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Troels Gravesen DTQWT

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Forum Jump

DIY Speakers and Subs

Page 1 of 3 [1](#) [2](#) [3](#) >

Thread Tools

08-22-10, 03:17 PM

1 | [Link](#)**lbaccoustics**

Member

Join Date: May 2008
Posts: 93

Troels Gravesen DTQWT

Hi all,
Im interested in this design, and was wondering if anyone had any thoughts on it?

http://www.troelsgravesen.dk/JA8008_DTQWT.htm

I dont Know if the waveguide is CD (geddes style) or not- but I have a hunch it is.
It fits my requirements-

A speaker that has a excellent in room response, ideally designed with the aim of increasing the direct radiated sound vs reflected.

Floorstanding design.

excellent response on a waterfall graph.

approx 10" wide front baffle or less.

Reasonable FR down to 60hz or lower.

cost is fairly insignificant- as this is a best I can get aim. What do you think??



Your Total Audio Video Solution



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08-22-10, 03:35 PM

2 | [Link](#)**augerpro**

AVS Special Member

I'd love to hear a pair. I like the overall concept very much, and Troels is a solid designer.

Join Date: Aug 2005
Location: Denver, Colorado
Posts: 1,432

The one thing you will want to consider is the Troels has a certain taste in voicing, with somewhat sloped response on axis. He does this with pretty all his speakers. I would imagine they would be somewhat laidback, and forgiving of poorly recorded material.

~Brandon

[DriverVault](#)
[Soma Sonus](#)
[Old Driver Tests](#)

 Quote

08-22-10, 03:55 PM

3 | [Link](#)

lbaccoustics

Member
Thread Starter

Join Date: May 2008
Posts: 93

very interesting that you say that.

I built the tj13w speakers a couple of years back and i found them to be too layed back to my personal taste.

If this is a voicing thing them I assume that they can be ajusted? or is that going to be a big change?

As im currently listening (and liking the balance of) a pair of focal speakers, so I assume my taste is towards the bright side....its a crime, but I cant help it!

<http://www.stereophile.com/standloud...al/index4.html>

(FR is half way down page)

Last edited by lbaccoustics; 08-22-10 at 07:50 PM..

 Quote

08-22-10, 04:37 PM

4 | [Link](#)

augerpro

AVS Special Member

Join Date: Aug 2005
Location: Denver, Colorado
Posts: 1,432

Quote:

Originally Posted by **lbaccoustics** 

If this is a voicing thing them I assume that they can be ajusted? or is that going to be a big change?

Well, given how much he integrates the slope with all the drivers, it is not so easy to adjust after the fact. I don't why he doesn't develop several tweeter level options.

~Brandon

[DriverVault](#)
[Soma Sonus](#)
[Old Driver Tests](#)

 Quote

08-22-10, 07:45 PM

5 | [Link](#)

lbaccoustics

Member
Thread Starter

Join Date: May 2008
Posts: 93

I sent him a quick email and he has sent back a graph of the response with several tweeter level options- they look very good to me.

Fast work!

 Quote

08-23-10, 03:54 AM

6 | [Link](#)

troels gravesen

New Member

Join Date: Aug 2010
Posts: 1

Dtqwt

Guys,
Treble voicing is a never ending topic as what is perceived as a true presentation of overtones is highly subjective.

Many commercial speakers have too high treble level - simply because treble sells, that is: They sound too "good".

In voicing the treble I always use the flute, oboe, violin and piano from good recordings and it's easy to hear when treble level is too high. From electronic music we cannot know what it should sound like as we have no reference.

A good method of testing treble level is to turn down your volume control close to zero. Put your ear to the drivers and if you still hear treble when the midbass is "dead" - you have too high treble level.

The TQWT and DTQWT obviously can be tuned to personal taste and you may try using R1011 = 1R0, 1R5, 1R8 or 2R2. View attachment.

best regards Troels

[Attached Images](#)

 1.GIF (8.7 KB, 57 views)

 Quote

08-23-10, 06:23 AM

#7 | [Link](#)

penngray

AVS Addicted Member



AVS CLUB MEMBER

Join Date: Feb 2006
Location: Florida
Posts: 26,450
Classified Rating: 100% (1)

Thanks for joining and posting Troels!!

I have saved his build links for a long time and every time I look at them I just keep thinking they are beyond me. I have to build one a some point considering they meet many of my requirements.

It is not "open-minded" to reject knowledge - Bob Lee

 Quote

08-23-10, 07:09 AM

#8 | [Link](#)

vasyachkin

Übermensch

Join Date: Jan 2008
Location: DIY-AV.NET
Posts: 2,134

Quote:

Originally Posted by [Ibaccoustics](#)
What do you think??

good speaker for deaf senile audiophools ...

 Quote

08-23-10, 07:15 AM

#9 | [Link](#)

vasyachkin

Übermensch

Join Date: Jan 2008
Location: DIY-AV.NET
Posts: 2,134

Quote:

Originally Posted by [troels gravesen](#)

*Guys,
Treble voicing is a never ending topic as what is perceived as a true presentation of overtones is highly subjective.
Many commercial speakers have too high treble level - simply because treble sells, that is: They sound too "good".
In voicing the treble I always use the flute, oboe, violin and piano from good recordings and it's easy to hear when treble level is too high. From electronic music we cannot know what it should sound like as we have no reference.
A good method of testing treble level is to turn down your volume control close to zero. Put your ear to the drivers and if you still hear treble when the midbass is "dead" - you have too high treble level.
The TQWT and DTQWT obviously can be tuned to personal taste and you may try using R1011 = 1R0, 1R5, 1R8 or 2R2. View attachment.
best regards Troels*

yeah. i test my house curve EQ by lowering the volume to whisper level. if i still hear all the frequencies evenly then it's set right. i should be able to hear down to ~60 hz at whisper level.

with most speakers if you turn the level down the bass will progressively become inaudible to higher and higher frequencies until all you hear is 1khz+. this means you don't get to hear the full depth of the music at any frequencies below 1 khz.

 Quote

08-23-10, 07:18 AM

#10 | [Link](#)

penngray

AVS Addicted Member



Quote:

Originally Posted by [vasyachkin](#)
good speaker for deaf senile audiophools ...

Says you, which isn't meaningful anyways since you have no real tastes period. 😊

AVS CLUB MEMBER

Join Date: Feb 2006
Location: Florida
Posts: 26,450
Classified Rating: 100% (1)

It is not "open-minded" to reject knowledge - Bob Lee

Quote



08-23-10, 08:07 AM

11 | [Link](#)

lbaccoustics

Member
Thread Starter

Join Date: May 2008
Posts: 93

Hello troels,

Thanks for joining. 😊

I dont know what to say. Ive had my ears tested and I can here to 19/20khz which is very good. I also have no particular dips in my hearing of interest either, but I just find to my taste that running the trebble a little hot sounds more exciting and 'right'.

And I crave dynamics/excitement!!

what can I say....Im a simple person.

On a side note.- I must say that I feel that waveguides as a whole are the answer for domestic audio reproduction. Im convinced of it now. Having made the waveguide on the dtqwt and its variants, what do you think?

Last edited by lbaccoustics; 08-23-10 at 08:12 AM..

Quote

08-23-10, 10:39 AM

12 | [Link](#)

flyng_fool

AVS Special Member
AVS CLUB MEMBER

Join Date: Aug 2009
Location: Frisco, TX
Posts: 1,815

Very interesting. Hey Penn. Do you think these would be a better mate for my DTS-10 than the Statements since they're so much more efficient?

Dumb enough to spend lots of cash on this junk!

Quote

08-23-10, 10:43 AM

13 | [Link](#)

pennggray

AVS Addicted Member



AVS CLUB MEMBER

Join Date: Feb 2006
Location: Florida
Posts: 26,450
Classified Rating: 100% (1)

Quote:

Originally Posted by **flyng_fool**
Very interesting. Hey Penn. Do you think these would be a better mate for my DTS-10 than the Statements since they're so much more efficient?

I have no idea what their Max SPL is. I would say neither are a good match for the DTS-10 based on the fact that I doubt they come close to the DTS-10 in SPL.

I just think we have to match horn design with horn designs.

I do think these design might have a unique and subjectively "Incredible" sound to them. Maybe not the sheer SPL/dynamics but for listening enjoyment this type of design could be something special. Atleast all that I have read about them points to that sort of subjective conclusion.

It is not "open-minded" to reject knowledge - Bob Lee

Quote

08-23-10, 11:09 AM

14 | [Link](#)

flyng_fool

Quote:

AVS Special Member
AVS CLUB MEMBER

Join Date: Aug 2009
 Location: Frisco, TX
 Posts: 1,815

Originally Posted by [penngrey](#)

I have no idea what their Max SPL is. I would say neither are a good match for the DTS-10 based on the fact that I doubt they come close to the DTS-10 in SPL.

I just think we have to match horn design with horn designs.

I do think these design might have a unique and subjectively "Incredible" sound to them. Maybe not the sheer SPL/dynamics but for listening enjoyment this type of design could be something special. Atleast all that I have read about them points to that sort of subjective conclusion.

I'm not concerned about max SPL as much as I am about something that can come close to keeping up with it. I am really a noob when it comes to this so I'll ask for your patience. Since the DTS-10 is so sensitive, would it be a better match to couple it with a more sensitive speaker? Perhaps I'll start my own thread on this.

Dumb enough to spend lots of cash on this junk!

 Quote

08-23-10, 11:37 AM

15 | [Link](#)

zero the hero

AVS Special Member

Join Date: Aug 2004
 Location: NJ
 Posts: 1,358

those speakers are almost 95db efficient... how much more could you want?

 Quote

08-23-10, 11:47 AM

16 | [Link](#)

lbaccoustics

Member

Thread Starter

Join Date: May 2008
 Posts: 93

Quote:

Originally Posted by [flyng_fool](#)

I'm not concerned about max SPL as much as I am about something that can come close to keeping up with it. I am really a noob when it comes to this so I'll ask for your patience. Since the DTS-10 is so sensitive, would it be a better match to couple it with a more sensitive speaker? Perhaps I'll start my own thread on this.

I dont know how loud you want to go, but even the TQWT goes above 110db with a clean distortion sweep- god knows how much further the DTQWT would go with the extra 4 10 inch bass drivers. I wouldnt be surprised if were talking over 117db.

 Quote

08-23-10, 12:19 PM

17 | [Link](#)

penngrey

AVS Addicted Member



AVS CLUB MEMBER

Join Date: Feb 2006
 Location: Florida
 Posts: 26,450
 Classified Rating: 100% (1)

Quote:

Originally Posted by [flyng_fool](#)

I'm not concerned about max SPL as much as I am about something that can come close to keeping up with it. I am really a noob when it comes to this so I'll ask for your patience. Since the DTS-10 is so sensitive, would it be a better match to couple it with a more sensitive speaker? Perhaps I'll start my own thread on this.

See your thread, Im back tracking a little on this speaker it might really suit your needs.

It is not "open-minded" to reject knowledge - Bob Lee

 Quote

08-23-10, 12:29 PM

18 | [Link](#)

jpjibberjabber

I Love My Haters

Join Date: Aug 2008
 Location: Popping Internet
 Myth Balloons
 Posts: 803

Quote:

Originally Posted by [penngrey](#)

I have saved his build links for a long time and every time I look at them I just keep thinking they are beyond me.

Lotsa stuff going on on this forum that fits that bill.

Anyway, I've always found a laid back treble to definitely be less fatiguing and, really, you get used to it over

time. It's never easy to get used to painful treble. Accuracy comes at the price of excitement sometimes.

Quote

08-23-10, 12:32 PM

19 | Link

pennggray

AVS Addicted Member



AVS CLUB MEMBER

Join Date: Feb 2006

Location: Florida

Posts: 26,450

Classified Rating: 100% (1)

Quote:

Originally Posted by [jpbjberjabber](#)
Lotsa stuff going on on this forum that fits that bill.

Hah, get out of DIY you silly little audiophile. Everything in this forum is beyond you, you have no real skills like real men with power tools 🐼

They are only beyond me because I do not have the Patience for those internals 🐼 Nothing here is remotely close to what I do for a day job 😊

It is not "open-minded" to reject knowledge - Bob Lee

Quote

08-23-10, 12:40 PM

20 | Link

vasyachkin

Ubersensch

Join Date: Jan 2008

Location: DIY-AV.NET

Posts: 2,134

Quote:

Originally Posted by [lbaccoustics](#)
Hello troels,

Thanks for joining. 😊

I dont know what to say. Ive had my ears tested and I can here to 19/20khz which is very good. I also have no particular dips in my hearing of interest either, but I just find to my taste that running the trebble a little hot sounds more exciting and 'right'.

And I crave dynamics/excitement!!

what can I say....Im a simple person.

On a side note.- I must say that I feel that waveguides as a whole are the answer for domestic audio reproduction. Im convinced of it now. Having made the waveguide on the dtqwt and its variants, what do you think?

by boosting treble you're trying to make up either for lack of overall SPL or for lack of treble definition.

you simply need clean and very loud speakers, and no need for running the treble hot.

btw i really need 2 go 2 sleep right now ...

Quote



08-23-10, 12:55 PM

21 | Link

lbaccoustics

Member

Thread Starter

Join Date: May 2008

Posts: 93

Quote:

Originally Posted by [vasyachkin](#)
by boosting treble you're trying to make up either for lack of overall SPL or for lack of treble definition.

you simply need clean and very loud speakers, and no need for running the treble hot.

btw i really need 2 go 2 sleep right now ...

Maybe.
Maybe dynamic compression,

definatly wasnt because the speakers ive used wernt 'clean' though.- <http://www.troelsgravesen.dk/TJL3W.htm>

seas excel drivers are clean



I do have a strong desire to play large scale classical at ref levels though.- just love the climax. Its the same with surround- thats why I like 'the dark knight' film so much.- its all build up! 😊

Quote

08-23-10, 06:07 PM

22 | Link

jpjibberjabber

I Love My Haters

Join Date: Aug 2008
Location: Popping Internet
Myth Balloons
Posts: 803

Quote:

Originally Posted by **pennggray**

Hah, get out of DIY you silly little audiophile. Everything in this forum is beyond you, you have no real skills like real men with power tools 🤖

They are only beyond me because I do not have the Patience for those internals 🙄 Nothing here is remotely close to what I do for a day job 😊

DIY is fun. I've got a trio of solid pieces I built about 10 years ago.

You know what else is fun? Owning real speakers. 😊

Quote

08-23-10, 09:02 PM

23 | Link

flyng_fool

AVS Special Member
AVS CLUB MEMBER

Join Date: Aug 2009
Location: Frisco, TX
Posts: 1,815

Quote:

Originally Posted by **jpjibberjabber**

Lotsa stuff going on on this forum that fits that bill.

Anyway, I've always found a laid back treble to definitely be less fatiguing and, really, you get used to it over time. It's never easy to get used to painful treble. Accuracy comes at the price of excitement sometimes.

When i adjust the treble I close my eyes and remember what some instruments sound like when I hear it in person, for instance a cymbal or triangle or the sibilance in a singer's voice when they sing a word with the "s" sound in it. Then I adjust the treble to where it sounds right to me. Invariably I end up running it kind of hot. Not very scientific I'll grant you but hey, it seems to work for me.

Dumb enough to spend lots of cash on this junk!

Quote

08-24-10, 08:05 AM

24 | Link

Ibaccoustics

Member
Thread Starter

Join Date: May 2008
Posts: 93

ok, having spoke to the wife, - (much to my surprise) she actually LIKES the idea of a avantgarde audio style setup!!

She would be happy as long as the horns were gloss black 😊

I have no idea what options are available for diy in this area but im limited to about 20" cones 🙄

omg!!!

she loves this-

<http://www.google.co.uk/imgres?imgur...t:429,r:15,s:0>

anyone know of a good CD design using good drivers like the jbl pro compression units??

Quote

08-24-10, 09:08 AM

25 | Link

Starkiller4299

Evil Deviousness.

Join Date: Jan 2007
Location: SW MI
Posts: 523

Dude. Nice. Only problem with horns like that is that you'll need to machine them yourself, probably with a lathe. If you have one already, great. If not, could be a challenge.

Quote

08-24-10, 09:43 AM

26 | Link

ibaccousticsMember
Thread StarterJoin Date: May 2008
Posts: 93

hopefully someone does a horn for me to use. otherwise it will be a big job to make the waveguides that big. If I were to try and build them, I doubt I could get a acceptable finish as using a lathe. besides a 20 inch horn isnt possible (at least with the kit I have available.

I do have a cnc router that goes up to 4ft wide though- so its possible to laminate a horn out of something like mdf. - but this would take weeks of machining though and I dont know how to get the profiles.

Realistically if no one made one this big, I would get someone to vac-form it.

someones got to make a OS waveguide in this size surely??

Quote

08-24-10, 10:05 AM

27 | Link

flyng_foolAVS Special Member
AVS CLUB MEMBERJoin Date: Aug 2009
Location: Frisco, TX
Posts: 1,815

You could make a clay model, then do a plaster mold negative and then fiberglass over the negative mold. That might work.

Dumb enough to spend lots of cash on this junk!

Quote

08-24-10, 10:16 AM

28 | Link

pennggray

AVS Addicted Member



AVS CLUB MEMBER

Join Date: Feb 2006
Location: Florida
Posts: 26,450
Classified Rating: 100% (1)

It just isnt happening. There is a great thread on DIY about making DIY waveguides.

Here it is...<http://www.diyaudio.com/forums/multi...on-thread.html>

I know Eric H and I have talked about it in PMs. If I had a Geddes waveguide or any other BIG waveguide I can use them as molds and layup my own fibreglass molds.

There is a guy in Europe that has a source to some very good waveguide designs and there was a group buy going on but nothing happened into the US.

Here is that discussion.

<http://www.diyaudio.com/forums/group...des-horns.html>

Quote:

Originally Posted by **flyng_fool**

You could make a clay model, then do a plaster mold negative and then fiberglass over the negative mold. That might work.

That is one method talked about in that DIY Audio thread.

It is not "open-minded" to reject knowledge - Bob Lee

Quote

08-24-10, 03:53 PM

29 | Link

ibaccousticsMember
Thread StarterJoin Date: May 2008
Posts: 93

It seems that thread is for unusual shape waveguides and that regular geddes style CD waveguides are already available.

I can see this being a long complicated project.

Quote

08-24-10, 04:24 PM

30 | Link

jpjibberjabber

I Love My Haters

Join Date: Aug 2008
Location: Popping Internet
Myth Balloons

Quote:

Originally Posted by **flyng_fool**

When I adjust the treble I close my eyes and remember what some instruments sound like when I hear it in person, for instance a cymbal or triangle or the sibillance



Posts: 803

in a singer's voice when they sing a word with the "s" sound in it. Then I adjust the treble to where it sounds right to me. Invariably I end up running it kind of hot. Not very scientific I'll grant you but hey, it seems to work for me.

Only problem is that sibilance, although gone on that recording, might re-appear on a different one.

Quote



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Troels Gravesen DTQWT

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DIY Speakers and Subs

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Thread Tools ▾

08-24-10, 04:28 PM

31 | [Link](#)

flyng_fool

AVS Special Member
AVS CLUB MEMBERJoin Date: Aug 2009
Location: Frisco, TX
Posts: 1,815

Quote:

Originally Posted by [jjjibberjabber](#) ▾
Only problem is that sibilance, although gone on that recording, might re-appear on a different one.

True, very true.

Dumb enough to spend lots of cash on this junk!

Quote



08-24-10, 04:31 PM

32 | [Link](#)

penngray

AVS Addicted Member



AVS CLUB MEMBER

Join Date: Feb 2006
Location: Florida
Posts: 26,450
Classified Rating: 100% (1)

Quote:

Originally Posted by [lbaccoustics](#) ▾
It seems that thread is for unusual shape waveguides and that regular geddes style CD waveguides are already available.
I can see this being a long complicated project.

later on in the thread there is some good discussion about OS waveguides and some good info on building a mold for one. Im still wanting to build a mold myself.

All of the waveguides have "CD" Constant Directivity. Geddes style waveguide is called an OS (oblate spheroid) waveguide and Geddes style "OS" waveguides are not really available. DDS-ENG90 is about the cheapest option I know of and they are not that cheap, they also use to have a poor build quality.

It is not "open-minded" to reject knowledge - Bob Lee

Quote

08-24-10, 05:05 PM

33 | [Link](#)

lbaccoustics

Member
Thread StarterJoin Date: May 2008
Posts: 93I could wait for the AE waveguide- you know it will be good.
- The problem is that I want a perfectly round one and I would like it in 18" too.- I cant see AE doing them that big.mmm, JBL 1 inch super tweet on a 6 inch waveguide and a jbl 2 inch compression driver on a AE 18" waveguide with 2 AE bass units at the bottom.
oh yes, I like that!

08-24-10, 06:39 PM # 34 | [Link](#)

Monger
Advanced Member
Join Date: Feb 2005
Posts: 865

Quote:

Originally Posted by **Ibaccoustics** 
*I could wait for the AE waveguide- you know it will be good.
 - The problem is that I want a perfectly round one and I would like it in 18" too.- I cant see AE doing them that big.*

*mmm, JBL 1 inch super tweet on a 6 inch waveguide and a jbl 2 inch compression driver on a AE 18" waveguide with 2 AE bass units at the bottom.
 oh yes, I like that!*

I don't think I'd wait around for that. It's been a couple of years already since John brought it up.

 Quote

08-25-10, 02:43 AM # 35 | [Link](#)

A9X-308
AVS Special Member
Join Date: Mar 2008
Location: The former democracy known as Australia
Posts: 2,700

Quote:

Originally Posted by **Ibaccoustics** 
ok, having spoke to the wife, - (much to my surprise) she actually LIKES the idea of a avantgarde audio style setup!!

She would be happy as long as the horns were gloss black 😊

I have no idea what options are available for diy in this area but im limited to about 20" cones 🙄

omg!!!

she loves this-
<http://www.google.co.uk/imgres?imgur...t:429,r:15,s:0>

anyone know of a good CD design using good drivers like the jbl pro compression units??

Having heard the Duos and Trios on a few occasions, I was less than impressed: they do look pretty though. There are DIY builds that will easily better them for less money (I designed and built one myself) but it took a lot of time and effort and much research.

I don't 'do' smilies. If it makes you feel better, imagine them to be where you think they should. Now exhale....

 Quote

08-25-10, 08:43 AM # 36 | [Link](#)

Ibaccoustics
Member
Thread Starter
Join Date: May 2008
Posts: 93

It looks like Im going to have trouble sorceing the horns then. - I cant see me getting a true perfect finish using diy methods- So ill have to give this some thought.

 Quote

08-25-10, 08:55 AM # 37 | [Link](#)

penngray
AVS Addicted Member



AVS CLUB MEMBER

Join Date: Feb 2006
Location: Florida
Posts: 26,450
Classified Rating: 100% (1)

If you want those horns then you need to start reading DIYaudio.com because that is where all the expertise for those UGLY big horns exist 😊

You should read LeCleac'h horn thread.

<http://www.diyaudio.com/forums/multi...ach-horns.html>

Also google Tractrix horn

It is not "open-minded" to reject knowledge - Bob Lee

 Quote

08-25-10, 11:15 AM # 38 | [Link](#)

A9X-308
AVS Special Member
Join Date: Mar 2008
Location: The former democracy known as Australia
Posts: 2,700

Quote:

Originally Posted by **Ibaccoustics** 
It looks like Im going to have trouble sorceing the horns then. - I cant see me getting a true perfect finish using diy methods- So ill have to give this some thought.

The **Azuras** are LeCleac'h profile and come in a variety of sizes. **Stereolab** also have a variety of tractix flares.

I don't 'do' smilies. If it makes you feel better, imagine them to be where you think they should. Now exhale....

08-25-10, 12:32 PM # 39 | Link

ibaccoustics
Member
Thread Starter
Join Date: May 2008
Posts: 93

Thankyou for that! 😊 - lots of choices and no vat as the tractrix horns are in europe! 🇪🇺

I suppose the geddes profile isnt going to be an option.

What I need to find out is if the other profiles on offer are going to have low enough 'honk'- as this is the key factor if im going to do this. I assume I could reduce hom with 30ppi foam regardless atleast.

08-25-10, 12:38 PM # 40 | Link

penngray
AVS Addicted Member
AVS CLUB MEMBER
Join Date: Feb 2006
Location: Florida
Posts: 26,450
Classified Rating: 100% (1)

There are many discussions about the "Honk"

You will never find an consensus. The Leclach followers will say there is no honk in their designs since there is an extreme round over and very smooth transition out of the mouth. The Geddes followers will say there is no honk if there is foam to control the honk.

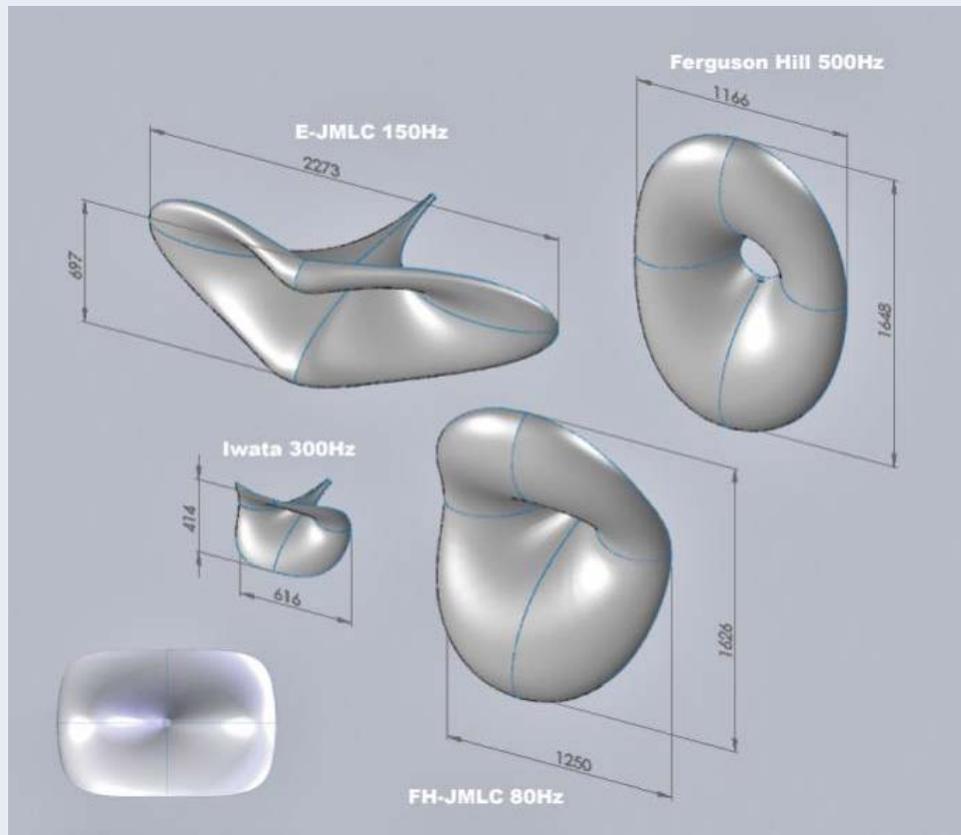
Its whole lot of subjective banter that I have followed for awhile. Fun stuff, you should get into the Wavelet threads 😊 Then you get pretty pictures to go along with all the subjective stuff 🇪🇺

FWIW, Even Geddes has posted that diffraction is an evil part of the "HOM" issue so the less diffraction we have in any horn the better its going to sound. His OS profile can be done by jzagaja on DIYaudio.com!!

He has been working on getting a group buy into the US for a long time....

<http://www.diyaudio.com/forums/group...des-horns.html>

Here are a few of his designs (Note: look at the mm length, those are MONSTER horn designs!!!)



A few of us want a 500Hz Iwata design.

It is not "open-minded" to reject knowledge - Bob Lee

Last edited by penngray; 08-25-10 at 12:53 PM..



08-25-10, 12:44 PM # 41 | Link

penngray

See this link for a picture of his 12" OS Waveguide with a picture of a speaker beside it that I think is very WAF!!!!

AVS Addicted
Member



AVS CLUB
MEMBER

Join Date: Feb 2006
Location: Florida
Posts: 26,450
Classified Rating:
100% (1)

<http://www.diyaudio.com/forums/group...ml#post2178610>



Lets build it !!! 🌱

It is not "open-minded" to reject knowledge - Bob Lee

Last edited by penngray; 08-25-10 at 12:52 PM..

Quote

08-25-10, 01:00 PM

42 | Link

Ibaccoustics

Member
Thread Starter

Join Date: May 2008
Posts: 93

Yes I saw this on the thread you posted before.

Unfortunately, the aesthetics mean that I would need a conical horn so the Iwata profile is out for me.

The OS conical waveguides suggested on the site would match my requirements, but again aesthetics come into it- I would want a 18" cone and in black.

Im also in the UK so im unlikely to get a group buy going for me over here.

Given the choice, I would want a OS profile horn, usable down to below 500hz, with 90 degree pattern control. The cone would also have a full roundover on the edge so it would look ok without mounting on a baffle.

Quote

08-25-10, 01:03 PM

43 | Link

penngray

AVS Addicted Member



AVS CLUB MEMBER

Join Date: Feb 2006
Location: Florida
Posts: 26,450
Classified Rating: 100% (1)

I didn't know you are in the UK. You actually might have an easier time getting what you want considering all the great sources for these designs are over in Europe.

btw, OS and conical are too different designs. Meaning you either have a OS or a conical waveguide.

Getting a 500Hz OS waveguide isnt that hard, it just has to be a large waveguide. The Azura AH-550 is perfect for you. It isnt OS but it has Le Cleac'h flar rate which many will argue is as good as or better.

It is not "open-minded" to reject knowledge - Bob Lee

Quote

08-25-10, 01:51 PM

44 | Link

Ibaccoustics

Member
Thread Starter

Yes, I ment conical as in a fully round horn rather than a square or asymmetrical one- its hart to get your idea over with all these tecnical descriptions.

Join Date: May 2008
Posts: 93



The AH 550 is lovely and has a great FR, but I dont think it will be practical to get a horn from australia to the uk, you cant get any further away!

Quote

08-28-10, 11:59 AM

45 | [Link](#)

Ibaccoustics

Member
Thread Starter

Join Date: May 2008
Posts: 93



having given it a bit of thought- Im going for it.
Ive put a thread up on diyaudio dicussing my project-

<http://www.diyaudio.com/forums/multi...orn-build.html>

Quote

08-28-10, 02:27 PM

46 | [Link](#)

A9X-308

AVS Special Member

Join Date: Mar 2008
Location: The former
democracy known as Australia
Posts: 2,700



I've read the diyaudio thread, and what you are asking for does not exist as far as I'm aware. My big trax would have suited (though no roundover beyond 90° to axis) but they were custom made. I suspect you will need to do the same or change your design requirements. A 2" driver will be required, but they sound like dirt operated that low and at level.

I don't 'do' smilies. If it makes you feel better, imagine them to be where you think they should. Now exhale....

Quote

08-28-10, 05:21 PM

47 | [Link](#)

Ibaccoustics

Member
Thread Starter

Join Date: May 2008
Posts: 93



If thats the case, I need to compromise on how low I drive the mid. Roughly how low would you suggest I can go cleanly?

can you provide any info on your build?

sounds interesting!

Quote

08-28-10, 05:45 PM

48 | [Link](#)

A9X-308

AVS Special Member

Join Date: Mar 2008
Location: The former
democracy known as Australia
Posts: 2,700



Quote:

Originally Posted by **Ibaccoustics**

If thats the case, I need to compromise on how low I drive the mid. Roughly how low would you suggest I can go cleanly?

About an octave above resonance, typically 7-800Hz but it will depend on the driver. These things have very little Xmax and every octave lower you want to run them needs 4x more.

Quote:

Originally Posted by **Ibaccoustics**

can you provide any info on your build?

sounds interesting!

No pics, as I've only owned a camera in recent years, and the rig was disassembled and sold off / given away / burned several years ago when I moved back to the city and had no room for it. It was huge and went through many changes and different flares and drivers (and was getting a new midbass horn) that it would take too long to describe. Horns for below a few hundred Hz have too many limitations and great high efficiency drivers are available, as is cheap clean power, that I see no need for them now.

Edit: forgot to add that you might find some of the stuff on [Erik's site](#) interesting but read closely as there are some not obvious links in there.

I used his EVM12L trax midbass at one stage.

I don't 'do' smilies. If it makes you feel better, imagine them to be where you think they should. Now exhale....

Last edited by A9X-308; 08-28-10 at 06:01 PM..

Quote

08-29-10, 11:27 AM

49 | [Link](#)

penngray

AVS Addicted Member



AVS CLUB MEMBER

Join Date: Feb 2006
Location: Florida

Im reading your posts in the waveguide thread over on DIY. You should get the Leleach designs...he is right about their pattern vs OS waveguides.

It is not "open-minded" to reject knowledge - Bob Lee

Posts: 26,450
Classified Rating: 100% (1)

Quote

08-30-10, 12:41 PM

#50 | [Link](#)

Ibaccoustics

Member
Thread Starter

Join Date: May 2008
Posts: 93

Thankyou A9X-308 + penngray.

Im reading up like my life depended on it right now. 😊

Quote:

Im reading your posts in the waveguide thread over on DIY. You should get the Leclach designs...he is right about their pattern vs OS waveguides.

- Agreed, but I have no way to know for sure if this is at the cost of 'honk'- thats what concerns me.
- I think im just going to have to accept that the only way to absolutly know for sure is to build it!

-It looks like the standard JMLC from the 'waveguides and horns' thread is the best answer for me. And the delivery is a awsome price!!!

-The question is, which one ??

The options are the JMLC 350hz or 400hz.
I think im at the point where Im going to have to decide what compression driver to use.....oooh, exciting!

Any recommendations for reasonably priced compression drivers?

- do you think going for the 350hz horn is worth it as even the 400hz is likely to be fairly far below FS whatever driver I use.

Also -I have heard that there arnt many (or any) good 2" compression drivers, so 1" or 1.4"?

-At least this aspect can be easily changed at a later date if needed.

If im reading the FR's right, a 1" driver (most) would work fine as a mid/high range driver and wouldnt require a tweeter/supertweeter on top. hmm

Last edited by Ibaccoustics; 08-30-10 at 12:50 PM..

Quote



08-30-10, 01:18 PM

#51 | [Link](#)

augerpro

AVS Special Member

Join Date: Aug 2005
Location: Denver, Colorado
Posts: 1,432

I tested a 425hz with a 1.4" driver and it could easily cross 800hz, maybe lower. I would go with the smallest horn that allows the crossover point you want.

~Brandon

[DriverVault](#)
[Soma Sonus](#)
[Old Driver Tests](#)

Quote

08-30-10, 01:48 PM

#52 | [Link](#)

Ibaccoustics

Member
Thread Starter

Join Date: May 2008
Posts: 93

Hello augerpro.

Welcome. - Ive been folowing your econowave style build, as well a some builds over on HT forums. Nice work. 😊

Any advice you can give is appreciated.

Ok,
The wife just decided for me-
400hz horn it is 😊

Last edited by Ibaccoustics; 08-30-10 at 01:53 PM..

Quote

08-30-10, 02:59 PM

#53 | [Link](#)

A9X-308

AVS Special Member

Join Date: Mar 2008
Location: The former
democracy known as Australia
Posts: 2,700

Quote:

Originally Posted by **Ibaccoustics**
Also -I have heard that there arnt many (or any) good 2" compression drivers

Wrong. OTTOMH I can think of several that I have used myself from BMS, B&C, JBL and Emilar. The TADs have an excellent reputation but are expensive and the phrams are delicate. Radian 2" drivers are also well regarded.

I don't 'do' smilies. If it makes you feel better, imagine them to be where you think they should. Now exhale....

 Quote

08-30-10, 03:39 PM

#54 | [Link](#)

augerpro

AVS Special Member

Join Date: Aug 2005
Location: Denver, Colorado
Posts: 1,432

Quote:

Originally Posted by [Ibaccoustics](#)

Welcome. - I've been following your econowave style build, as well as some builds over on HT forums. Nice work. 😊

You'll just make Zilch's head swell with comments like that 😊

Actually I decided to use the QSC horn and Eminence drivers as a result of my testing last year, before I ever heard of Econowave, and before Zilch used them. It was my testing that brought these devices performance to his attention. In fact the inspiration was Geddes' Summas. Not taking anything from the Econowave, they are good projects, enough that I'm debating not putting out the budget 2512/DE160 version of my No Quarter since he already covered that driver combo, so there doesn't seem much point.

~Brandon

[DriverVault](#)
[Soma Sonus](#)
[Old Driver Tests](#)

 Quote

08-30-10, 04:55 PM

#55 | [Link](#)

Ibaccoustics

Member

Thread Starter

Join Date: May 2008
Posts: 93

[quote=augerpro;19122132]You'll just make Zilch's head swell with comments like that 😊
QUOTE]

Apologies Brandon (if its ok I call you that?), I just phrased it that way as I couldn't remember the name of the 'No Quarter' off hand and wasn't aware of the time line of evolution between the 2 projects.

Your all good by my standards 😊

A9X-308-

The TAD's are way out of budget, but I have heard some at one point and would be very happy with that level of performance! 🙏

The radian (850pb??) is interesting, and also a stretch, but...maybe.
As I've said before, I would be more willing to spend out here than other areas, as long as the performance is significantly improved by the increased financing.

 Quote

08-30-10, 05:15 PM

#56 | [Link](#)

augerpro

AVS Special Member

Join Date: Aug 2005
Location: Denver, Colorado
Posts: 1,432

No apologies necessary, I'm sure Zilch is reading this and giggling 😊

~Brandon

[DriverVault](#)
[Soma Sonus](#)
[Old Driver Tests](#)

 Quote

08-30-10, 05:53 PM

#57 | [Link](#)

Ibaccoustics

Member

Thread Starter

Join Date: May 2008
Posts: 93

Your too kind. 😊

Im looking into the radian, and it looks good.

I haven't found any independent tests/info on distortion or FR yet though. If it holds good distortion towards its lower end that would make it worth it to me.

The problem I'm having is that I'm limited by the size of the mouth I choose for the horn. Once I've chosen it, I'm set in many of my choices from that point on (crossover etc). I really would like to play cleanly and low though.

 Quote

08-30-10, 07:01 PM

#58 | [Link](#)

augerpro

AVS Special Member

Join Date: Aug 2005
Location: Denver, Colorado
Posts: 1,432

I'll defer to A9X-308's judgement on how high the Radian can reach, but I don't know that anyone is using 2" drivers without a supertweeter. In the 1.4" size there are several that have the low end capability and can stretch just high enough to not need a supertweeter.

~Brandon

[DriverVault](#)
[Soma Sonus](#)
[Old Driver Tests](#)

Quote

08-31-10, 01:14 AM

#59 | Link

A9X-308

AVS Special Member

Join Date: Mar 2008
 Location: The former
 democracy known as Australia
 Posts: 2,700

Quote:

Originally Posted by **augerpro**

I'll defer to A9X-308's judgement on how high the Radian can reach, but I don't know tht anyone is using 2" drivers without a supertweeter.

Nah, except for the coaxials like the BMS and new B&C (maybe TADs), I wouldn't run a 2" w/o a supertweeter or usually above 8k or so.

I don't 'do' smilies. If it makes you feel better, imagine them to be where you think they should. Now exhale....

Quote

08-31-10, 07:13 AM

#60 | Link

IbaccousticsMember
Thread Starter

Join Date: May 2008
 Posts: 93

I like the aesthetics of a 3 way with a big horn and a little one on top, but Im not sure it would be worth the added complexity and cost. Considering the price of the 2" radian, This could get really expensive.
 Unless a cheap supertweeter can be had that performs well in the top range.

http://www.radianaudio.com/component..60pb_850pb.pdf

Looking at the FR data, the driver is good out to 20k, I assume people dont run the driver up that high in a horn due to the horn itself rolling the top end off.-but presumably, this would be the same regardless of the sise of the mouth used, so even the 1.4" would perform the same in a 400hz horn.

I dont have any FR data on the horns im looking at yet, and likely im not going to until I actually get them here to test.

Quote

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DIY Speakers and Subs

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Thread Tools

09-20-10, 02:38 PM

61 | Link

Kim Bay Smidt

New Member

Join Date: Sep 2010

Posts: 2

Quote:

Originally Posted by [lbaccoustics](#)

Hello troels,

Thanks for joining. 😊

I dont know what to say. Ive had my ears tested and I can here to 19/20khz which is very good. I also have no particular dips in my hearing of interest either, but I just find to my taste that running the trebble a little hot sounds more exciting and 'right'.

And I crave dynamics/excitement!!

what can I say....Im a simple person.

On a side note.- I must say that I feel that waveguides as a whole are the answer for domestic audio reproduction. Im convinced of it now. Having made the waveguide on the dtqwt and its variants, what do you think?

Hi,

I've visited Troels and listened to the DTQWT. There's no doubt that Troels is knowing what he is doing. The DTQWT does not sound laid back at all to my ears.

We played all kinds of music for hours at 100dB+ and I had no listening fatigue at all. This tells me the speaker is perfectly designed.

More treble (and distortion) will make my ears bleed so Troels did this very right IMHO. Change one resistor to adjust the level of

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Look into the Hørning Agathon Ultimate which is the inspiration for the DTQWT I think. I've not heard the Agathons but the Euprodite at Tommy Hørnings place in Brabrand/Århus. I was very disappointed about the Euprodite. The modified Lowther was too colored for my taste and the bass was lacking punch and power ten fold! They played deep, yes, but who want such big headphones!?

The DTQWT is another story. So clean, uncolored and neutral! And dynamics in spades! And the bass? Deep, clean, detailed, powerful and scale the acoustic bass to have a true life like size! Wow! :-D

Very few can make crossovers that really blend the sound from multiple drivers together so it really works. Troels is one of those very few masters. I'm indeed impressed.

Happy to be building my own pair of the DTQWT, and now in MKII, check troelsgravesen.dk



09-20-10, 02:49 PM

62 | Link

Kim Bay Smidt

New Member
Join Date: Sep 2010
Posts: 2

Quote:

Originally Posted by **lbaccoustics**

I like the aesthetics of a 3 way with a big horn and a little one on top, but Im not sure it would be worth the added complexity and cost. Considering the price of the 2" radian, This could get really expensive. Unless a cheap supertweeter can be had that performs well in the top range.

Looking at the FR data, the driver is good out to 20k, I assume people dont run the driver up that high in a horn due to the horn itself rolling the top end off.-but presumably, this would be the same regardless of the size of the mouth used, so even the 1.4" would perform the same in a 400hz horn.

I dont have any FR data on the horns im looking at yet, and likely im not going to untill I actually get them here to test.

I once had the 2" Radian 950PB. The very best compression driver I've heard. Clearly better than TAD, BMS and all the Altec drivers I've heard, including the 288...

The Radian driver sounded so smooth, dynamic and right. The major problem is, for me at least, how impossible it's to make neutral sounding system using multiple horns. And the fuzz about coaxial drivers does not make it better IME/IMHO.

A friend are using the 950PB in a 400 Hz horn, a super tweeter and open baffle bass (four 15" Eminence alpha 15a) each side. Properly the best way to go using compression drivers?

Build the DTQWT MKII and don't worry about loudspeakers for a long time.



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