DVA Products Guide

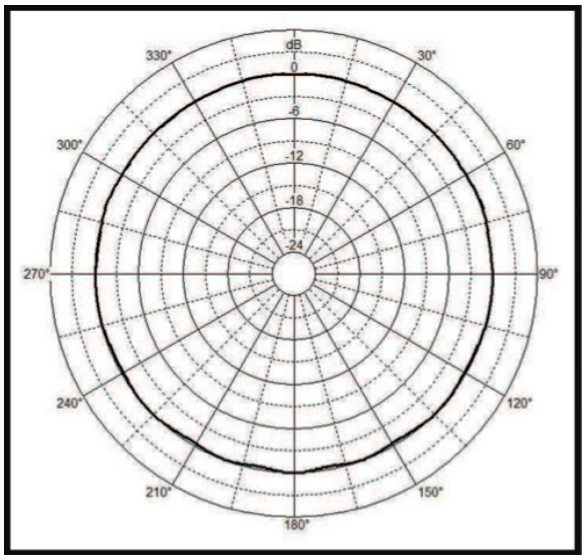


dBTechnologies

Why DVA S2585N?

DVA S2585N is born with the aim to help users who want to attenuate the power SPL behind the stage, focusing then the directivity on the front.
The problem of this concept is that users subwoofers configurations are not standard: they can place subwoofers in front of the stage (Central configuration) or at the stage sides.
DVA S2585N then had to be able to solve every particular situation whatever was the subwoofers position.

Standard Omnidirectional Subwoofer

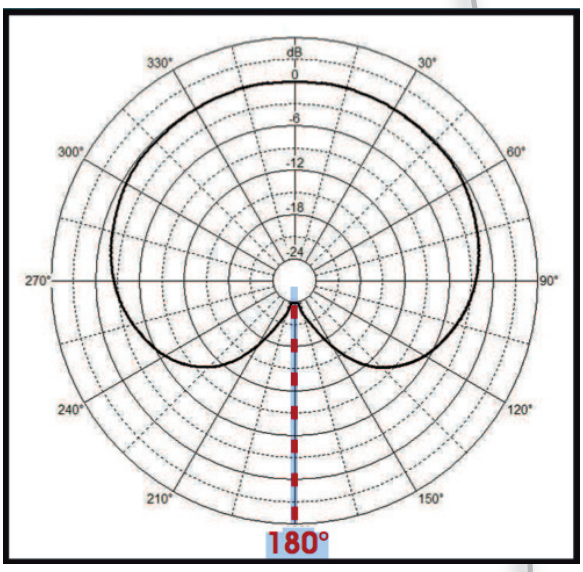


An omnidirectional subwoofer's power response is generally considered to be a perfect sphere in three dimensions.

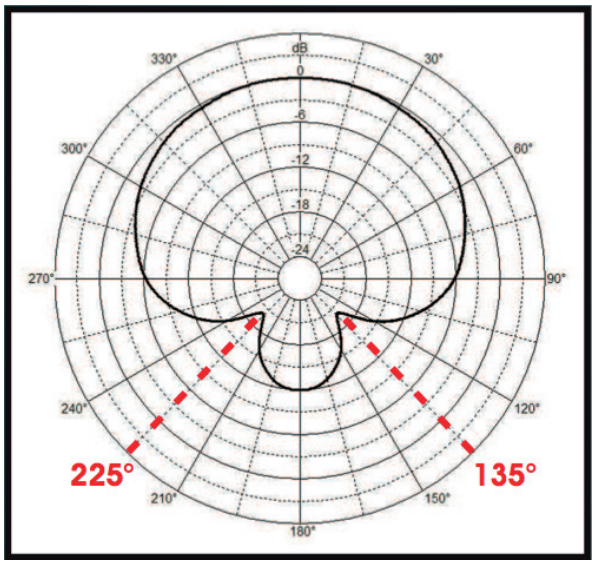
Cardioid Subwoofer

A cardioid sub is a low-frequency speaker with a heart-shaped directivity.

The power attenuation for this kind of speaker is placed at the back (180°).



Supercardioid Subwoofer



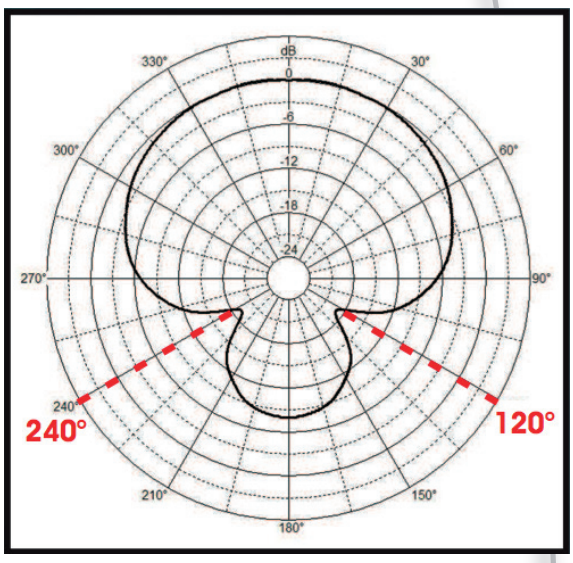
A supercardioid sub is meant to be a bidirectional low-frequency speaker.

In this case, the power attenuation is placed at ±135°.

Hyperardioid Subwoofer

A hypercardioid sub is a bidirectional low-frequency speaker too.

In this case, the power attenuation Is placed at ±120°.



What's the best solution among cardioid, supercardioid and hypercardioid



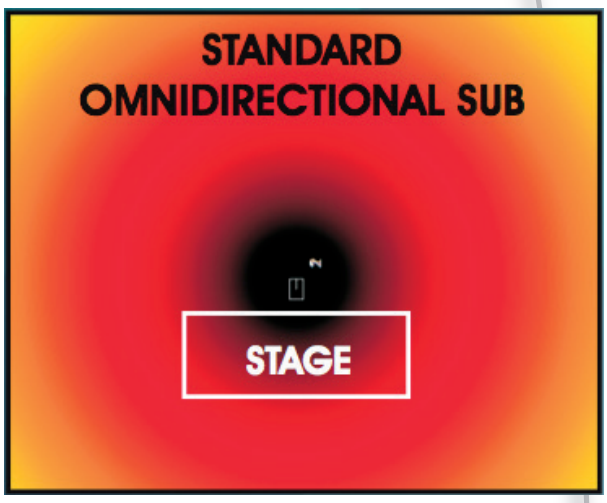
There isn't a perfect solution for every situation. That's why S2585N can be configured like a cardioid, a supercardioid and also a hypercardioid subwoofer.
The S2585N default configuration is the supercardioid one and it can be used in cardioid or hypercardioid ones via RDNET just clicking one of the desired "cardioid preset" buttons.

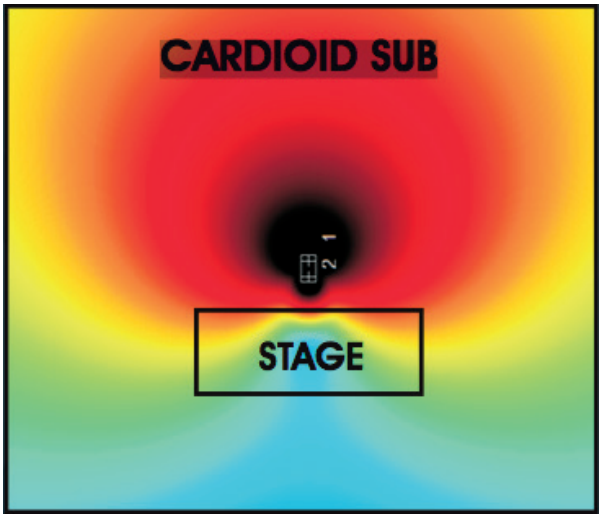
Let's explain the three cases.

Cardioid Case

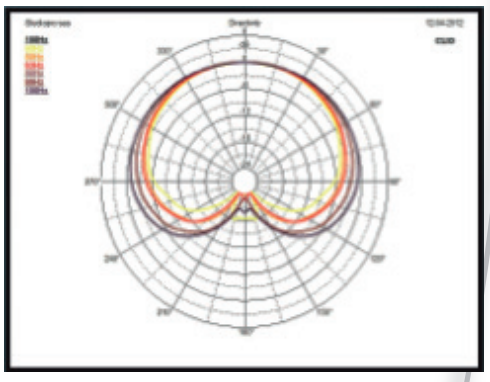
The cardioid configuration is suggested to be used for situations where the subs are placed in front of the stage in central configuration.

In this case, the phase cancellation under the stage brings the SPL in this area down to -22dbspl compared with the front of the stage.





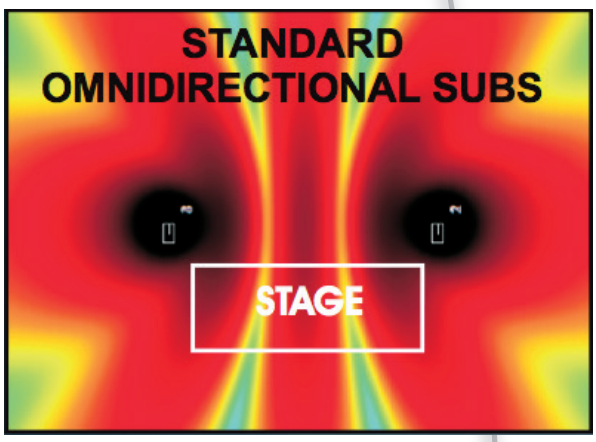
Measured cardioid directivity of DVA S2585N from 40Hz up to 100Hz

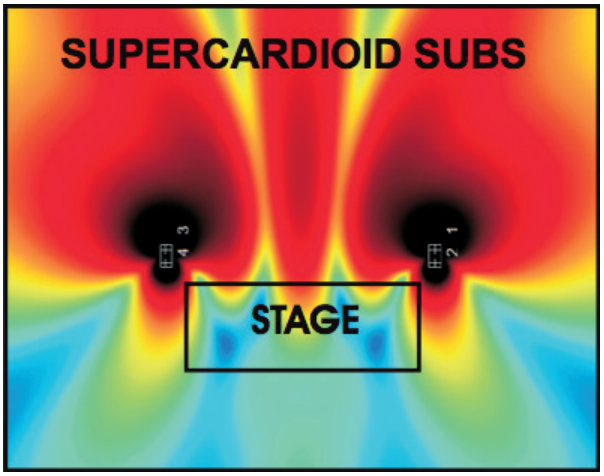


Supercardioid Case

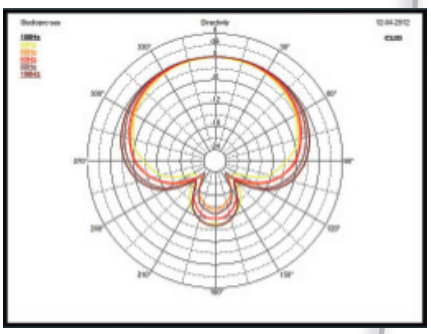
The supercardioid configuration is suggested to be used for stages widths from 8 up to about 14m.

In this case, the phase cancellation under the stage brings the SPL in this area down to -20dbspl compared with the front of the stage.





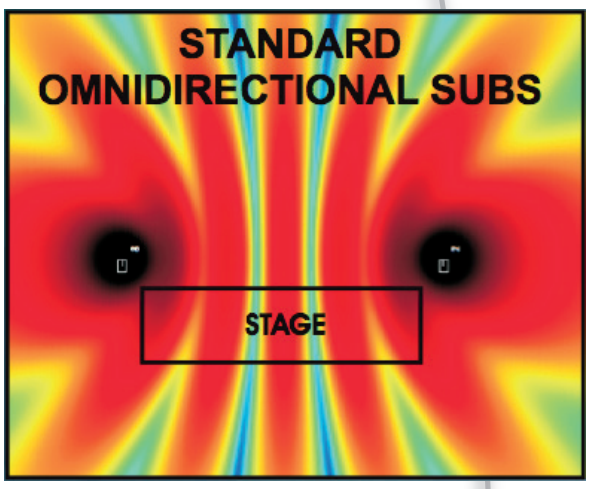
Measured supercardioid directivity of DVA S2585N from 40Hz up to 100Hz

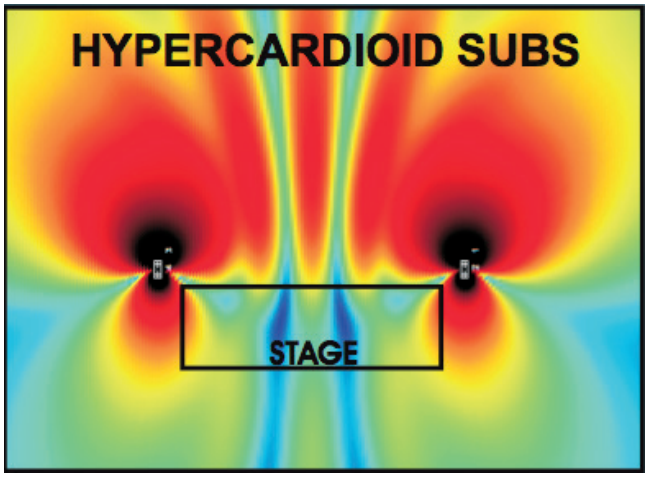


Hypercardioid Case

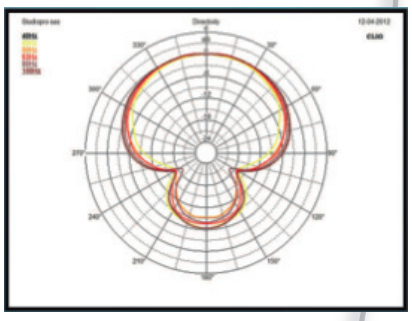
The hypercardioid configuration is suggested to be used for stages widths bigger than 14m.

In this case, the phase cancellation under the stage brings the spl in this area down to -18dbspl compared with the front of the stage.





Measured hypercardioid directivity of DVA S2585N from 40Hz up to 100Hz



Conclusions

DVA S2585N can be used to:

- avoid spl behind the subs
- avoid spl under the stage
- avoid phase cancellations due on walls behind the subs

DVA S2585N features are:

- high spl: 2500wrms
- controlled directivity thanks to cardioid / supercardioid / hypercardioid configs.
- up to 4.5ms integrated group delay
- up to 10 integrated x-over frequencies
- RDNET on board
- every feature related to RDNET is available
- riggable like DVA S10DP