

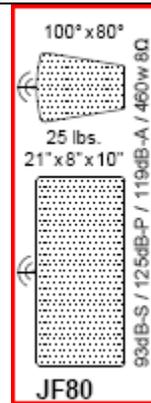


stage research

Presents

The Sound Design Drafting Template!

- Contains the specs on over forty of over the most commonly used speakers.
- Gives you the tools to predict the SPL of a speaker with just a pencil and paper.
- Brings the information you need together in one place for those production meetings.
- The Sound Design Drafting Template is a great teaching tool for explaining basic sound theory.
- These are just some of the things this template can do. There are too many applications of this template to fit on one piece of paper, but somehow we managed to fit it on one piece of plastic.

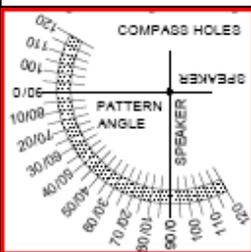


Every Speaker in the main section has two cut-outs. The top is the "Top View". The bottom is the "Side or Front/Back View". The name is below the cut-outs. This symbol indicates the grill of the speaker. If you do not see one of these on the bottom cut-out it means the cut-out is the "Front/Back". Most of the time they are the same size, when they are not you will see a on the top and bottom. This indicates the size of the smaller view of the speaker.

The pattern is above the "Top View". It is written as Horizontal x Vertical. It has the Weight and Dimensions between the two cut-outs.

On the side are the specs for the speaker. This will help you plan out the needed amps as well as help predict what the speaker will do. These specs use abbreviations which are: A=AVERAGE C=CONTINUOUS P=PEAK R=ROTATABLE S=SENSITIVITY.

Check it out. And start drawing!



This is a specialized protractor to help you draw the pattern of the speakers. Once you use a cut-out to draw a speaker you will use this to draw the pattern. Ex: You draw a CQ-1 where a center cluster would go on a ground plan. Then you draw the pattern to see where the speaker will hit. To do this

you place the hole at the focal center of the speaker. Line up the straight edge to be parallel with grill of the speaker. Then select the degree of the pattern and mark it. Rotate the template and do the same for the other side of the speaker. You then use the straight edge scale to draw the pattern as far as you need it to go.



Compass Holes are on the line at the top. These can be used to finish drawing the cone of the speaker. Simply place the "0" hole on the focal center of the speaker. Hold it down using a pencil. Using a second pencil pick a hole a certain distance from the focal center and rotate the template to draw an arc.

dB LOSS OVER DISTANCE (DOUBLE DIST. = -6dB) 1M ~ 3'3"	
128m	-42
64m	-36
32m	-30
16m	-24
8m	-18
4m	-12
2m	-6
1m	0

Using the Inverse Square Law

information on the top left edge of the template in conjunction with the speaker specs you should be able to predict the SPL at any distance from the speaker.

WATT INCREASE TO SPEAKER = dB INCREASE FROM SPEAKER	
100w	20dB
50w	17dB
10w	10dB
8w	9dB
6.3	8dB
5w	7dB
4w	6dB
3.15w	5dB
2.5w	4dB
2w	3dB
1.6w	2dB
1w	0dB

The information on the bottom left edge will help you predict the dB. For example: An SSM has a Sensitivity of 88.8dB, which is 1 Watt at 1 Meter. It calls for a 150 Watt amp. This would give you an added 22dB making the speaker 110.8db at 1 meter. And at 8 meters it would be 92.8dB.