Subject: Re: Where do you look for ideas?
Posted by Wayne Parham on Sat, 14 Sep 2019 15:16:02 GMT
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I would never DIY if I could find what I was looking for commercially. It is always more efficient to do research and design for an optimized product, and then to create tooling to make the product in whatever quantities are expected. So companies making commercial products have a head-start.

There are two criteria that I've found push me towards DIY. One is price and the other is quality. Sometimes commercial offerings tend to favor the middle of the road, and so I can find no low-cost optimizations nor any high-quality optimizations.

Or sometimes, available market offerings are good in many aspects, but not the ones I'm looking for. Like for example, a high-end speaker that looks great as furniture but that doesn't measure well. Or one that measures well in one direction but not over a range of directions. Those are qualitative requirements that maybe even the best high-end speakers don't provide. Or maybe I want one or two requirements to be satisfied, but at a good price. So like an inexpensive speaker that measures well but doesn't have an expensive wood finish to raise cost.

Those are the things that drive me into DIY. I have this experience in cars as well as audio. I have a couple classic cars, and when I first got into the hobby, I wanted a shop to build a high-performance engine, install a new transmission and differential, suspension parts and brakes. What I got from the shop was not reliable, so I ended up studying the specialized requirements of the parts I would need to satisfy my automotive performance requirements, and I built the engine myself. It took me several iterations, learing as I went, before I had an engine that would do what I wanted it to do.

I suppose I could have continued to look for shops that might do the work for me, and in some cases, I did that. I built relationships with various machine shops and restorers and paint/body shops. I job out work where I can. But some things just aren't really in the wheelhouse of any of these shops.

Even engine builders tend to specialize, and so while one guy can build a great quarter-mile engine and knows how to setup a car for the quarter mile, he will not necessarily have any experience in SCCA/IMSA because handling requirements are quite different. Likewise NASCAR is pretty much a longevity thing - Gotta run high-RPM for hours at a time, not just seconds. And handling requirements are different here too. So each has different optimizations. Street cars have some aspects that can benefit from NASCAR optimizations and some that would favor SCCA/IMSA optimizations. And of course, every street racer wants to be the quickest car too, so some quarter-mile optimizations are useful too.

Of course, there are commercial offerings that might satisfy my desires in a car. There are Porsches and Lamborghinis that would probably satisfy my performance requirements. But I wanted a classic American muscle car, and those manufacturers don't make 'em. So I could find a high-end car shop to buy one from. But some of the best ones are priced in the stratosphere. And even of those, some use crate motors that may or may not suffice for me.

So it's the same situation for me in cars as it is in audio. I DIY because I have specific needs that just really can't be satisfied commercially, either at all or at my price point.