



Acoustical Axis

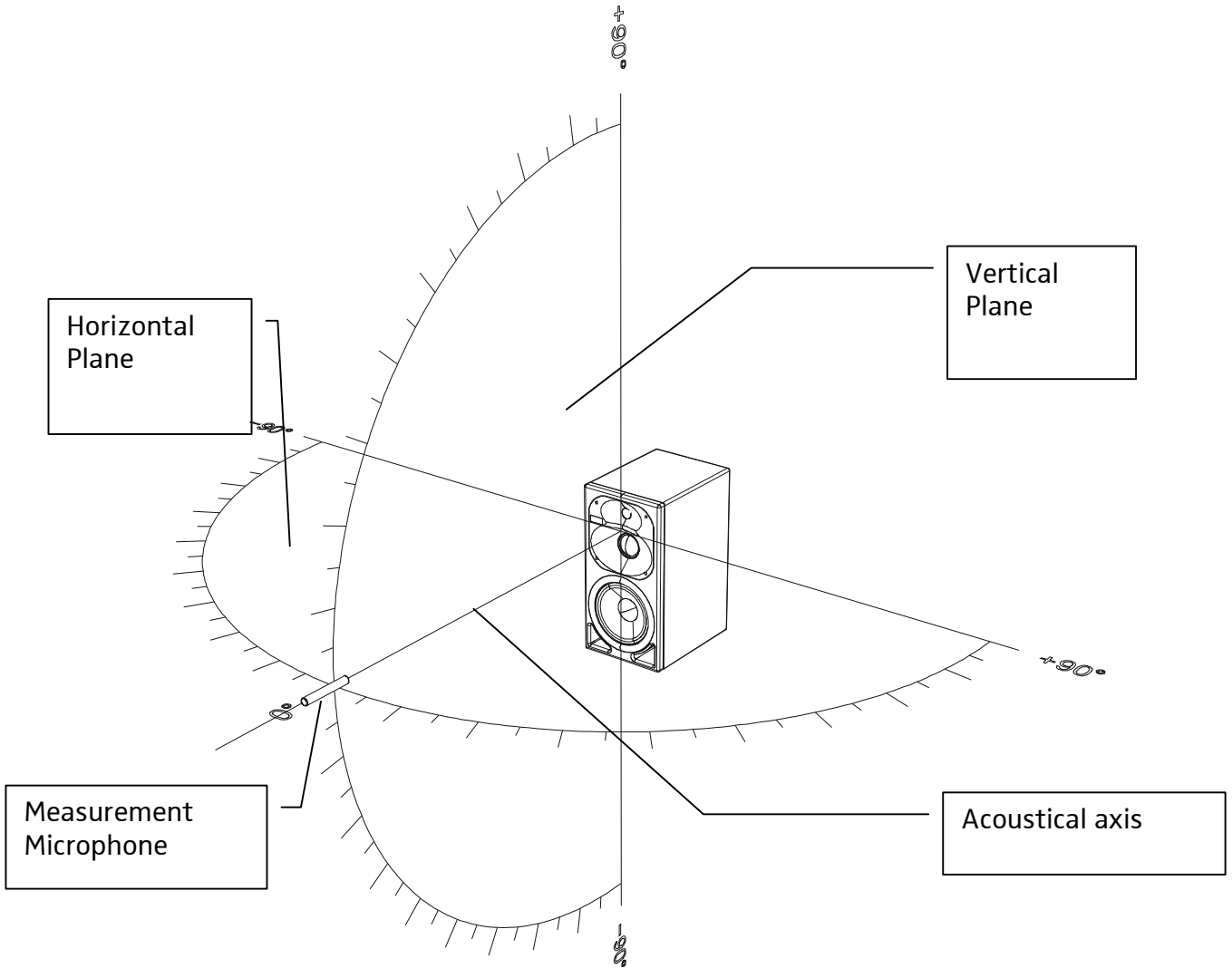
Studio Products

Acoustical Axis Definitions
Studio Products

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Introduction

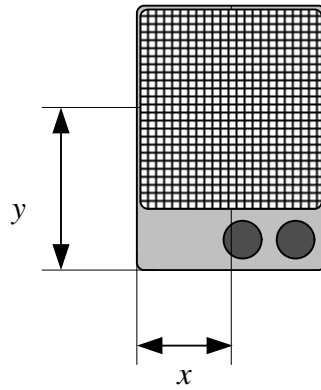
The acoustical axis is a line normal to the loudspeaker's front panel along which the microphone was placed when tuning the loudspeaker's crossover during design. Pointing the acoustical axis, in the horizontal and vertical planes, towards the listening position or centre of the listening area will give the best measured and perceived sound quality. Imperial dimensions are based on a conversion of the metric dimensions and are rounded to the nearest $\frac{1}{8}$ ".



Setup for measuring a loudspeaker's radiation pattern

One-way Systems

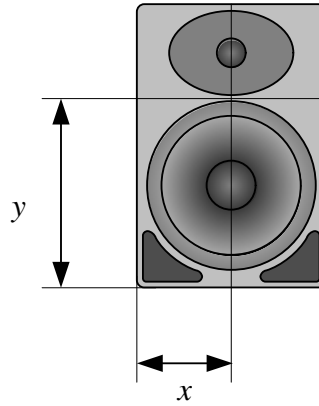
For one-way loudspeakers, the acoustical axis is located at the mid-point of the driver.



Product	x-dimension	y-dimension
M 52	6.0 cm ($2\frac{3}{8}$ "	10,0 cm ($3\frac{7}{8}$ "
M 52 D	6.0 cm ($2\frac{3}{8}$ "	10,0 cm ($3\frac{7}{8}$ "

Two-way Systems

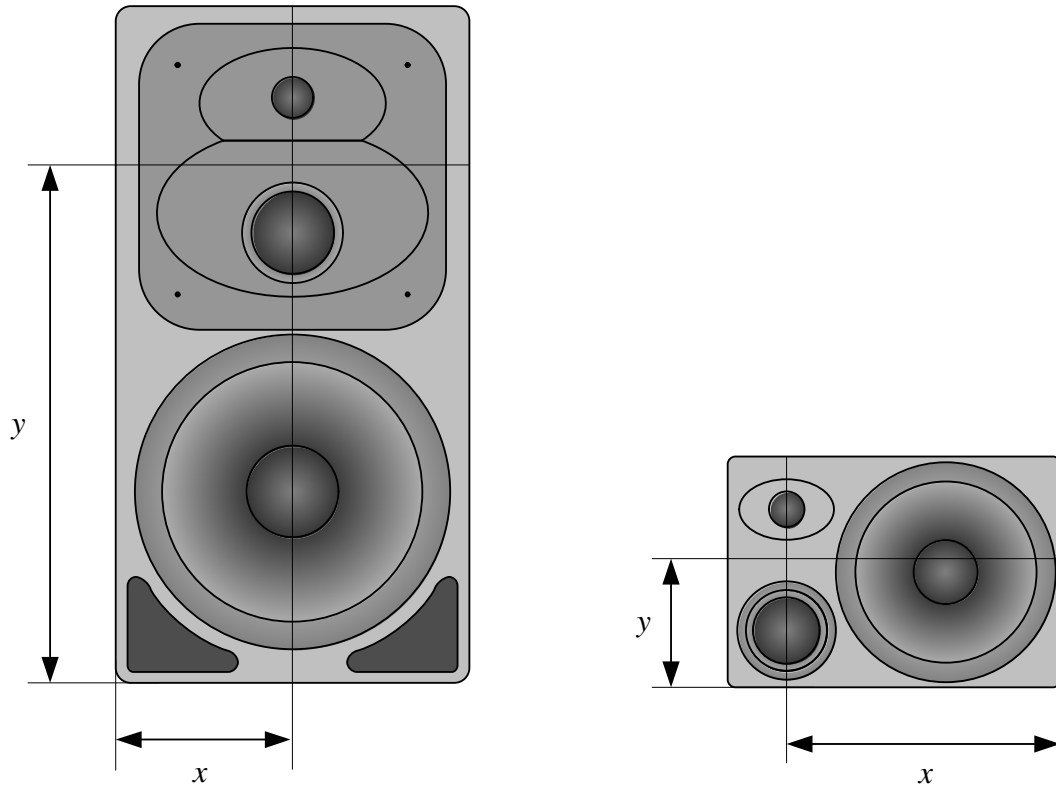
For two-way loudspeakers, the acoustical axis is located at the mid-point of the bass and tweeter drivers.



Product	x dimension	y dimension
O 110	8.5 cm ($3 \frac{3}{8}$ "	16.5 cm ($6 \frac{1}{2}$ "
O 110 D	8.5 cm ($3 \frac{3}{8}$ "	16.5 cm ($6 \frac{1}{2}$ "

Three-way Systems

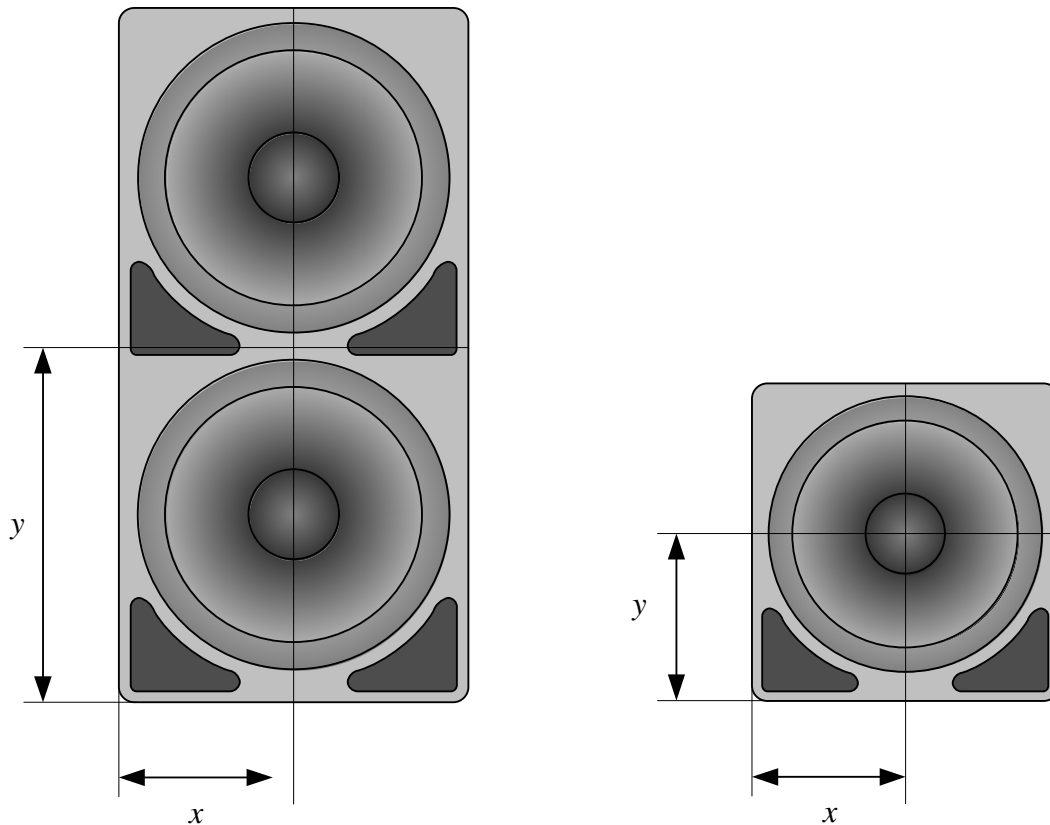
For three-way loudspeakers, the acoustical axis is located at the mid-point of the midrange and tweeter drivers.



Product	x dimension	y dimension
O 300	30.5 cm (12")	14.5 cm (5 ³ / ₄ ")
O 300 D	30.5 cm (12")	14.5 cm (5 ³ / ₄ ")
O 410	16.5 cm (6 ¹ / ₂ ")	51.0 cm (20 ¹ / ₈ ")
O 500 C	20.0 cm (7 ⁷ / ₈ ")	57.5 cm (22 ⁵ / ₈ ")

Subwoofers

For subwoofers with two drivers, the acoustical axis is located at the mid-point of the two drivers. For subwoofers with one driver, the acoustical axis is located at the mid-point of the driver. Subwoofers can be considered to be omni-directional in their pass band, which is generally below 120 Hz. Therefore it does not matter in which direction a subwoofer faces when it is placed in a room.



Product	x dimension	y dimension
O 800	16.0 cm (6 ¹ / ₄ ")	20.2 cm (8")
O 810	16.5 cm (6 ¹ / ₂ ")	17.0 cm (7 ¹ / ₂ ")
O 870	16.5 cm (6 ¹ / ₂ ")	36.0 cm (14 ¹ / ₈ ")
O 900	20.0 cm (7 ⁷ / ₈ ")	60.5 cm (23 ⁷ / ₈ ")

Klein + Hummel reserve the right to change product specifications without notice. Exceptions and omissions excluded.

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