Subject: Ping Martin King
Posted by Ralph on Wed, 15 Sep 2004 20:08:01 GMT
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Hi Martin,You said you were working on horns these days, and a dual horn design in particular. Care to share any news of your progress?All the best and thanks,Ralph
Martin King Horn Theory Article

Subject: Re: Ping Martin King
Posted by Martin on Thu, 16 Sep 2004 00:05:06 GMT
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Hi Ralph,Well ..... I posted my first set of write-ups on horn theory about a month ago. Then I went on a two week vacation with my family. I could not look at the horn articles any more after a year of working on them.So I have been back in the rut since Labor day. I am still working on horn theory and the dual horn concept, but progress is slow. The following are the important tasks in my life right now in order of priority :1) Three little kids back to school (just in time before I killed them!).2) Two ballet lessons and one tap lesson for my two girls every week.3) Piano lessons for my boy and older girl every week.4) Swimming lessons at the Y for my youngest girl every week.5) Keep wife happy (impossible!)6) Fix bathroom sink (see item 5).7) Outside yard work (see item 5).8) Watch NY Giants with my boy on Sundays and yell at TV just like my Dad and I did for years when I was a kid (can't help it, been a fan since the 60's).9) Full time engineering job, new boss who seems to think I can do a lot more work then they have asked for in the past (I can but he is still a jerk!).10) Hobby (speaker design, listen to new Mosaic set of Art Farmer and Benny Golson, answer 5 to 10 e-mail questions a day, somethimes post on the one or two forums I read at work).That is my life. You see that speaker design is number 10 on my list which means I get maybe an hour or two a couple nights a week and sometimes on the weekends.I recently put the horn theory down for a few weeks and have been working on extending the MathCad worksheets into 3D. This is almost done and will provide an interesting article to be added to my site hopefully in the next month or two. Then it is back onto horns. First, I have to finish the room boundary impact on mouth impedance and size that is started and almost done. Then, I was going to tackle the front and back loaded horn speaker. My guess is that this will be finished and documented by the spring. I am also working with my growing collection of Lowther drivers and building another speaker system. I also try and sleep most nights. Too many interesting tasks and too few hours in the day. My Dad can't understand how I get everything done, I tell him that one boy and two girls is easier then the five boys he had. My brothers and I were bad kids, mine are very good easy nice kids. I will continue writing articles for my site covering what I have learned but there will be no more free MathCad worksheets or free designs. People are starting to make money off my efforts, without remembering where the design tools came from, so I am going to leave what is already available on line but not add any new advanced MathCad tools.I don't generally advertise new work added to my site on any of the forums. I assume interested people are on my mailing list. If you are really interested in keeping track of what I have made available, or where I am going next, you might consider joining the mailing list. There are about 150 members already, and more every week, and I send out updates about every

month or two as blind carbon copies to keep everybody's e-mail address private.Hope that helps,Martin

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Subject: Re: Ping Martin King
Posted by Ralph on Thu, 16 Sep 2004 02:42:07 GMT
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Hi Martin,Thanks for offering so much of your time. I have always been impressed with your work and value your opinions. I'll keep watching as things progress. I'll also probably ask on the forums occasionally so others who aren't aware of your work will be made aware of it.All the best,Ralph

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Subject: Re: Ping Martin King
Posted by Manualblock on Thu, 16 Sep 2004 11:26:46 GMT
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Hi Martin; Is the Art Farmer and Benny Golson available through the new catalogue I don't see them in the last one? Love the Mosaic's, great sound and thorough discography. Thanks J.R.; Listen to Duke Pearson a lot.

Subject: Re: Ping Martin King
Posted by akhilesh on Thu, 16 Sep 2004 12:58:11 GMT
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HI Martin,Thanks for the detailed post. I had a quick question. I am not into horn theory, nor do i think i will be building a horn. However, I am curious, and thought i'd throw this by you. I believe there have been papers published on horn design. Are you extending this work, borrowing from it, or starting from scratch to make up your own model? thanx-akhilesh

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Subject: Some references you may have looked at already
Posted by akhilesh on Thu, 16 Sep 2004 13:11:05 GMT
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http://melhuish.org/audio/horninfo.htmlhas a lot of links, including referencees to AES articles. YOu may have already looked at these, MArtin, but if not, it may be useful. thanx-akhilesh

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Subject: Re: Ping Martin King
Posted by Martin on Thu, 16 Sep 2004 15:31:54 GMT
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Hi J.R.I found the new release on the website a while back. The latest catalog came a couple of weeks ago and it featured this selection. I ordered it right away along with the Dizzy Reece set. It should arrive today or tomorrow.I have most of the Mosaic sets in my collection and started buying from Mosaic not long after they came into existence. I have only been disappointed in one set. I did not buy the Duke Pearson set since I think I have several of the records already.Martin

Subject: Re: Ping Martin King
Posted by Martin on Thu, 16 Sep 2004 15:33:07 GMT
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Hi Ralph,You probably found out more about my boring life then you really wanted to know. 8^)Thanks for the positive feedback,Martin

Subject: Re: Ping Martin King
Posted by Martin on Thu, 16 Sep 2004 16:32:44 GMT
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Hi akhilesh,I answered your post once already but it seems to have disappeared.Over the past couple of years, I have collected a lot of the significant papers writen by the recognized authors in the horn field and put them in my personal notes. I have also visited a lot of the Internet sites covering horn design downloaded the design methods and included them in my personal notes. But after reading all of this body of work I could not find a common method for designing a horn. Some of this is probably due to my inexperience. But in other cases I found several different methods for sizing the coupling volume. So I decided to make my own pass through the theory. This resulted in the series af articles I have recently added to my site. There are more articles to come as I look at different areas in more detail. My method for designing a horn is going to evolve more as I continue to learn.You asked :"I believe there have been papers published on horn design. Are you extending this work, borrowing from it, or starting from scratch to make up your own model?"The answer to your three questions is :Yes.Yes.Yes.I think that my MathCad quarter wavelength methods are going to allow me to look at various aspects of horn design and theory in more detail then what is included in all of the classic papaers.Hope that helps,Martin

Subject: Re: Ping Martin King
Posted by Manualblock on Thu, 16 Sep 2004 16:46:59 GMT

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I like the Pearson samba slant on some of the recordings. May I ask which one dissapionted? BTW I saw the Art Farmer Benny Golson on the website, a "must Buy".

Subject: Re: Ping Martin King
Posted by Martin on Thu, 16 Sep 2004 17:30:53 GMT
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The recent Bud Shank and Bob Cooper select set. One disc was great, and the other two boring. I think that the first review on Mosaic's site sums up my feeling very well.Martin

Subject: Re: Ping Martin King
Posted by roncla on Thu, 16 Sep 2004 21:04:42 GMT
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I have read your work so far on horn theory Martin. Excellent work , i really mean it.I have been fighting with the math and you have expressed it in a much cleaner way.A lot of it i am still grappling with.First, I have to finish the room boundary impact on mouth impedance and size While doing several waveform sims i happened to notice that room volume had an almost resistance activity to the wave as it was exiting?Makes sense on a physical level.ronAgain Martin, excellent work

Subject: Re: Ping Martin King
Posted by Martin on Thu, 16 Sep 2004 23:05:51 GMT
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Hi Ron,Thanks for the positive feedback on the horh work. It represents a first pass through and there are many areas I want to expand and dig in a little bit deeper. The room boundary and room interaction is just one topic. I am going to program the math in MathCad and also use some ANSYS acoustic simulations to get the wave plots you describe coming from the code you use for horns. The ANSYS FEM should help correlate the MathCad work (I am gettign ready with the following explanation at work : "No boss, our new superconducting magnet design really does look like a horn.").Thanks again,Martin