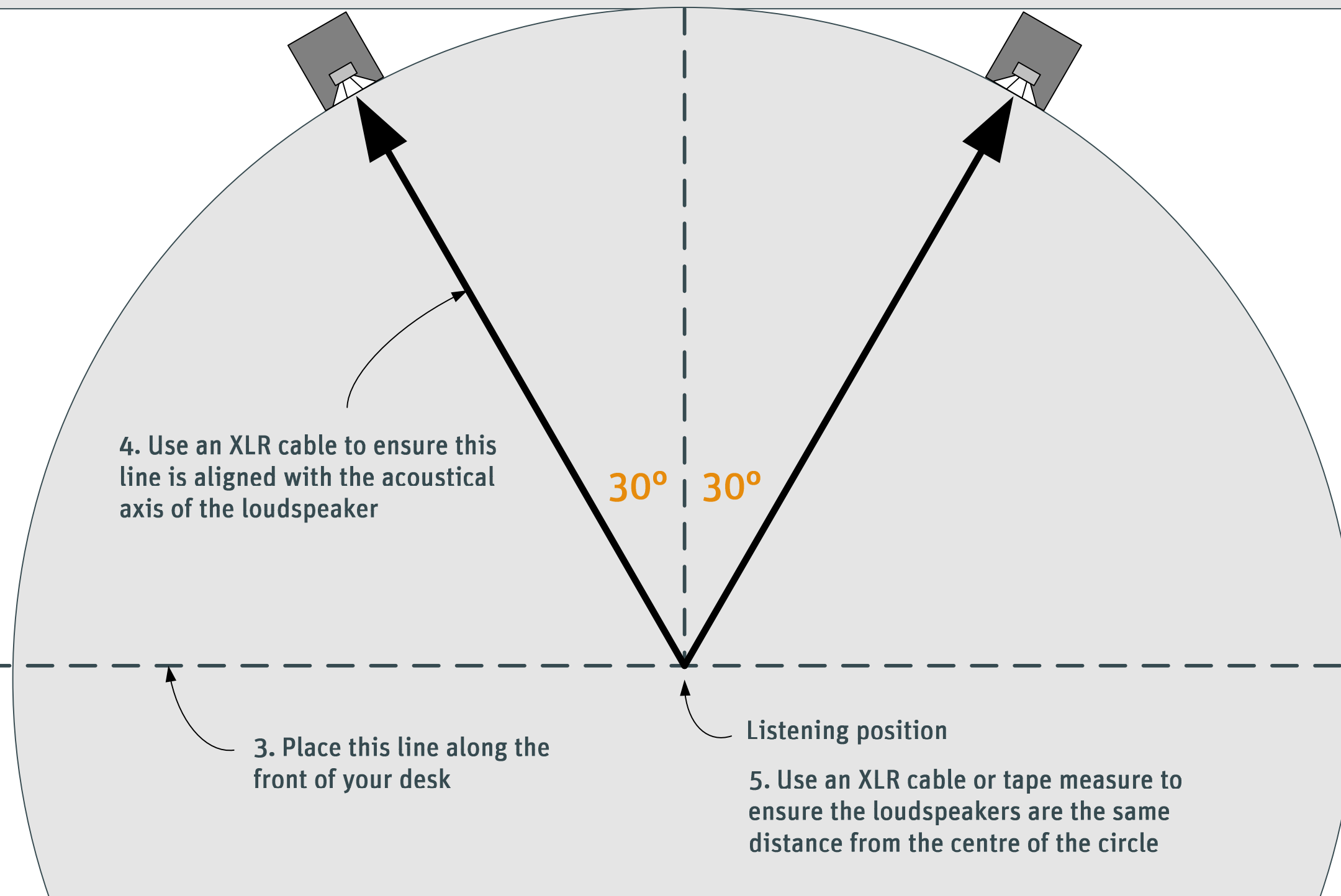




Monitor Location Template

Stereo Applications



4. Use an XLR cable to ensure this line is aligned with the acoustical axis of the loudspeaker

30° 30°

3. Place this line along the front of your desk

Listening position

5. Use an XLR cable or tape measure to ensure the loudspeakers are the same distance from the centre of the circle

Instructions

1. Set all controls to their default positions – see panel 1 to the right
2. Observe nearby boundaries when selecting a loudspeaker position – see panel 2 overleaf
3. Ensure the loudspeakers and other equipment is positioned symmetrically (left/right) in the room
4. Put the centre of the Monitor Location Template at the listening position
5. Place the loudspeakers' acoustical axis at the correct angle – see arrows above and panel 4 overleaf
6. Check the loudspeakers are the same distance from the centre of the circle
7. Point the loudspeakers' acoustical axis at the centre of the circle – see panel 4 overleaf
8. Adjust the loudspeakers' acoustical controls – see panel 7 overleaf
9. Place the subwoofer appropriately – see panel 8 overleaf
10. Cable the system and adjust the subwoofer's acoustical controls – see panel 9 overleaf

1. Default control positions

Loudspeakers:

Acoustical controls = 0 dB
Output level = 100 dB SPL
Input gain = 0 dB

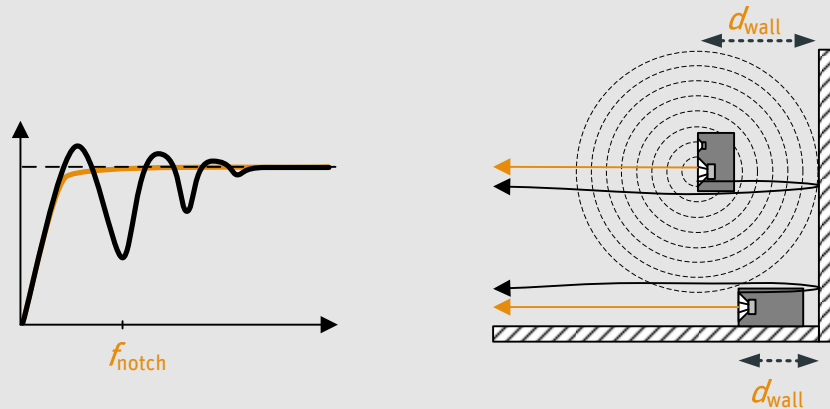
Subwoofers:

All eight two-position switches to the left
Input gain = 0 dB
Phase = 0°
Low cut = 0 dB
Parametric Equaliser = Bypassed



Loudspeaker and Subwoofer Setup for Stereo Systems

2. Distance from the wall



Loudspeakers placed a distance from a wall suffer from comb filtering in the bass (f_{notch} occurs when $d_{\text{wall}} = \lambda/4$), for example if d_{wall} is 1 m, f_{notch} is 86 Hz. Avoid the distances shown below to minimise this effect.

Full Range Loudspeakers
KH 120 or KH 310

Avoid $d_{\text{wall}} = 0.8 - 2.0$ m

Adding a subwoofer brings more flexibility in loudspeaker positioning.

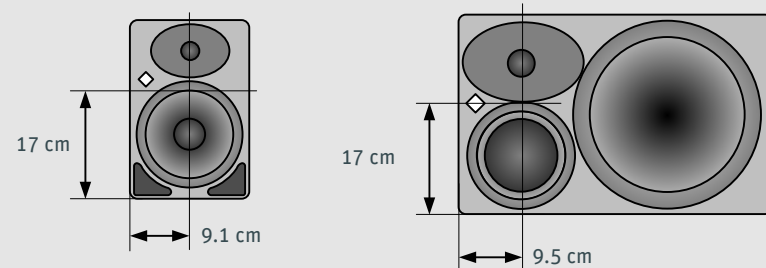
Bass Managed Loudspeakers
KH 120 + KH 810 or KH 310 + KH 810

Avoid $d_{\text{wall}} = 0.8 - 1.0$ m

Subwoofers

Avoid $d_{\text{wall}} = >0.8$ m

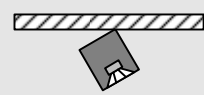
4. Acoustical axis is the reference point



Point the acoustical axis, both horizontally and vertically, at the listening position to get the best response

7. Acoustical controls – Loudspeakers

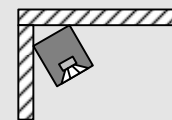
Against a wall



Solid: Bass = -5 dB

Soft: Bass = -2.5 dB

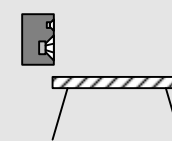
In a corner



Bass = -7.5 dB

Low-Mid = -1.5 dB

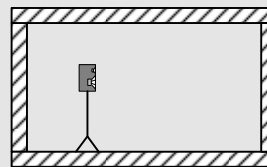
Near a desktop



Small: Low-Mid = -1.5 dB

Large: Low-Mid = -3 dB

Free standing

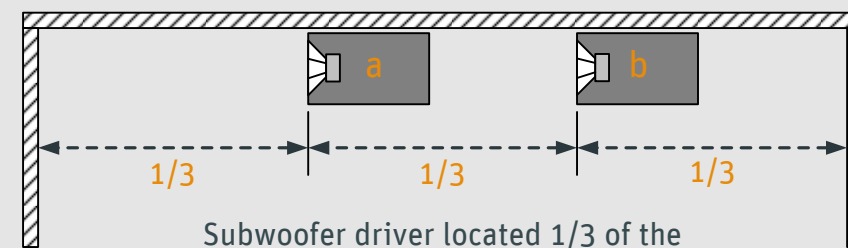


Live: Treble = -1 dB

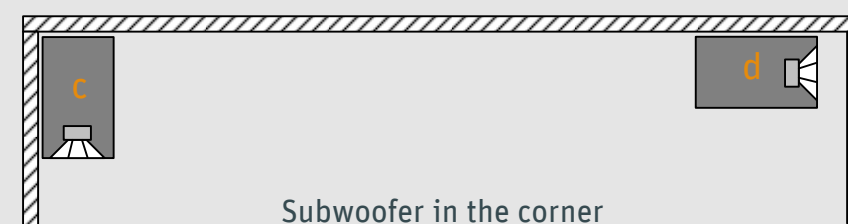
Bass = -2.5 dB

Dead: All 0 dB

8. Single subwoofer placement (choose a, b, c or d)



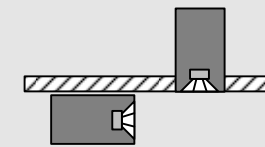
Subwoofer driver located 1/3 of the way across the room



Subwoofer in the corner

9. Acoustical controls – Subwoofers

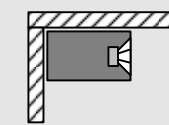
Against a wall or flush mounted



Solid: Low Cut = -2 dB

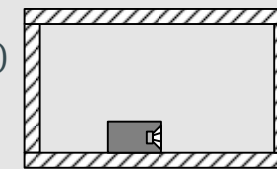
Soft: Low Cut = 0 dB

In a corner



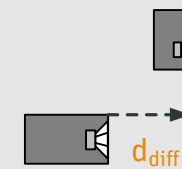
Low Cut = -4 dB

Free standing (not recommended)



Low Cut = 0 dB

Different distances



Phase = see below for instructions

Level adjustment:

1. Use the bass management enable/disable control to decide if the subwoofer is too loud or too quiet compared to the main loudspeakers.
2. Adjust the subwoofer input gain control until the bass level is the same, whether bass management is enabled or disabled (the sound be deeper, not louder or quieter).

Phase adjustment:

1. Enable bass management and switch on the 80 Hz test tone.
2. Adjust the phase control (use all 8 settings: 0 plus 0, 45, 90, 135 and then 180 plus 0, 45, 90, 135) until you can hear the lowest level at the listening position (180° out-of-phase).
3. Switch the 180° phase switch to the opposite position (system is now in-phase). Example: the lowest level was heard with the setting 0 and 90, so the subwoofer is in-phase with the setting 180 and 90.
4. Re-trim the level again – see above.