Subject: How To Implement The Smithy
Posted by Manualblock on Thu, 14 Sep 2006 14:29:35 GMT
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So would that horn be used in a two-way? It crosses at 800 cycles; is that right? Because I see it listed as a mid-horn.Westlake uses it as a HF horn?What would look like a good combination regarding the bass driver?I don't see specs listed anywhere. Say a 15" in a ported box crossing at 800 hz to the Smithy?Could you use an Altec Comp driver?Thanks.

Subject: Re: How To Implement The Smithy
Posted by GarMan on Thu, 14 Sep 2006 15:49:59 GMT
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Hi MB,There's a couple of versions floating around. One for 2" exit and one for 1" exit compression drivers.I built a clone of the JBL 2397 horns and use them with my 2445 2" exit drivers. They're crossed at 800Hz to 15" 2235 woofers. The horns and drivers tend to rolloff just below 10KHz, so it benefits from a supertweeter. Can't really expect a 2" exit compression to extend out to 20KHz.The small smith horn, dubbed "1200Hz Smith Horn" was designed for 1" drivers. You may have to rework the crossover, but this horn may replace the plastic horns used on Pi Speakers.gar.

Subject: I'm open
Posted by colinhester on Thu, 14 Sep 2006 16:30:19 GMT
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...to any ideas. I have a pair of A7 cabs that I'll use for the bottom-end, but other than that I don't care. However, all of us need to be on the same page for the HF compression drive size. This will make the CNC parts a little more cost effective.....Colin

Subject: Re: So A 1200 hz 1" comp would get to 16k?
Posted by Manualblock on Thu, 14 Sep 2006 16:56:06 GMT
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G-Man; do you think a solid 16K with a 1" x'sed at 1200 would do the trick?

Subject: Options
Posted by GarMan on Thu, 14 Sep 2006 17:00:34 GMT
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My vote goes to the 1" version for 3 reasons:1) Most people own or use 1" drivers vs 2". Anyone using Pi speakers could most likely use the horn too.2) 2" compression drivers are very expensive to buy if you don't already own a pair3) I already have a 2" version of the hornsColin, do you have a preference for front-loading or back-loading the work for this group build?Front-loading would have the group pool some money together to design and built some tools to make the individual builds easier. Examples of tools include pre-fab vanes, cutout and router template, pre-fab throat adaptors.Back-loading is if we do minimal upfront and let the individual builders build from scratch.Gar.

Subject: Re: So A 1200 hz 1" comp would get to 16k?
Posted by GarMan on Thu, 14 Sep 2006 18:16:38 GMT
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Hi MB,If you haven't already, the link below contains a lot of information. Lots of measurements, but also lots of measurement issues. I think the "clean" measurements start on page 6 of the thread. Looking at the data, it seems to do a respectable job up to 16KHz. A compensation network similar to the one on your 4-PI should flatten that somewhat.I've never built or heard this version of the smith horn, so I'm only going by feedback from the AudioHeritage guys.Gar.
1200Hz Smith at AudioHeritage

Subject: Re: Options
Posted by colinhester on Thu, 14 Sep 2006 20:09:01 GMT
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I would like to see a 1" or possibly 1.4", but 1" is likely to have more interest.From what you've described briefly, it seems the vanes are the most difficult part to construct. Is this true? Also, this is a very critical part of the dispersion mechanism. I would certainly like to see these CNC'd. Beyond that, what else would be terribly difficult for a novice builder? What about the throat plate? Are their commercial ones available?I would vote for "back-loading" the work. MUCH less hassle.....Colin

Subject: Re: So A 1200 hz 1" comp would get to 16k?
Posted by Manualblock on Thu, 14 Sep 2006 20:40:15 GMT
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They say it gets to 16k which is fine by me. What is your take on the front/back load question if I may ask?I would be up for a pair if this gets off the ground. Front or back.

Subject: Me too! Me Too!
Posted by SteveBrown on Thu, 14 Sep 2006 20:48:18 GMT
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I'd be very interested in buiding a pair of these, too! Count me in.

Subject: Re: Me 3. 1" 1200-1600hz
Posted by Bill Epstein on Thu, 14 Sep 2006 20:57:47 GMT
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Subject: Re: Now I get it. Had to think about that one.
Posted by Manualblock on Thu, 14 Sep 2006 22:46:45 GMT
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A sandwich horn; between the other three horns.

Subject: Re: Options
Posted by GarMan on Fri, 15 Sep 2006 12:56:58 GMT
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Colin,I think anyone with a few woodworking projects under their belt should be able to make this a weekend project, provided the vanes are prefab. It's not that the vanes are very difficult. Just time consuming to make the jig, and very mundane to carve out 14 of them, plus any spares just in case.For me, it'll be a green light if the vanes are prefab.g.
