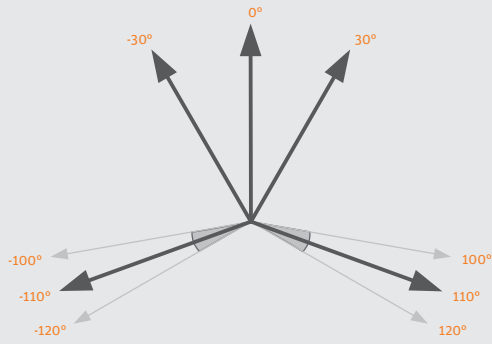




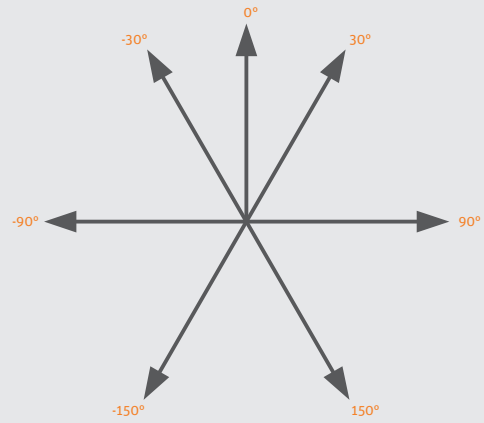
Getting Started Quickly

Place the loudspeakers at the correct angle
(ITU-R BS.775-1)

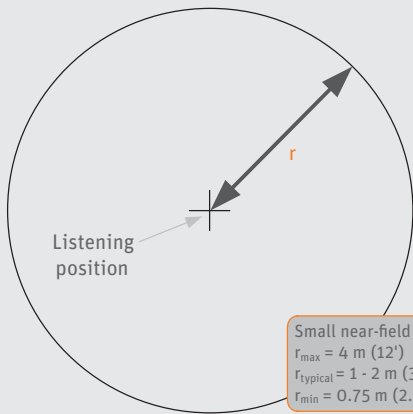


For 2-channel stereo use $\pm 30^\circ$

For 7.1 high definition systems
(no international standards)

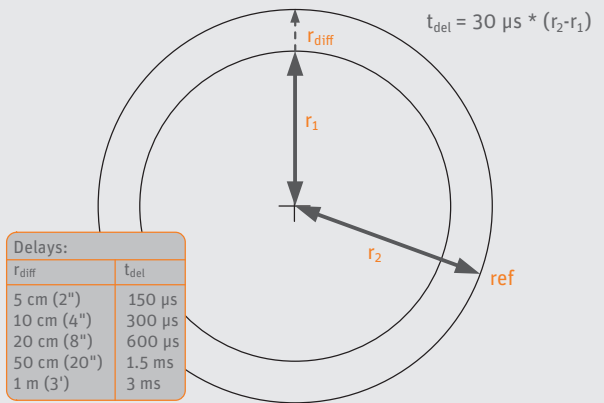


Place the loudspeakers at the same distance



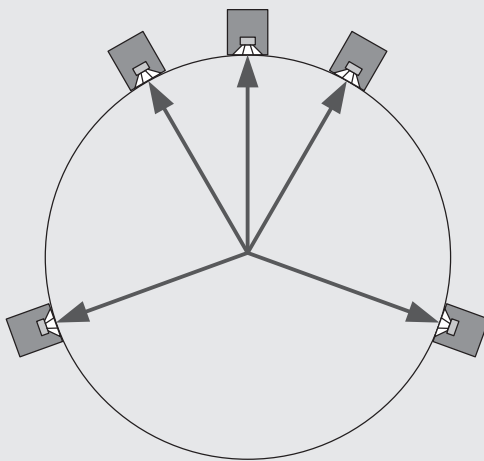
Small near-field systems:
 $r_{max} = 4 \text{ m (12')}$
 $r_{typical} = 1 - 2 \text{ m (3 - 6')}$
 $r_{min} = 0.75 \text{ m (2.5')}$

Delay closer loudspeakers by $30 \mu\text{s/cm}$ ($76 \mu\text{s/inch}$)
Use the furthest loudspeaker a reference



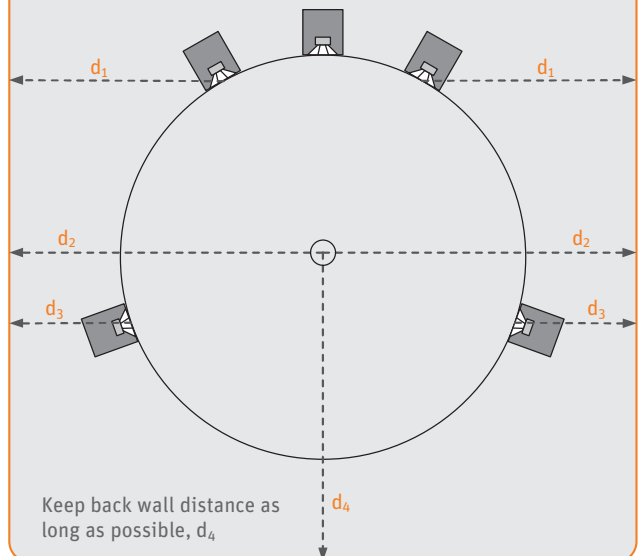
Delays:	
r_{diff}	t_{del}
5 cm (2")	150 μs
10 cm (4")	300 μs
20 cm (8")	600 μs
50 cm (20")	1.5 ms
1 m (3')	3 ms

Horizontal: Point loudspeakers at listening position



Use the acoustical axis as a reference

Symmetrical loudspeaker and object placement in the room improves stereo imaging, d_1, d_2, d_3

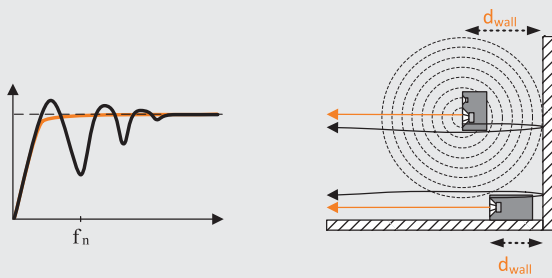


Keep back wall distance as long as possible, d_4



Getting Started Quickly

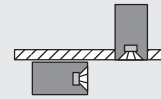
Distance from the wall



Full Range Loudspeakers	Avoid $d_{wall} = 0.8 - 2.0$ m
Bass Managed Loudspeakers	Avoid $d_{wall} = 0.8 - 1.0$ m
Subwoofers	Avoid $d_{wall} = >0.8$ m

Acoustical controls

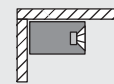
Against a wall or flush mounted



Solid: Level = -4 dB
Low Cut = -2 dB

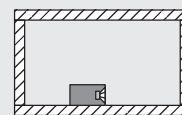
Soft: Level = -2 dB
Low Cut = 0 dB

In a corner



Level = -8 dB
Low Cut = -4 dB

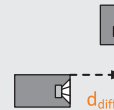
Free standing (not recommended)



Live: Level = -2 dB
Low Cut = 0 dB

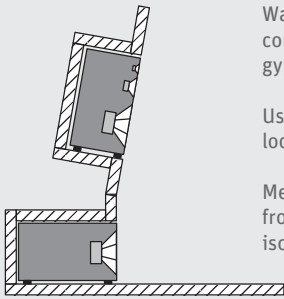
Dead: All 0 dB

Different distances



Phase = see operating manual for details

Flush mounting

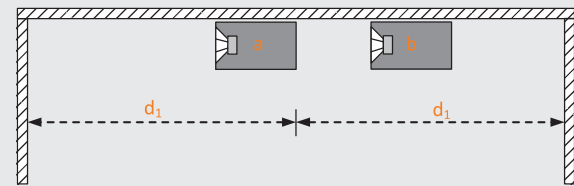


Wall should be heavy: bricks, concrete, or multiple layers of gypsum or MDF.

Use REK 1, 2 or 3 to remote locate the electronics panels

Mechanically isolate the cabinets from the structure using vibration isolators

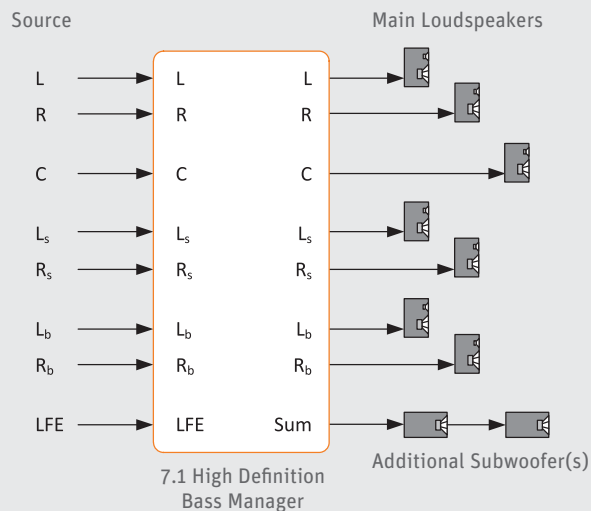
Single subwoofer systems – off-center



Single subwoofer systems – corners



Cabling



Multiple subwoofer systems – corners



Multiple subwoofer systems – Plane Wave Bass Array™

