Subject: For Beginners
Posted by lon on Fri, 02 Apr 2004 19:37:21 GMT
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For Beginners like me there's a PDF from PE available whichis the manual from one of their kits. I present it here for comment and criticism by the professionalsand other readers. For certain of the techniques in speakerbuilding there isno "Methods of Work" archive that I have found... something systematic in the manner of a FAQ for first time readers andthose ready to actually get out the hot glue gun. The Craftsman Corner is the most logical place for this stuffthat I can think of but Wayne may have another suggestion. It's my opinion that the good speakerbuilding book has notbeen published yet. I enjoy David Weem's "Great Sound StereoSpeaker Manual" but it lacks a lot of T/S details and information on the current box modelling software that is around today. VanceDickason's Cookbook leaves a lot to be desired for a first-timereader IMO but I may be an isolated case.
BR1 manual PDF

Subject: Re: For Beginners
Posted by Bill Fitzmaurice on Fri, 02 Apr 2004 21:26:43 GMT
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That manual is quite good in that it includes a goodly amount of theory as well as instruction.There isn't much out there for the newby DIYer, and that's a big departure from 10-20 years ago. That because there was a lot of experimentation going on then in speaker design, but precious little now. I write for AudioXpress magazine, which on average has two speaker projects per issue. That's a far cry from its pre-2001 predecessor, Speaker Builder, which during its late '80s early 90's heyday often had four or five projects per issue. The reason for the current lack of projects? A lack of people writing them. If you're serious about DIY go to the AudioXpress site and see about getting back issues of Speaker Builder, most especially 1985 to 1990 or so. Most of what is considered cutting edge speaker technology today in fact appeared in Speaker Builder during that time period coming out of the home work shops of both professional and amateur builders.

Subject: Re: For Beginners
Posted by Wayne Parham on Fri, 02 Apr 2004 22:25:56 GMT
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I think maybe the reason for the decline you're seeing is due to these online discussion groups. The date range you're talking about coincides with the introduction and widespread growth of BBS and HTTP on the internet.Personally, I love rot rod car and audio magazines. I loved computer magazines too back in the 70's and 80's when they were into the nuts and bolts, schematics, source code and assembly language. It's great to be able to thumb through the pages, take it with

you wherever you go, and keep it for ever and ever when you're done.But now days, lots of people are on the internet and it has it's own advantage, being interactive. I was amazed to see how much activity there was on audio and automotive discussion groups when I first found them. It has definitely had an impact on printed media.So there are cool things being published in both media. But the point I wanted to make here is about online media. There's a ton of stuff happening here, much more than a half dozen speaker projects a month. If you look around online, you'll probably find that many per hour. And I'm not talking about just cheezy thrown-together stuff either, I'm talking about serious, well-thought-out efforts.

Subject: Re: For Beginners
Posted by Wayne Parham on Fri, 02 Apr 2004 22:53:38 GMT
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What you've brought up is exactly what this particular "craftsmen" forum is here to address. The other forums talk about some of the technical issues and opinions and what not, but it seemed like there weren't any forums on construction and building techniques. Oh, sure, there are some excellent woodworking websites and many of those are pointed out by the capable craftsmen who are regulars here. But as for audio-specific craftsmanship skills, I think this place is pretty cool.

Subject: Re: For Beginners
Posted by wunhuanglo on Sat, 03 Apr 2004 00:32:27 GMT
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It's true that there is a lot of self-published stuff on the net that is print-ready beautiful. But I really believe there's something else going on, and that is the effect of general affluence combined with the availability of ready-made at any price point.Years ago people had less disposable income, audio was a far higher percentage of take home pay, and the range of choices was more limited

believe can be directly correlated with the decline in audio oriented publishing.

Subject: Re: For Beginners
Posted by lon on Sat, 03 Apr 2004 02:33:27 GMT
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My collection of Speakerbuilder mags goes back to 1998 whenI discovered it by accident at the newish Barnes and Noble herein Northeast Wisconsin. B&N also carried Glass Audio and AudioAmateur. And I think Ed Dell was right in combining those publicationsunder one masthead as _audioXpress_. But I still came in in themiddle of the party not knowing much about

what was going on. In a letter to Ed (email I think) I suggested that as a publishing effort, the best cue to take is from _Cooks Illustrated_ magazine. _Cooks_ is what I'd call a "guys cooking mag." I subscribed toit for a couple years... got about 2 years of it free for readerstips I submitted. The thing about Cooks is that from issue to issuethey don't assume you know anything. Soooo, if they are talking aboutfrying chicken, there's a sidebar showing you how to cut up a chicken _in every feature where cutting up a chix is required_. Theyalso have sidebars on "how food works" for the scientifically curious. Where I'm going with this is that a style sheet approach andarchive of how-to articles has not been assembled or written byanyone anywhere. During the years since I first subbed to Speakerbuilder after buying a few issues, I mostly looked at the pictures while understanding little of theory. To a great extent that is still thecase. But in recent times with the feedback and encouragementavailable from AudioRoundtable and the Full Range Driver Forum I have actually assembled that first project described under the header"boomtoobz". I am listening to the organ recital (Pipedreams,Minnesota Public Radio) right now and am amazed at what I was able to make with a couple of closeout RS 1197s and some pretty longlengths of PVC pipe. These look different than what I've linkedto as the inspiration for the boomtoobz. So far as I know it canbe considered something new. That's a good feeling of accomplishment. But putting theory tothe project is a bit difficult even with Martin King's advice here. I'm hoping that these things can come together so beginners suchas myself do not view the whole activity as the blindmen and the elephant: one piece of info here and another some place else with the critical bit in another place yet to be discovered. That's why I show links from other sites' links and projects. At this time there seems to be no archival site for simple schematicreading, board assembly, component gathering nor a style sheet forfor preparation of articles.
lon@athenet.net

Subject: Re: For Beginners
Posted by Bill Fitzmaurice on Sat, 03 Apr 2004 14:28:27 GMT
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I agree that the net has an influence on things, but one unfortunate aspect of the net is that anyone can put in their two cents, including those who probably shouldn't. There's an advantage to print in that to get there you generally have to pass muster with an editor. A point in fact to illustrate this is the forums at that other site, most especially in the cables and tweaks sections, where it's not uncommon to see threads that resemble a drill team consisting of Ray Charles, Stevie Wonder and Jose Feliciano, if you get my drift. I'm not sure of the value of a forum where as much if not more disinformation than information is disemminated.It is true that DIY is on the decline. Witness the removal of Rat Shack from the genre. Sure, Parts Express and MCM are booming thanks to the net and mail-order, but the local sources for DIY have dried up. A good deal of that has to do with the maturity of T/S theory; in the 80's Speaker Builder printed project after project using the relatively new T/S parameters. Now the attitude there is 'been there,done that, how many ways can you build a vented box?' Now what you mostly see there are the two box types still not commonly available at Circuit City: TLs and horns. I expect line arrays will start showing up regularly. As noted before, they'd love to print a lot more projects, which they pay for, if only writers would submit them. Personally I see that this could turn around, though not for the best of reasons. From Wunhuanglo's comment I can see that he doesn't work in retail management. Disposable income is on the decline, not the rise, for the average American. If you

don't believe it, check and see who the largest employer is in your state. Chances are like mine it's Walmart, followed by MacDonalds and Burger King. Not exactly where one gets rich quick. Manufacturing jobs are heading to China, and they're not coming back. The good news is that thanks to Chinese manufacturing you can go to Walmart and buy an air conditioner or TV for 77 bucks; the bad news is that while our retail costs for manufactured goods are down so are average incomes. Family income is holding, but only because both mom and dad have jobs. People that used to get health benefits as part of their package now have to pay for it. Yes, those at the top of the heap are doing quite well. But the top of that heap is getting to be a smaller place with every passing day. While Chinese manufacturing also means that there will still be plenty of $29.95 speakers at Best Buy there will also be a demand for better quality goods at prices less than that of the average SUV, and that's where the resurgence of DIY could take hold. Going back to the original question, I think that Dave Weems book belongs in every DIYers library, and probably Vances as well. Consider mine perhaps; though I've rendered most of the projects in it obsolete compared to my subsequent efforts, there's still a lot of value there for the newbie. There are lots of others as well, all it takes is a bit of effort to find them.

Subject: Re: For Beginners
Posted by Wayne Parham on Sat, 03 Apr 2004 18:48:43 GMT
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I'd say you're just the guy to assemble a really cool FAQ. Get together with Fitzmaurice and the rest of the regulars here and compile it into a great new DIY audio/video book. I'll betcha it's popular enough to publish in print and online, and Epstein was itching to do a how-to-DIY video, so that could be put together too. Whaddya think?

Subject: Re: For Beginners
Posted by wunhuanglo on Sat, 03 Apr 2004 19:04:20 GMT
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While I agree with much of your thesis, it seems that you might not be considering all factors. For instance, Wal-Mart may have the largest number of employees in New Hampshire, but the fact

Hyannis for that matter) is not attributable to Wal-Mart cashiers going to work in the morning. Here

same story. Retail stores are continuously popping up everywhere, and though they may not be

car, and the European and Japanese status marques are in abundance.I think two parent incomes are a fact of a new attitude as much or more than necessity. When we were growing up

no computers, CD players, DVDs, no Internet provider, no cell phones, no Disneyland vacations.

The median cost of a new home continues to increase as does the median square footage. Home

we work many more hours to obtain them. Those extra hours are the ones that at one time might have been DIY time, but no more.

Subject: Re: For Beginners
Posted by Bill Fitzmaurice on Sat, 03 Apr 2004 20:06:14 GMT
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Actually, one qualification for a Massachusetts driver's license is that you have to flunk an IQ test, and preferably have a flatline EEG. Anyone trying to travel between Nashua and Beantown at less than 75 MPH is forced off the road. What other places call 'road rage' in Massachusetts is referred to as 'good driving manners'. As to the cummuters going from NH to Mass, it's not because they want to, it's because they have to. They can't afford to live where they work. It's the same as those who spend 4 hours a day on the LIE. It's not because they enjoy traffic, it's because at $3000 a month for a walkup studio who can afford to live in Manhattan? 'Joe Millionaire' maybe, but certainly not 'Average Joe'. My mother never worked. She never had to. In the sixties my father never made more than $10k per year, and we had a big house in suburban Boston, a summer home and a boat. My wife always has worked, and not to support our need for toys. She carries our health insurance that takes 1/3 of her pay. When I went to college my total expenses senior year, 1971, were $1500. My daughters senior year, 1999, cost $32,000. I just had some surgery, spent 11 days in the hospital. The tab came to $60k, and half was for drugs. What happens to the poor schmo who doesn't have insurance? Retail stores are popping up all over, and they all share one trait: low wages and minimal benefits. I know. I manage a 3 store retail chain. The platinum card carrying SUV driving people of means are doing very well, and aren't afraid to spend. But at the other end of the spectrum people are hanging tight; if they aren't scared of not having a job at all in 2 months they just don't have the spare income to spend on anything beyond the necessities. Ours sales of high end goods are booming. Middle priced goods are only selling at a mediocre pace, though, and the lowest priced are hardly moving at all. The gap between haves and have nots is widening. That's why I see DIY coming back, because better to DIY than DW (do without).Most people up here also have newer cars and own homes. That's mostly because interest rates are so low that almost anyone can afford a house or a new car. It's also because you can't find an affordable apartment and with labor rates at $50 per hour no one can afford to keep fixing their old cars. Oh, and it's not the mechanics making that money, they're lucky to get $15; it's the shop owners that make the profits. I know. They're the ones who come into my stores dropping two or three grand at a pop. They used to be the exception, with most sales being in the $300 range. Now they are the rule; we don't see many mechanics any more. If you really want to see how well things are going for the working stiff take a drive to Walmart, or any other retail store, and look in the parking lot. Not the one out front, the one out back, the employee lot. Count how many Lexus and Infinitys you see. Then count the KIAs and Hyundais. When you discount the high priced stuff that belongs to management you can do what I do everyday and be thankful that you don't have to get along on what they make.

Subject: Re: For Beginners
Posted by Ion on Sat, 03 Apr 2004 20:15:24 GMT
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Lots of talking points here and all well-taken. This rise/declinething of DIY has me a bit buffaloed. It was my impression with seeing the volumes at MAD, PE and other forums that the 'handcrafted audio' hobby and product were on the rise. So like Theodore Sturgeon says in an essay, "always ask the nextquestion." Since manufacturing is moving out and certain designs of speakers are played out, what's left and where's the market? My take on this is Boutique Audio: handcrafted specialized productwhich is sought by the discerning consumer but impractical toproduce by Polk or Bose(tm) or Klipsch. To that end, the next phase of the audio hobby might very well becottage industry on a localized basis. Also, since the designs we are seeing go considerably past thegolden ratio box with a hole in it, my notion was to takethe carefully considered and modelled designs we see from the TL, front horn and back horn specialists and recruit art galleriesto display them. That or perhaps coffee houses become yourshowroom... no retail space is secured. There is a constant flowof viewers with an eye toward the same level of sophistication as anart object which has the added benefit of making music. :-) This sculptural, aural and tactile aspect of the newer designs is something which I have not really seen discussed much. As a non-professional I have always been interested in design andarchitecture. So I'm thinking that these designs could be displayedin an exhibit fashion. I believe this Think Tank approach is valuable and it is very early on in the discussion of what the next wave of American invention will be. We always have to ask the next question like Sturgeon says.

Subject: Re: For Beginners
Posted by Bill Fitzmaurice on Sat, 03 Apr 2004 20:22:42 GMT
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I see two routes for DIY. On the one hand you have those who want the best quality product you can get for the best possible price, and DIY is definetely the way to go to get to that destination. The other is for those who don't accept that what's out there already is as good as it gets, and keep looking for better ways. I'd put myself in that category, for while I may be past the stage of DIY for its own sake I still believe that the best speaker cabinet I'll ever build is the next one.

Subject: Building a FAQ [was Re: For Beginners]
Posted by Ion on Sat, 03 Apr 2004 20:48:21 GMT
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I think it's a worthwhile venture. And I would add that the graphic skills of (I think her name is Sherri who did the logo for AudioRoundtable) or someone similarly skilled in the art of the graphic presentation and layout would also be necessary. I have nohtml skills at all, nor do I have a digital camera, scanner, andvarious other accessories necessary to build a useable FAQ. But working

together, I think a start can be made. Several of thecraftspeople involved on an active level with the hobby live inapartments like myself. What we can do without a cabinet shop as asubcontractor is limited. With a cabinet shop doing the panel cutting, assembly and finishing can be done in a fairly confined space so long as ventilation is available-- _in season_ in my case being from Wisconsin. :-) [I've never gotten any comment from my neighbors here on the second floor of the building about the occassional sawing and hammering that goes on in here-- sometimes during the Opera on Saturday afternoon from the Met.] So what would the first question of the FAQ be or what is thefirst question that any of the readers... especially you _lurkers_... want it to be? ;-) I'll start it out which only seems only fair: You've decided on a design you'd like to execute. What is the proper way to do a cut list? Is there software thatcan take a given panel size and spit out a cut list which is mostefficient and conserves the most product? Or is this still somethingthat has to be done with an architectural scale rule and graph paper? On a related topic and before I forget, the most recent Fine Woodworking magazine has a reference for a handheld calculator for doing conversions from inches to millimeters back and forth. It's from Calculator Industries and is called The Pocket Handyman III. I have not gotten the URL for it yet, but I could put it in a separatepost.

Subject: Well, yeah but...
Posted by wunhuanglo on Sat, 03 Apr 2004 21:54:48 GMT
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Tuition at UNH this year is $8664. That's the number that compares to your 1971 tuition. Your daughter apparently didn't go to UNH, so that's not a fair comparison. But it is indicative of my point: Daddy, state school - Daughter private school.Everybody demands more and more all the time and then talks about two jobs "just to make ends meet".Yeah, $6K a day in the hospital is steep. But 30 years ago I'll bet that it would have been three days, $3K and funeral expenses. $30K worth of drugs is serious business and I have to believe they bought your life.I think I anger you because you have the impression that I drive a Lexus SUV and don't notice anyone else from inside my tinted windows. Far from the truth - I drive a Lexus 300, but I got it last year when both my parents died and it's 9 years old. They got it from my sister who gave it to them when she bought a new car. I certainly couldn't afford it on my own.Yes, there certainly are a lot of people who struggle, and retail is the place to find them if you're not going to your local diner to talk to the waitresses. But my point was and is that far fewer people are in truly dire straits today than ever before, and many of the most vocal about how hard it is to make ends meet are much better off than their parents and grandparents were.

Subject: Not to beat a dead horse, but...
Posted by Bill Fitzmaurice on Sun, 04 Apr 2004 13:18:25 GMT
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the $1500 my last year at UNH cost me included room and board as well as tuition. Tuition was

about $600.Did my daughter go to private school? Yes- because private schools have endowments and she managed to get financial assistance that made my actual out of pocket the same as it would have been at UNH. UNH,like most state schools, is dead broke and you can forget about any financial aid there.Fully half of my drug expenses were for IVs: sugar water. I asked my doctor if typical markup of the $30k of drugs I got was the same as the typical 50% margin in other retail operations, for an actual cost of $15k. He said they probably cost more like $1k; they make huge profits on the insured to make up for what they lose treating the uninsured or Medicare patients. You don't anger me at all. But I'm surprised that you'd take the stance that you do when you admit that you can't afford a new Lexus any more than I can. My point is that being in retail I see first hand what people are buying, who's buying it, and more important who's not spending because they can't afford to. The descrepancy between the number of those who can afford to spend a lot and those who can't afford to spend at all is the widest today than I've seen in 25 years of retail management experience, and that includes during recessions. Finally, my parent's generation typically had one person supporting the family, and managed comfortably. June and Ward Cleaver were the rule, not the exception. Our generation typically has both parents working, and not because they want to, but because they have to. That in and of itself is not a bad thing, but when both parents in the average family are working and still can barely cover expenses(and current Dept of Labor statistics as well as my personal observations bear that out) the economic forecast is not a rosy one.

Subject: One last thing...
Posted by wunhuanglo on Sun, 04 Apr 2004 19:53:07 GMT
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Please forgive my lack of manners; I sincerely hope you're doing OK after your incident in the hospital.Charlie

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Subject: Re: One last thing...
Posted by Bill Fitzmaurice on Mon, 05 Apr 2004 02:06:24 GMT
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Let's just say that my expenses for toilet paper are way down. Prognosis is good, starting chemo and radiation in 2 weeks. If you are over 45 and haven't done the colonoscopy thing yet get your ass into your doctor's office, literally. That ten minutes of mild discomfort saved my life. Pass it on.

Subject: Third Route
Posted by GarMan on Mon, 05 Apr 2004 20:10:10 GMT

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Bill,How about a third route? Wanting something to call your own. After completing a few DIY projects, I've come to realization that the feeling of Pride does a pretty good job of covering up any downsides of DIY. Even if you can't beat the quality of mass marketed products, at least I can brag about doing it myself. I've come to a point where I can't even get myself to build from a kit. I've to start from scratch. Next step would be to do my own designs.Gar.

Subject: That's the spirit
Posted by Bill Fitzmaurice on Tue, 06 Apr 2004 11:30:34 GMT
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My sentiments exactly some thirty odd years back. One disagreement, though. You can beat the quality of mass marketed products, it's just a matter of taking the necessary time to develop the expertise to do so.

Subject: Re: One last thing...
Posted by lon on Tue, 06 Apr 2004 18:01:15 GMT
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I'm 57. Been there. Did that. Recommended.