Subject: Re: Horns, transmission lines and reflex cabinets
Posted by Ed Schilling on Sun, 07 Aug 2005 14:41:49 GMT
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Wayne, "Here's the thing, Ed. It isn't fair for you to pounce on Bob's statement, "Single-driver full-range speakers have a limited dynamic range." That was a statement of fact, and you shouldn't use it to launch a campaign. It isn't a statement about horns or transmission lines, it is a statement about single drivers. "Sorry, didn't mean to start anything. But I might ask the question...limited dynamic range by what standard? Compared to a K-horn? Or compared to similar sized drivers? I have not really noticed "limited dynamic range" to be a problem (when horn loading them). I would assume that my 4 Klipsch La Scalas had adequate dynamic range. Thing is, that at sane levels, they didn't sound any more "dynamic" than the little single driver that replaced them. And that is exactly why they were replaced! Again, I thought the premise was...."Why a single driver can't play metal". I stand by my position. They can. In some cases and loadings." It only increases output at low frequencies, to augment where the driver is getting weak. So it doesn't help efficiency"That IS an increase in efficiency.....it is just at the bottom where it is needed. "When used at bass frequencies, a horn has to be pretty large. "Yes they do, I agree which is why in my favorite example it is actually meant to be used in corners for that very reason. "The physical construction of a small back horn is very similar to that of a transmission line. "Not really, Maybe some.....in my example there is a compression chamber, a throat, and the path is an exponential flare and when in corners the mouth is just about right for the intended cutoff. It is not similar to any TL I have seen. It may "behave" that way when not in the corners but I am not even sure that is right. "Put a transmission line in the corner, and it acts very much like a back horn placed in the corner. Alternately, take a backhorn out of the corner, and it becomes a tuned pipe. "Now, this I have to think about! The TLs I have had experience with simply went "boomy" when placed in corners and the BLH had the cut off raised. So I'm not sure if they are "flip flopping" in the way they behave.....we both know any speaker in a corner will gain a little efficiency. A TL that was not designed for a corner will have a big bump in the LF response that it simply does not need. Boom. "That will show you what I say is true. You know how I know? Because I've done it." I believe you, based on your examples.It should be noted that in my comments I was referring to a TRUE BLH.....one that either has a proper mouth or uses the corners to "fake it".It also has a "real" compression chamber....a "real" throat....and a genuine exponential flare on a length that is correct for the cutoff. I have not been talking of a hybrid. But rather a "true" horn. In my example that would in fact be a "Back Loaded Corner Horn"I think we agree there is a place where the designs overlap.....but that is not what I have been talking about. I have meant all along a "true" BLH....one with a mouth the right size and if it is vented to the front and not designed to use the corners it will be big like the J-Low.....or you could use the corners and then the walls form the "big" mouth.Boy, this is a touchy subject! The fact that Jeff "outed me" may lead some to think I have some sort of agenda.....nothing could be farther from the truth. I wish that had not happened....it clouds things and may lead guys to a wrong conclusion about why I'm posting my OPINIONS. I was simply trying to encourage guys who might have been thinking about building a single driver speaker to continue on and not be discouraged by the OPINION they can't play "Metal". That is all.Ed