Getting Started Quickly

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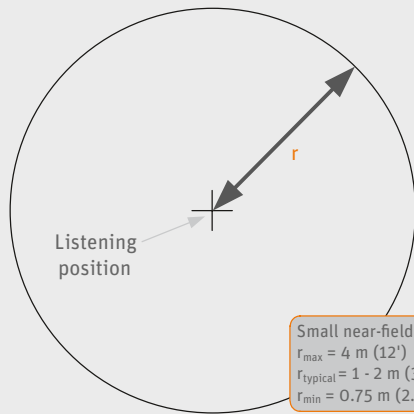

0°
-30° 30°
-100° 100°
-110° 110°
-120° 120°
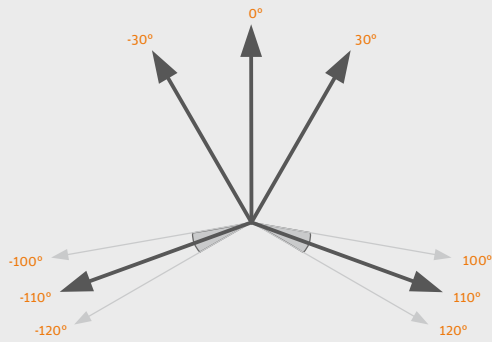
For 2-channel stereo use ±30°

For 7.1 high definition systems
(no international standards)

0°
-30° 30°
-90° 90°
-120° 120°
-150° 150°
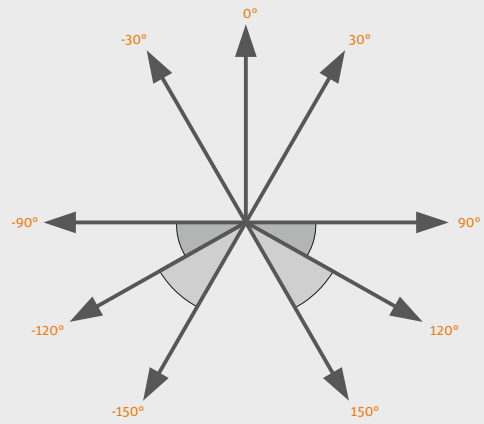
Place the loudspeakers at the same distance

r

Listening
position

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

Delay closer loudspeakers by 30 µs/cm (76 µs/inch)
Use the furthest loudspeaker a reference

$$t_{del} = 30 \ \mu s * (r_2 - r_1)$$
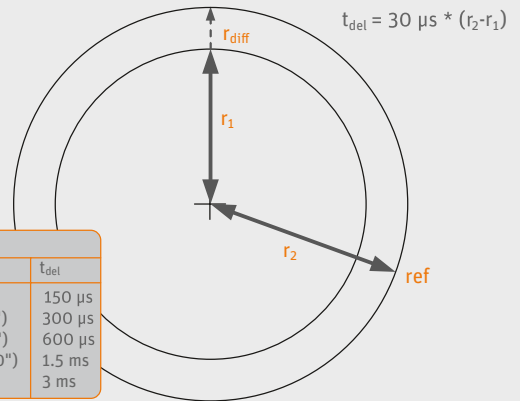
r_{diff}
r_1
r_2
ref

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
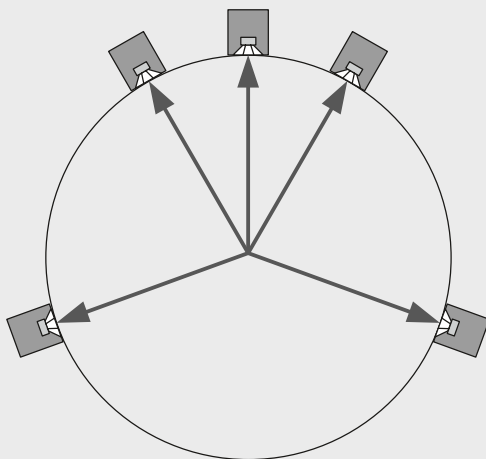
Use the acoustical axis as a reference

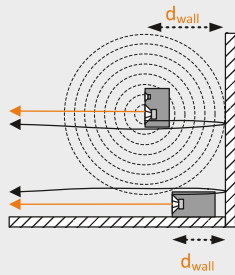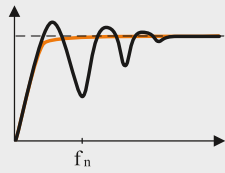## Symmetrical loudspeaker and object placement in the room improves stereo imaging, d_1, d_2, d_3

d_1 d_1
d_2 d_2
d_3 d_3
d_4
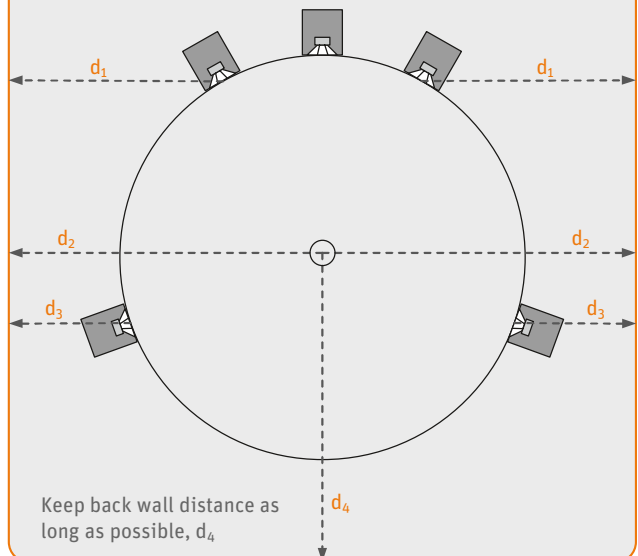
Keep back wall distance as
long as possible, d_4

Getting Started Quickly

Distance from the wall

d_{wall}

f_n

d_{wall}

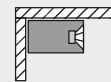|	
Full Range Loudspeakers	Avoid d_{wall} = 0.8 – 2.0 m
Bass Managed Loudspeakers	Avoid d_{wall} = 0.8 – 1.0 m
Subwoofers	Avoid d_{wall} = >0.8 m

Acoustical controls

Against a wall or flush mounted
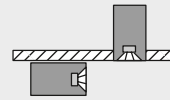
Solid:	Level = -4 dB
	Low Cut = -2 dB
Soft:	Level = -2 dB
	Low Cut = 0 dB

In a corner

	Level = -8 dB
	Low Cut = -4 dB

Free standing (not recommended)
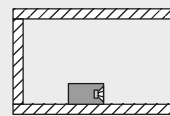
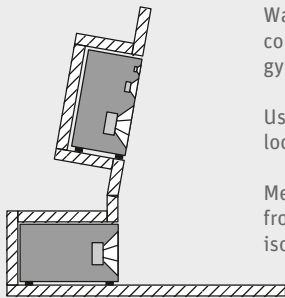|	
Live:	Level = -2 dB
	Low Cut = 0 dB
Dead:	All 0 dB

Different distances
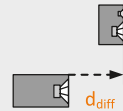
Phase = see operating manual for details
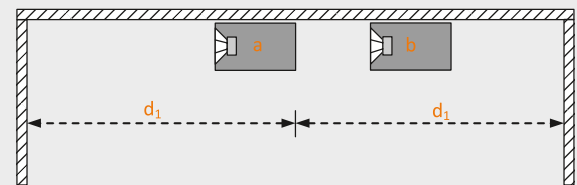
d_{diff}

Flush mounting

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

Use REK n to remote locate the electronics panels

Mechanically isolate the cabinets from the structure using vibration isolators
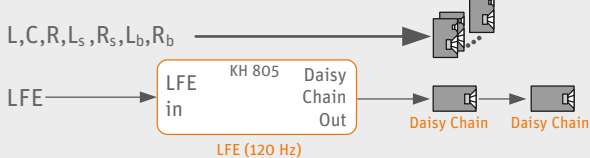
Single subwoofer systems – off-center

a   b

d_1 d_1

Single subwoofer systems – corners

c   d

Cabling and Right Channel Input Mode switch settings

2.0 Source

L
R

L	KH 805	L
R		R
	Daisy Chain Out	
	Right	

Daisy Chain   Daisy Chain

5.1/7.1 Source (not bass managed)

L,C,R,L_s,R_s,L_b,R_b

LFE

LFE in	KH 805	Daisy Chain Out

LFE (120 Hz)

Daisy Chain   Daisy Chain

5.1/7.1 Source (bass managed)

L,C,R,L_s,R_s,L_b,R_b

LFE

LFE in	KH 805	Daisy Chain Out

LFE (Wide)

Daisy Chain   Daisy Chain

Multiple subwoofer systems – corners

a   a

<1.5 m   <1.5 m
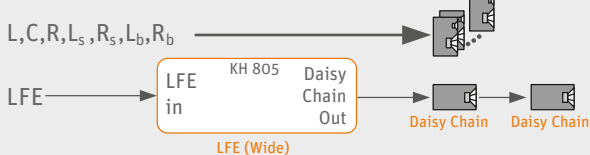
Multiple subwoofer systems – Plane Wave Bass Array™

b   b   b   b

Spacing <1.4 m or <2 m