



### 1

### Loudspeakers Listening Distance Recommendations



**Not recommended:** when too close to the loudspeaker the drivers - HF or Mid/HF - are not summing together properly at the crossover point, which affects the perceived frequency response balance.

**Recommended listening distance:** the direct sound vs. reverberation balance depends on the distance and on the room acoustic damping properties, but in typical cases the imaging is good.

**Typical listening distance in studio control rooms.**

The further away you move from the loudspeaker the more reverberation fields dominates. The imaging is less accurate and the frequency response balance depends increasingly on the room acoustical properties.

### 2

Monitors	-3dB LF extension	SPL short term RMS @ 1 m *
6010A	73 Hz	93 dB
8020A	66 Hz	95 dB
8030A / 8130A	55 Hz	100 dB
8040A / 8240A	45 Hz	105 dB
8050A / 8250A	35 Hz	110 dB
1032A	40 Hz	113 dB
8260A	26 Hz	113 dB
1037C	35 Hz	116 dB
1038B	33 Hz	120 dB
1034B	32 Hz	123 dB
1039A	29 Hz	126 dB
1035B	29 Hz	131 dB
1036A	19 Hz	131 dB

\*) Maximum short term sine wave acoustic output on axis in half space, averaged from 100 Hz to 3 kHz @ 1m

Subwoofers	Frequency +/-3 dB	SPL short term RMS @ 1 m
5040A	35 - 85 Hz	96 dB
7050B	25 - 85 Hz	100 dB
7060B / 7260A	29 - 85 / 120 Hz	108 dB
7070A / 7270A	19 - 85 / 120 Hz	112 dB
7071A / 7271A	19 - 85 / 120 Hz	118 dB
7073A	19 - 85 / 120 Hz	124 dB

### 3

Room volume up to	Subwoofers for 2-channel (Stereo)	Subwoofers for 5-channel (Surround)
55 m³	5040A	5040A
65 m³	7050B	7050B
75 m³	7050B	7060B / 7260A
85 m³	7060B / 7260A	7070A / 7270A
95 m³	7070A / 7270A	7071A / 7271A
100 m³	7070A / 7270A	7071A / 7271A
115 m³	7071A / 7271A	7071A / 7271A
125 m³	7071A / 7271A	7073A
170 m³	7071A / 7271A	7073A
200 m³	7073A	2 x 7073A
240 m³	7073A	2 x 7073A
400 m³	2 x 7073A	3 x 7073A
400 m³	2 x 7073A	3 x 7073A

### Notes

Large Pipe Organ 16 Hz

Concert grand piano 29 Hz  
5 strings Electric bass 31 Hz

Double bass 40 Hz

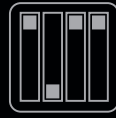
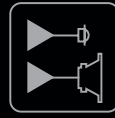
Tuba (horn) 45 Hz

Guitar 80 Hz

Male fundamental frequency 120 Hz

Female fundamental frequency 230 Hz

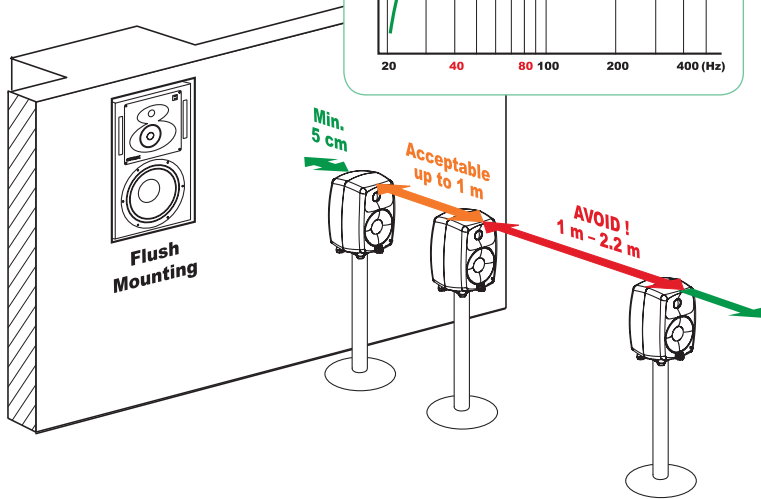
Useful low frequency spectrum extension



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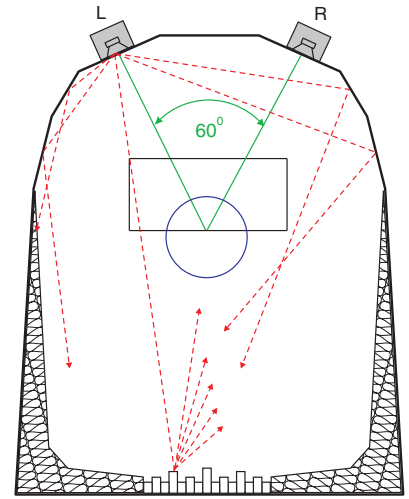
### Placing speakers in relation to front wall

Distance from wall	First cancellation frequency
0.10 m	858 Hz
0.20 m	429 Hz
0.40 m	214 Hz
0.60 m	143 Hz
0.80 m	107 Hz
1.00 m	86 Hz
1.20 m	71 Hz
1.40 m	61 Hz
1.60 m	54 Hz
1.80 m	48 Hz
2.00 m	43 Hz
2.20 m	39 Hz
2.40 m	36 Hz
2.60 m	33 Hz
2.80 m	31 Hz
3.00 m	29 Hz



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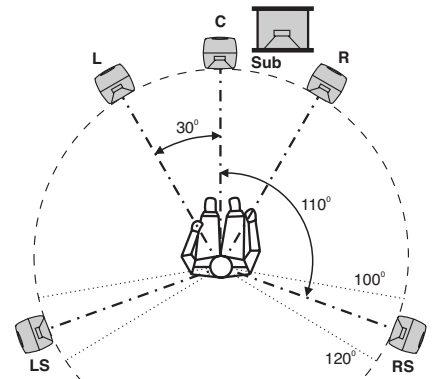
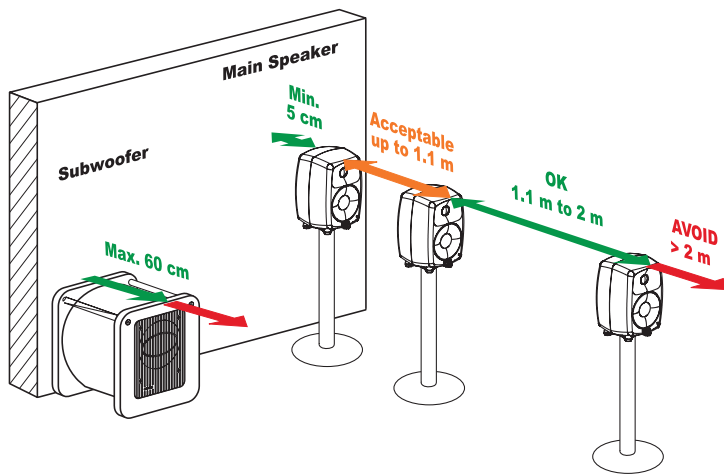
### Main speaker placement



Stereo setup

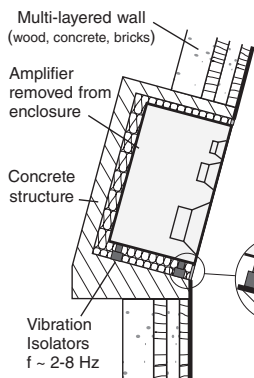
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### Placing free standing speakers with subwoofers

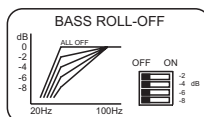
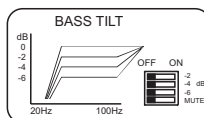
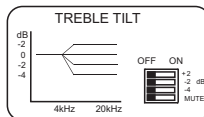


5.1 surround setup  
ITU-R BS.775-1

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8000 series needs ventilation and free air flow around the speaker cabinet and sufficient openings on top and bottom for proper LF response.



### Flush mounting into a wall

- Flush mounting removes edge diffraction
- Eliminates reflection from the wall behind the speaker
- Increases LF speaker efficiency
- Provides higher system SPL and lower distortion

