Subject: Re: Efficiency of backhorns
Posted by Martin on Wed, 16 Apr 2008 03:05:21 GMT
View Forum Message <> Reply to Message

Most BLH designs you find on the Internet are really a hybrid of a TL at low frequencies that transitions to a horn as frequency rises. Once it has transitioned to a horn then a properly sized coupling volume behind the driver can be used to filter out higher frequencies from being tranmitted by the horn mouth. The transition frequency from TL to horn behavior is determined by the size of the mouth taking into account nearby room boundaries.This is my definition of how most reasonably sized BLH work. Others might, and probably will, strongly object to this dexcription of how a BLH works. Based on my definition the low frequencies produced by the hybrid TL/horn reinforce the rolling off SPL response of the driver. Typically low Qts full range drivers are used by most BLH builders so they need help down low. But to answer the oriiginal question, if done correctly the efficiency of the system will not be increased across the entire frequency spectrum. For example, if your full range driver has a SPL level of 95 dB/W/m and a Qts of 0.2 then the goal of the BLH design is to provide bass output that extends down to maybe 40 or 50 Hz at the same 95 dB/W/m. In most cases this is easier said then done.