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Technical support advisory 050606a

Calculating total latency through the PDC

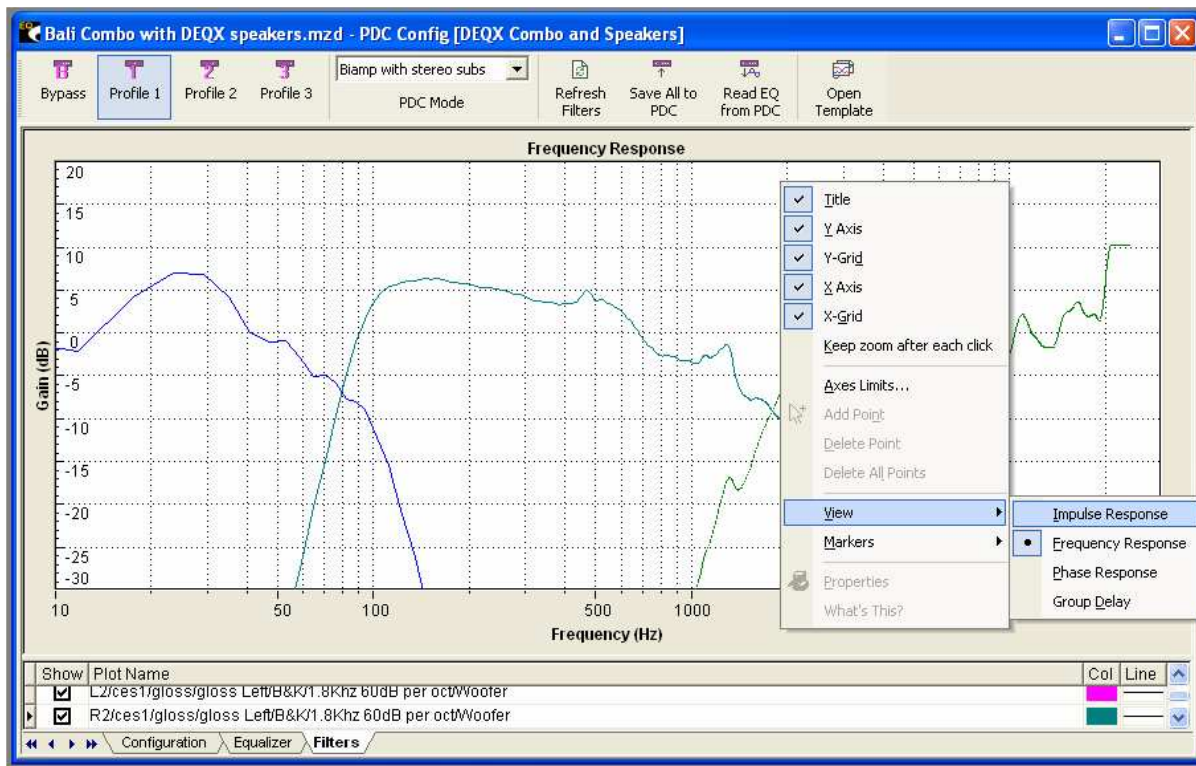
This document is to assist users in calculating the total delay through the PDC2.6.

Requirements:-

- Version 2.0 Calibration software

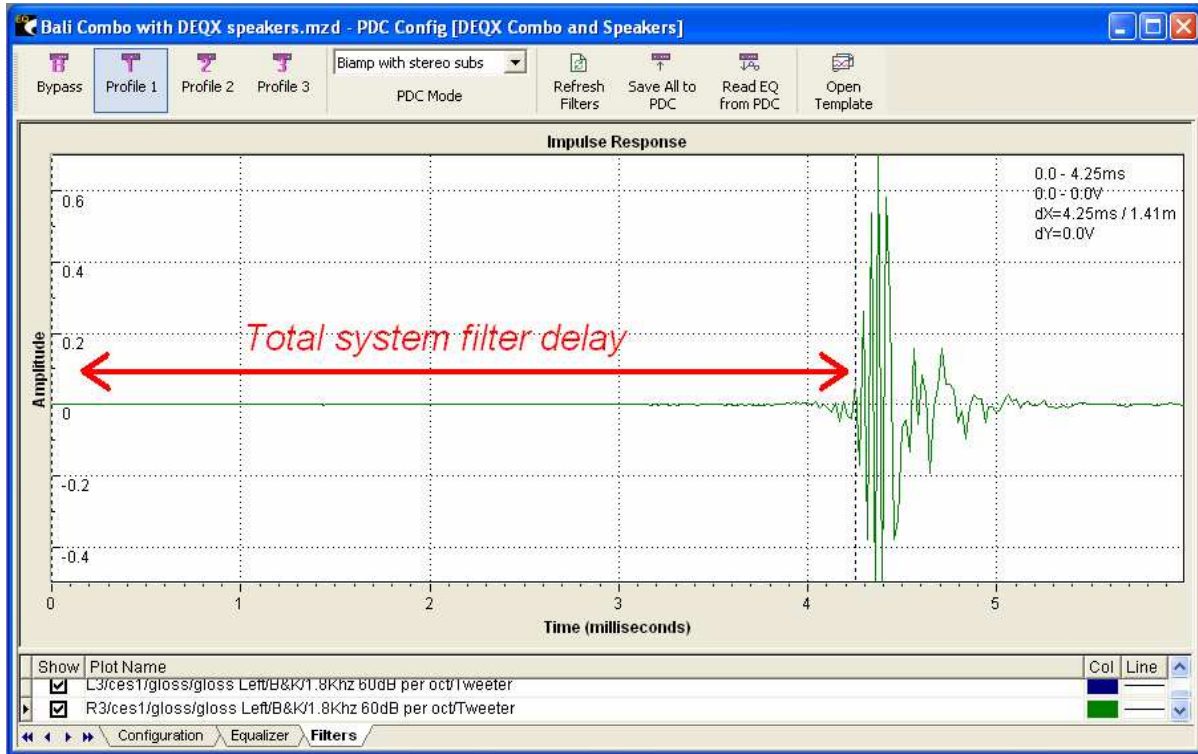
Procedure:-

- 1) Open the project you wish to calculate the delay for.
- 2) Click 'Configure' and open or create the configuration you wish to find the delay for.
(If creating a new config or modifying a config, be sure to press 'Refresh Filters' afterwards.)
- 3) Click on the 'Filters' tab.
- 4) Right click on the graph and select 'View', and then 'Impulse Response'.



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- 5) Right click again and add vertical markers. Put the left marker at 0ms and the right at the beginning of the impulse. The total system delay will appear at the top right of the window.



- 6) Use the following table to look up the correct I/O latency to suit your system and add it to the filter delay.

<u>Conversion</u>	<u>Conditions</u>	<u>Value</u>	<u>Unit</u>
D-D	48 kHz	2.4	ms
D-D	44.1 kHz	2.6	ms
A-D	48 kHz	3.2	ms
D-A	48 kHz	3.4	ms
D-A	44.1 kHz	3.7	ms
A-A	48 kHz	4.2	ms

- 7) The result is the total signal delay through the PDC.
 Example: - The delay from the above graph is 4.25ms. If using the PDCs digital inputs at a 44.1 kHz sample rate with analog outputs, the I/O propagation delay would be 3.7ms. This would be a total delay though the PDC of 7.95ms.