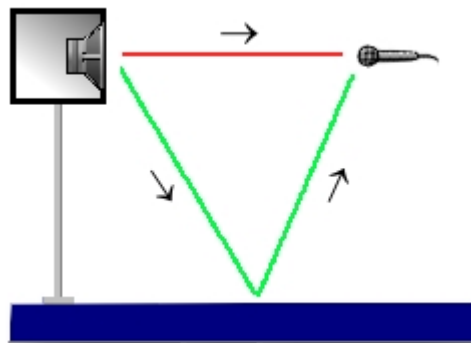


Sample Champion - Application note # 2

Examples of reflections on a surface.

When selecting the anechoical part of an Impulse Response, the reflected wave must be recognized and rejected from the analysis. The reflected impulses have the same shape of the anechoical wave, but have been "filtered" by the surface and have lower amplitudes.

In every case (and especially when reflected waves are very low), the localization of the first reflection must be confirmed with physical arguments:

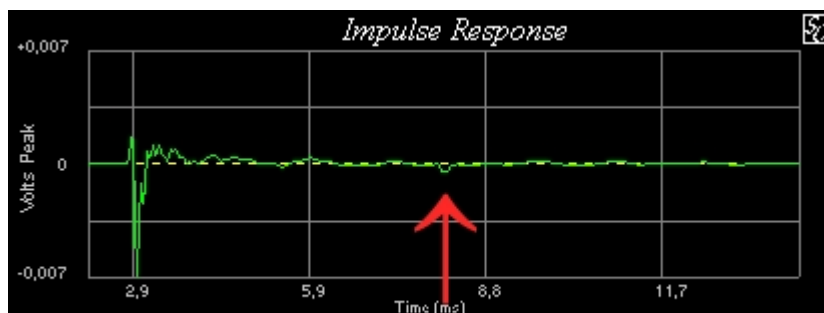


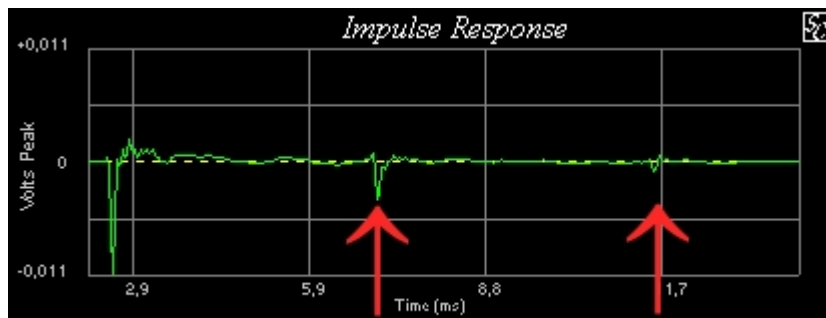
The time t between the "anechoical " impulse and the first reflection is:

$$t=(S2-S1)/c$$

where $S1$ is represented in the figure with the red path, $S2$ with the green path and c is the sound speed (with Sample Champion the exact value of c , depending from air temperature, can be read inside the measurement geometrical setup window).

● Here are 2 examples of reflections:





The first is a reflection against an absorbing surface, the second against a reflective material.

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