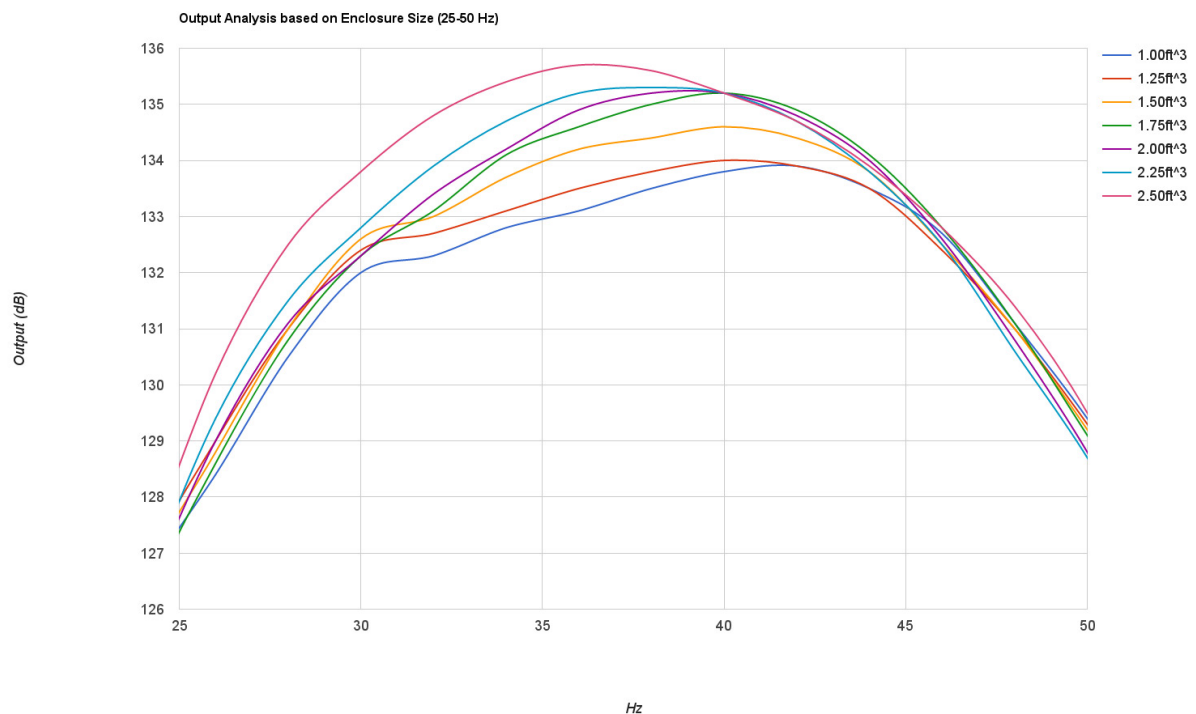


Does Size Really Matter?

December 21, 2016 | 0 Comments | 10657 Views

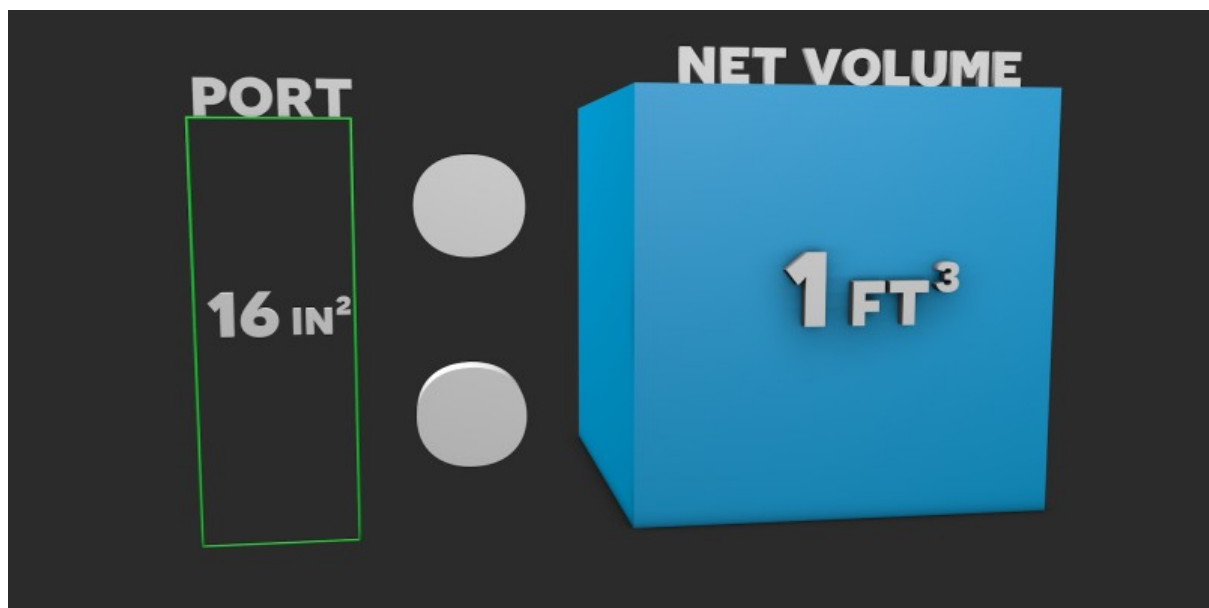
Big boxes are louder! Excuse me... **BIG BOXES ARE LOUDER!** If you've got the space to give up, and you like it loud, go big! It seems logical of course, but so few folks actually embrace it. The **DD Box Design** system was formed many years ago on this very principle. Using a new **3510 ESP** we've constructed 7 different boxes based on the DD Box Design system just to show the advantages of a larger box.



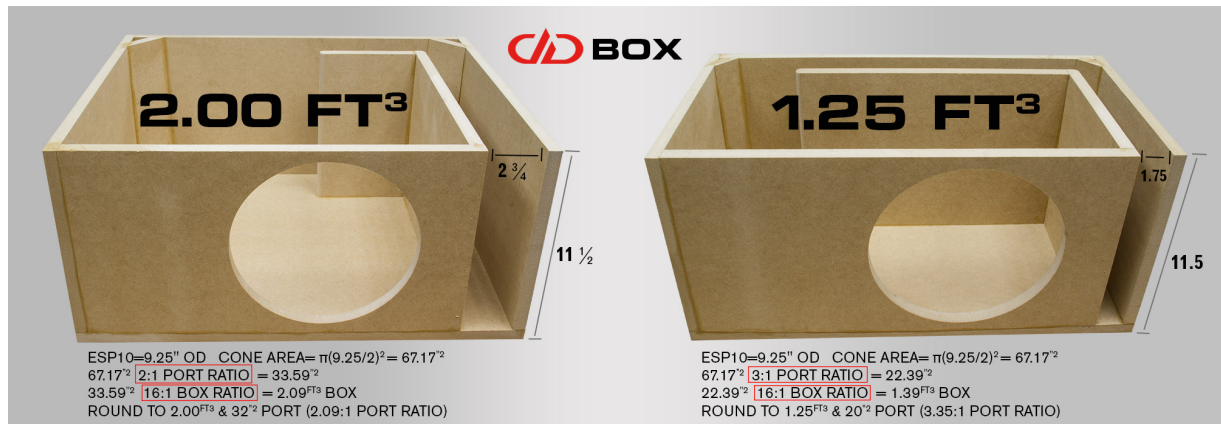
* DD3510gD2 woofer was used in all examples. Enclosures all utilized ports whose cross-sectional

areas were 16in² per cubic foot of net airspace with a tuning of 35 hz.

The DD Box Design system is based on a series of ratios specifically tailored to suit the performance capabilities of the Power Tuned DD Audio woofers. The masterminds in the R&D team have worked tirelessly in order to make sure that these ratios give you the most bump in your trunk. One of the most important ratios is 3:1 and 1.5:1. These ratios apply to the woofer and the port of the enclosure. The Power Tuned woofers can effectively motorize the air mass in a port that is up to 1.5:1, or 67%, its size without any massive effects on power handling around the tuning frequency of the port. This means that a woofer, like the 3510 ESP can effectively utilize a port up to about 44 square inches, which is huge! On the other end of the spectrum, a ratio of 3:1, or 33%, could be a good starting point as to whether you should start looking at a smaller woofer if you don't have space for a port that is around 22 square inches.



Now you might be thinking... that's all wrong. You don't build a box around the port! An enclosure is built around the airspace that that woofer requires! While that might be true, we've found that following another golden ratio will set you free. That ratio is 16:1. That is to say, 16 square inches of port area per cubic foot of net airspace. With this ratio we can look back at our ports and determine how big our enclosures should be. If the 3510 ESP can utilize 22 to 44 square inches of port, we can divide those values by 16 to determine how big our enclosure's net internal volume should be. These numbers will equate to 1.375 cubic feet and 2.75 cubic feet.



In testing, we've found that the average listener prefers the responsiveness of an enclosure between 1.25 cubic feet and 1.75 cubic feet. However, the bass junkies, you know the ones... the rap loving, R&B blasting, EDM eccentrics are big fans of the extra output they get from the enclosures up to about 2.5 cubic feet of airspace for a single 10" woofer!
