displays additional input and output vectors (vecinL, vecinR, vecoutL, vecoutR). The input vectors show the situation before the preringing compensation. Typically shown are bell shaped peaks with different frequencies, height and width causing the preringing.
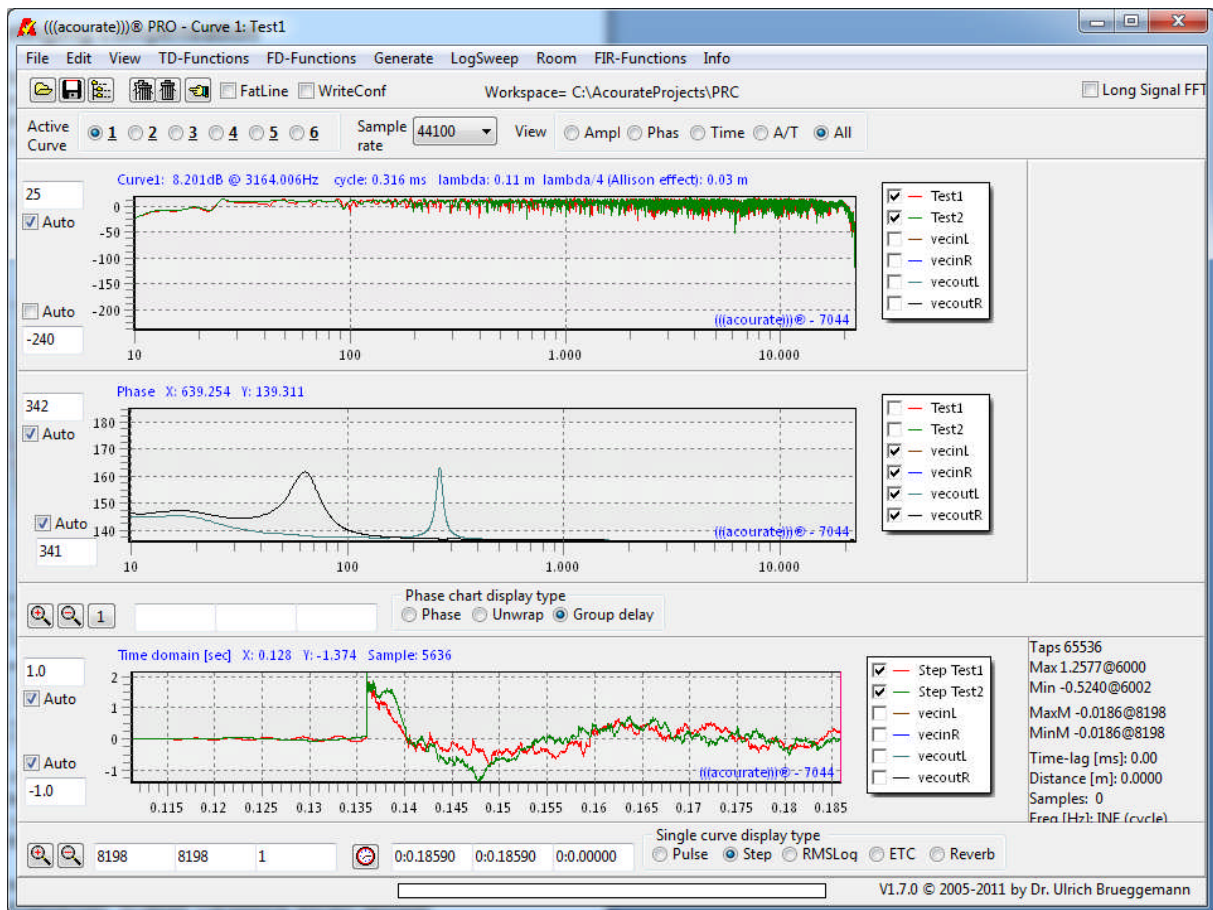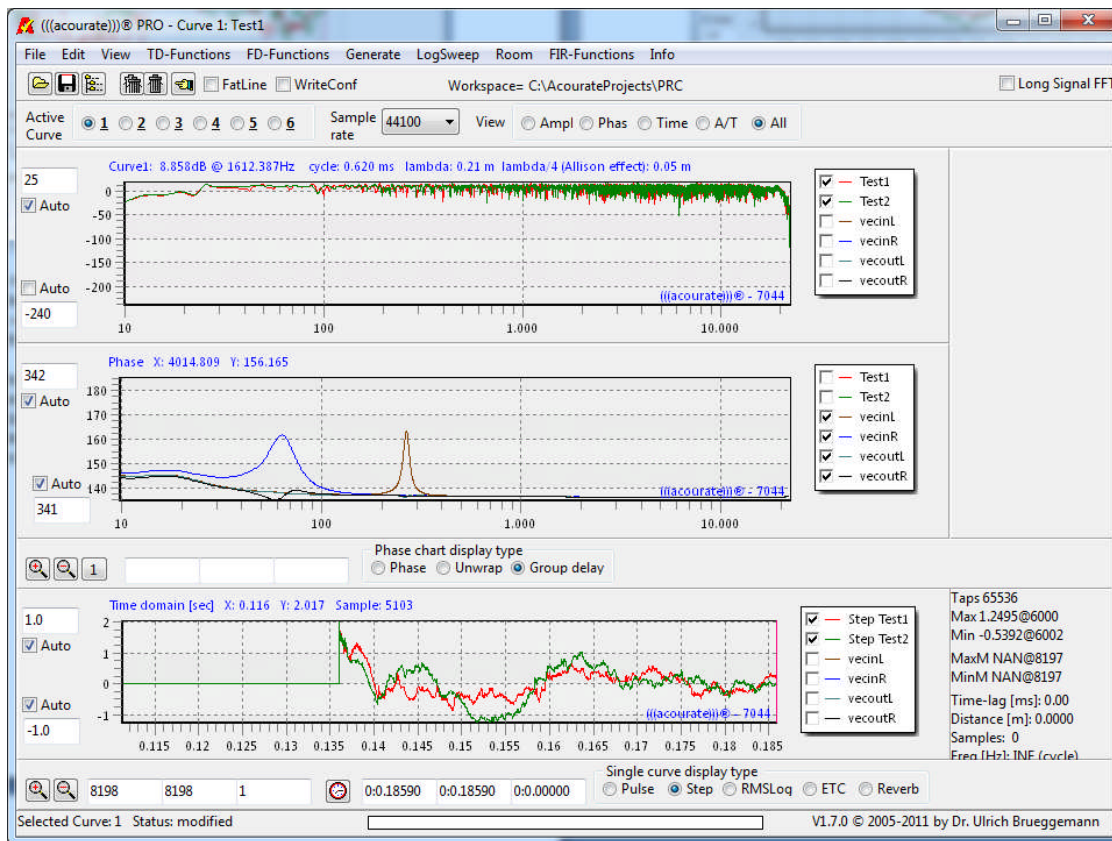
The example shows a single peak for left and right channel, left side with a higher frequency. The step response confirms these peaks.

Now with the option PRC in Acourate the number of peaks for each channel can be entered in macro4.
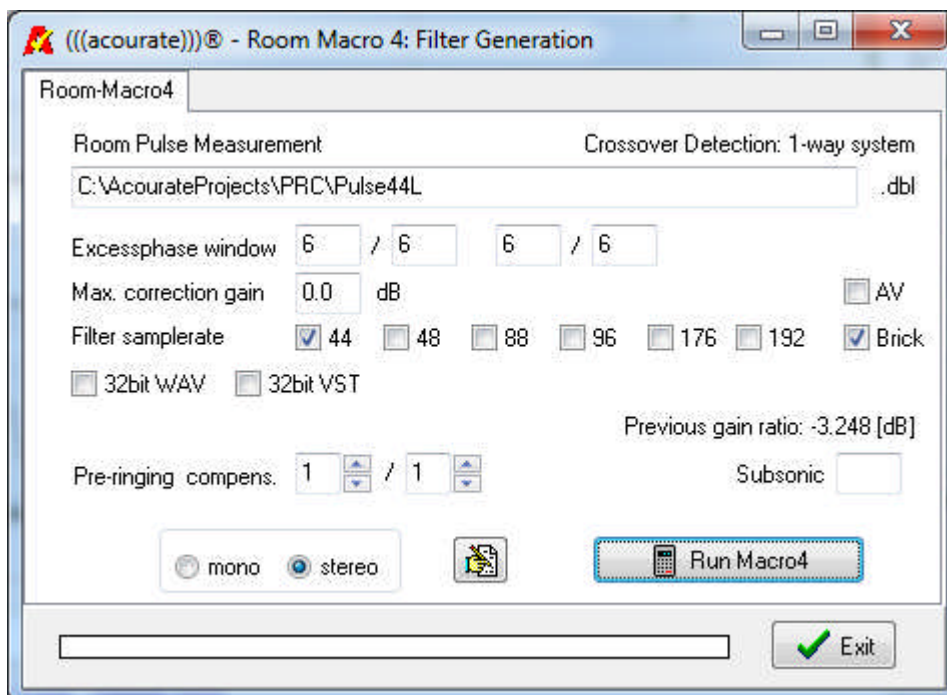
The result is shown after macro4 calculation and test convolution:

Step response detail:

Clearly the preringing behaviour has improved.

Furthermore it has been found that a subsonic filter specified in the target curve designer hs some negative effect on the PRC result. The function is still implemented to view the target curve including the subsonic filter during the target design. Please switch off the subsonic filter before saving the target !!

The desired subsonic frequency kann now be entered in macro4:
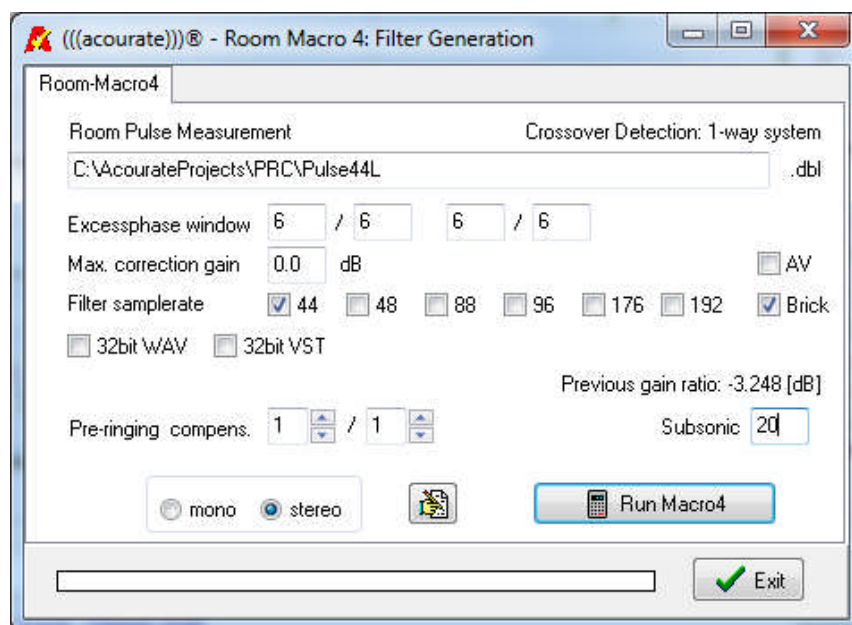
Result:

Final remark:
Sometimes less is more. It is recommended, not to define a very high parameter for the excessphase window in macro4 and then to suppress the peaks by PRC.
But anyway at the end the listening result is the only valid criteria !!