

Another type of low-frequency sound absorber is known as a <u>bass trap</u>, which utilizes the "lossy" <u>open-closed organ pipe</u> cavity-type resonance as its principle of operation. The bass trap has alternating layers of absorbent, porous materials (*e.g.* fiberglass insulation) and air to absorb frequencies which have ¹/₄-wavelengths equal to the depth of the bass trap, *i.e.* $D_{bt} = \lambda/4$. For a depth $D_{bt} = 1 m$, a bass trap absorbs frequencies $f_{bt} = v/\lambda = v/4D_{bt} = 343/4 \approx 86 Hz$. The construction of a typical bass trap is shown in the figure below:



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