Subject: Cyburgs Needle with FRS 8
Posted by jemraid on Wed, 15 Jun 2005 05:26:36 GMT
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When looking for info about these speakers I came across GarMans post on this forum. Eventually I found some plans and have nearly finished a pair. I used the Visaton FRS 8, available here in the UK from CPC and they sound very good indeed, with an amazingly (for a 3" driver)solid and deep bass. For anyone interested in making a pair, I've put a page about them the link is below.
http://www.jrbham.btinternet.co.uk/needle/index.html

Subject: Re: Cyburgs Needle with FRS 8
Posted by akhilesh on Wed, 15 Jun 2005 13:49:14 GMT
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Great Link. Looks like the notch filter tames the mids nicely, and you get decent bass. How much do you get...around 80 Hz?thanks-akhilesh

Subject: Re: Cyburgs Needle with FRS 8
Posted by GarMan on Wed, 15 Jun 2005 13:50:25 GMT
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Hi Jim,Very nice work on the speakers and the documentation. Thanks for sharing. I like your use of the double baffle for the driver and will copy that idea for myself.Considering the cost of drivers and simplicity of the speaker design, it's an amazing set of speaker, aren't they? I'm glad to hear you're getting deep bass from your set. My pair of Needles have a full and balanced sound, but nothing that can be described a deep-bass. But then again, I'm used to hearing a pair of JBL 2235, each in their own 5 ft^3 cabinets.Gar.

Subject: Re: Cyburgs Needle with FRS 8
Posted by jemraid on Wed, 15 Jun 2005 15:44:39 GMT
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Dear akhilesh,Well Berndt claims 50 Hz and below, certainly I'm hearing things I never did before, but I do not have any way of measuring frequency.I have not used a notch filter, I use the Visaton FRS 8 which apparently does not need one.Regards - Jem

Subject: Re: Cyburgs Needle with FRS 8
Posted by jemraid on Wed, 15 Jun 2005 15:47:29 GMT
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Well it sounds deep to me Gar :-), anymore and the neighbours would be round with hatchets.Regards - Jem

Subject: Re: Cyburgs Needle with FRS 8
Posted by akhilesh on Wed, 15 Jun 2005 17:20:45 GMT
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HI Jem,Sounds good! 50Hz is possible if the box is tuned to that frequency, but then you get an upper bass dip (the one note bass). But I have never heard the driver. It certainly sounds like a good one! I am working on a pair of Fostex Fe103A'as now, and preliminary rough measurements indicate a large peak, from 2200 Hz all the way to 8,000 cycles! I'll be doing a notch on that one for sure, a LARGE notch. -akilesh

Subject: Re: Cyburgs Needle with FRS 8
Posted by jemraid on Wed, 15 Jun 2005 20:43:19 GMT
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Dear akilesh,I suppose the driver the Visaton FRS 8 could be called the El Cheapo of the European single driver scene, much like Radio Shack in the USA. There is a horn loaded speaker that uses it 'The Buschhorn' that claime 50 Hz as well.Alas I have no idea about the upper bass dip or any way of checking it.Regards - Jem

Subject: Re: Cyburgs Needle with FRS 8
Posted by roncla on Wed, 15 Jun 2005 20:53:51 GMT
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A basic TQWT, why the copyright? If you tune the length of the pipe below .707 x Fs it will make a very big dip in the lower FR. The lumpy response of the old Zigmahornet (without lots of stuffing) is the same and it was tuned for .707 x Fs. Been there , done that, got the hat and the T-shirt. And i didnt copyright anything, dont really need the money, my job keeps me in toys. When you first get into this hobby you may think that you have an original concept, but so many of the newer designs are a basic takeoff on concepts that were developed in the 1930s. The only new concepts i have seen are the likes of Tom Daniel , Martin King and the likes. Hell even my horn designs are

based (or start out on the base) on the old concepts and aided by modern day computer pressure/wave sims, which refine the design.(add some Kentucky windage or SWAG in some cases). Lets face it, physics is physics. Either it works,in an acceptable manner, or it does not. An electromagnetic transducer performance is limited to its ability to make the cone move as close to the incoming sine wave as possible. Which is why i like low Qts drivers/BLHs as there is less mass to move and a stronger motor to move the mass. Let the horn do the LF response and provide loading on the cone to help break-up.ron

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Subject: Re: Cyburgs Needle with FRS 8
Posted by jemraid on Thu, 16 Jun 2005 04:37:25 GMT
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The best thing to do Ron would be to explain the above to Berndt, it's his design, most of what you said goes over my head anyway.All I can say is they are very nice little speakers, very importantly my wife can move them easily, I like listening to them and even more now I've had them working for a week.Regards - Jem

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Subject: Re: Cyburgs Needle with FRS 8
Posted by GarMan on Thu, 16 Jun 2005 17:26:25 GMT
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If it sounds good to you and you enjoy listening to them, then you've found yourself a good set of speakers.

Subject: Re: Cyburgs Needle with FRS 8
Posted by jemraid on Thu, 16 Jun 2005 19:22:35 GMT
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Dear Gar,Thanks for the comment, nice of you to say so, I must say that I get a great deal of satisfaction from these, quart out of a pint pot type speakers. It was an easy project to complete, now I've finished most of the woodwork I can tidy up my printing room, go back to my etching and listen to nice music whilst I think about my images.Regards - Jem

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Subject: Re: Cyburgs Needle with FRS 8
Posted by akhilesh on Fri, 17 Jun 2005 01:20:13 GMT

Nothing wrong with Cheap, Jem. In fact, most of us DIYers tend to be that way! -akhilesh

Subject: Re: Cyburgs Needle with FRS 8
Posted by jemraid on Fri, 17 Jun 2005 04:39:49 GMT

Dear akhilesh,Thanks for the 'nothing wrong with cheap' the FRS 8 drivers I speak of are probably made in their thousands and though they are made to a price there is a specification on the Visaton site. If the drivers were found to be seriously divergant from that the company would soon be out of business.I also found that listening to the 'Dansette' record player with a penny on the tone arm was fine until I heard a pair of 'proper' HiFi speakers, the improvement was dramatic, but once there with a proper speaker the differences are minimal.Regards - Jim