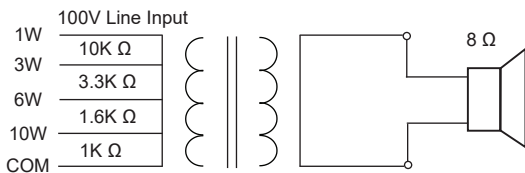


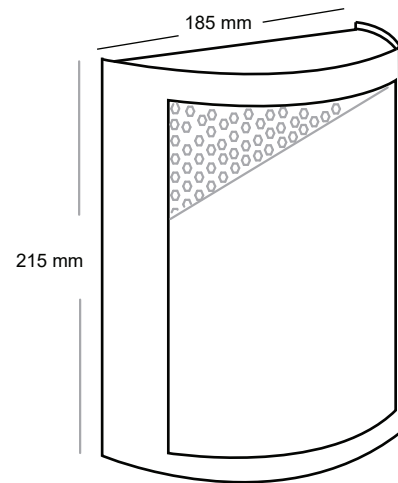
Introduction

It is constructed with high quality ABS plastic with 4" dual cone speaker driver and multi tapping matching transformer of 1, 3, 6 and 10W 100V line. Suitable for wall and ceiling installation with optional tilt mounting bracket. Available in white colour. Optional black colour available upon request.

Circuit Diagram



Physical Dimensions



Design Assistance

BS410 speaker is suitable for wall mount and ceiling slab mounting.

They are widely used at staircase, small room, column beam and etc.

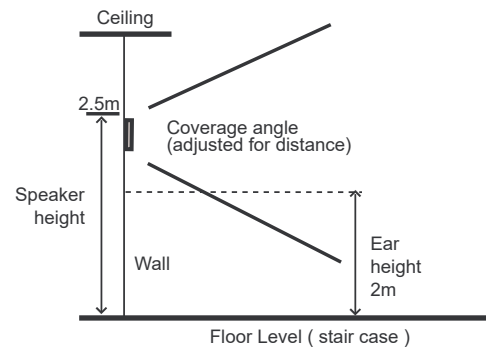
As a guideline, the placement of BS410 ceiling speakers shall be as :

Mounting Height	Distance of Speakers	Coverage Area
2.5 m or less	4 m	Appr 16 m sq
2.5 m to 4 m	3.5 m	Appr 12 m sq
4.0 m to 6 m		Appr 10 m sq

Note :
Based on 3W power input tapping to speakers, with targeted 85 dB at listening point.
Exclude power loss due to cabling

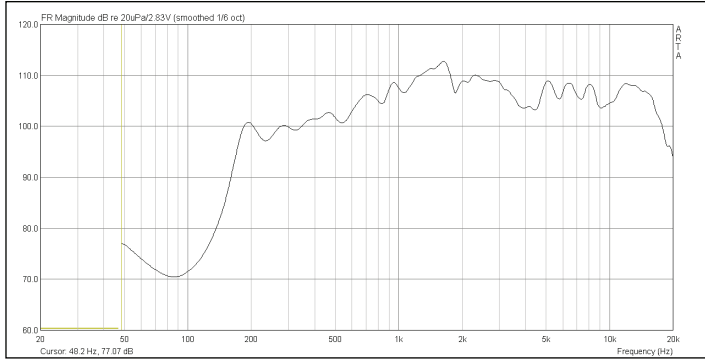
In order to hear properly, the sound source from speaker shall be minimum 6 dB above the background noise.

If the background noise is around 70 dB, such as in a shopping area with average crowd, the person shall be listening to the speaker sound at approximately 76 dB, at around 1.5 to 2m above floor level.

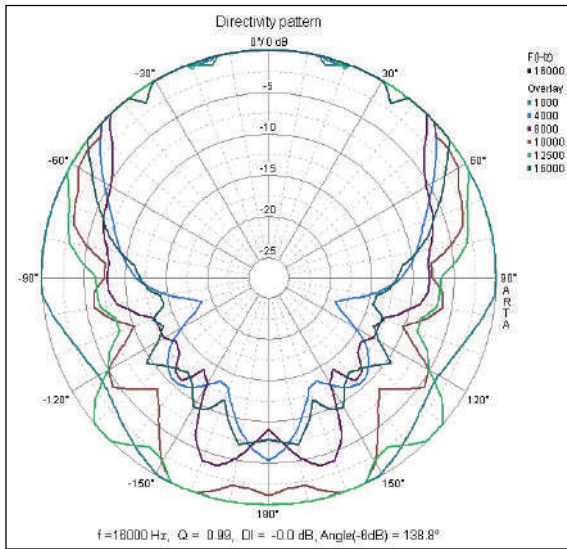


If the power input to BS410 is 3W, the SPL (1KHz) at 2 m from speaker shall be approximately 92 dB. With music source, the average SPL shall be 3 dB below ; thereby the hearing shall be around 89 dB, which is rather comfortable level in a shopping mall.

SPL Chart



Polar Chart



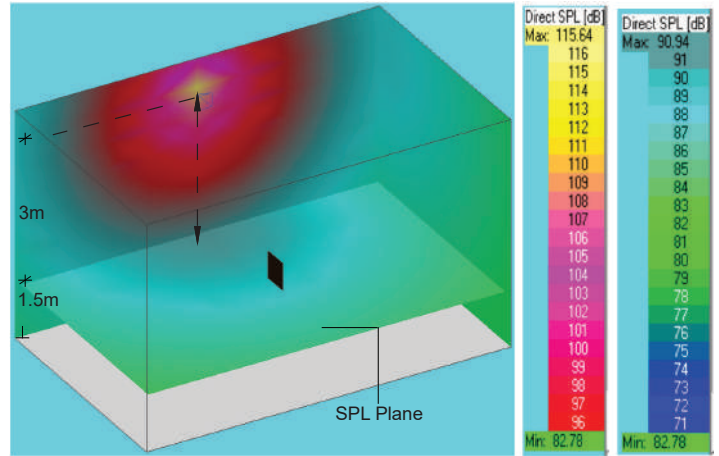
Technical Specifications

Speaker	
Power rating	10W 100V line
Diameter	4" (101.6 mm)
Cone type	Dual Cone
Impedance	8 Ohm
Freq Response (-5dB)	100 - 16 KHz
SPL @ 1W / m (+/-3dB) ; 1 KHz	92 dB

Matching Transformer	
Tapping (100V line input)	1 / 3 / 6 / 10W
Primary impedance	10 K / 3.3 K / 1.6 K / 1K Ohm
Secondary impedance	8 Ohm

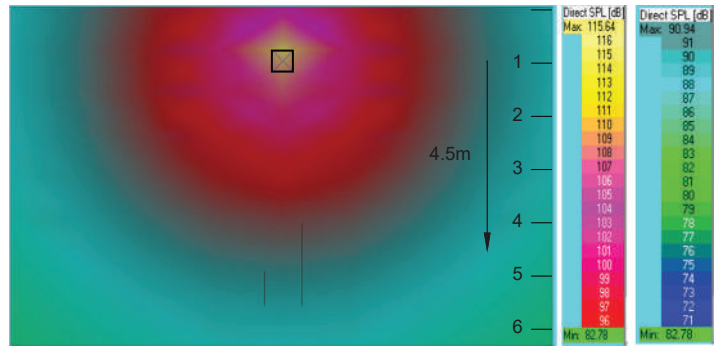
Physical Dimensions	
Grille / enclosure	ABS with metal grille
Overall size	185 x 215 x 90 mm
Weight	760 g
Colour	White

SPL Simulation



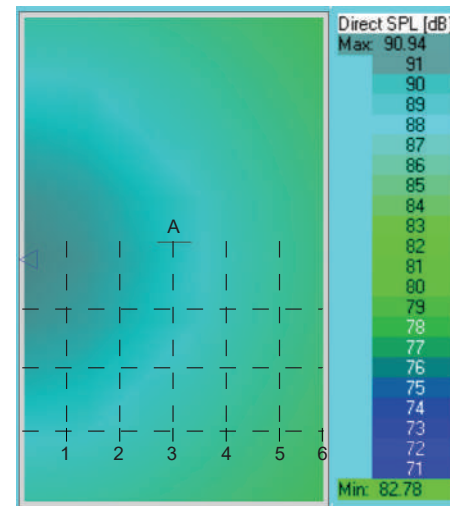
ISO View

The simulation of BS410 mounted on wall with 4.5m above floor level and SPL plane shown at listening level of 1.5m AFL.



Front View

SPL mapping from front view.



Top View

SPL mapping from top view showing horizontal dispersion at listening level of 1.5m AFL (3m vertical height).

Note: All the chart are measured at 1kHz, 1W.
Variation of power against SPL to be calculated at additional 10 log P.

e.g: At point A with speaker power at 3W,
 $SPL = 89 + 10 \log 3$
 $= 89 + 3$
 $= 92 \text{ dB}$

Safety Standards: EN55013 EN55020 EN61000

