Subject: WOW, first time I've been AMAZED in a while.(long)
Posted by dbeardsl on Sun, 16 Mar 2003 22:00:44 GMT
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I dunno if you guys remember reading anything about that Woody Norris guy in pop-sci and his various inventions including Hyper Sonic Sound(HSS) reproducing sound using a really high freq carrier signal (100Khz) and relying on a bunch of DSP and the nonlinearity of air in high amplitudes.I know Wayne remembers.Anyway, the guy (now the owner of his multi-millon dollar company thing) drove 5 hours from San Diego up to California Polytechnic Institute (Cal Poly) and gave a demonstration/presentation of HSS to about 30 of us in the Audio Engineering society on campus. WOW, I haven't been amazed by something sound related in a while. For those who don't haven't heard of it, HSS is a means of producing the entire audio spectrum using a flat HF transducing surface which is kind of piezo-electric like but different. It relies on the non-linearity in the restoring force of air molecules under high displacement situations (high SPL) which means that with really loud HF sounds, the peaks of the wave travel faster than the troughs, turning a sine wave into a saw tooth as it progresses. When this HF sine wave is amplitude modulated by another carrier, this change in the wave as it progresses generates a bunch of harmonics up and down the spectrum. Anyway, a bunch more stuff happens and you get the full spectrum of Sound from a small box-less panel that goes in a perfectly straight line and who's SPL doesn't reduce hardly at all with distance. The units he had for a demo weren't eq'd for crap and only did about 100hz and up, but that a 20-20k one is coming out next month sometime. Whatever the case, it was really amazing.A laser beam of sound. It was REALLY strange, I've never heard anything so strange, imagine watching a laser pointer jump around the room, anybody can locate the dot, it appears in the same place for everybody. Then imagine its not a dot you are staring at but a sound source you are hearing. Its really strange to hear the thing pan across the room and reflect off every surface including people. It was even stranger when it passed across your head, you'd swear you were wearing headphones. The guy talked a lot about the physics behind it and everything, and had us all walk a hundred yards away and he we could still hear it very clearly. http://www.atcsd.com/tl_hss.htmlOne other thing he mentioned which wasn't on his website was a new idea for a subwoofer using a flying saucer shaped thing (Frisbee size) made of fiber glass that holds a vacuum and contains a voice coil to flatten and unflatten the disc to reproduce low freq sounds. He said they were going to release it in a number of months.Sorry for the crappy writing, I'm excited.

Subject: Oh, now that's cool!
Posted by Wayne Parham on Sun, 16 Mar 2003 22:05:55 GMT
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Hi Danny!Now that's cool!!!I agree with you - There isn't much new in loudspeakers and some of the hype gets a little sickening. But HSS technology is really interesting. Neat stuff!Wayne

Subject: Re: WOW, first time I've been AMAZED in a while.(long)
Posted by Scholl on Mon, 17 Mar 2003 09:03:17 GMT
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This was done in some museums in the 50s but not to the extent and quality of Atlantic Technology. Back in the 90s I tried to reproduce the effect with a piezo tweeter and several generators, mixers and an FM modulator but with poor results, the amp overheated from the 100k

commercial product come out.Thanks for the update.

Subject: Re: WOW, first time I've been AMAZED in a while.(long)
Posted by dbeardsl on Mon, 17 Mar 2003 16:20:38 GMT
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Yeah, I saw it in pop-sci a while ago and remember seeing the website, but actually listening to it and hearing about all the contracts being signed with different companies and demos being given around the world, it got me pretty excited, I might even buy some stock.Check out some of the news about the company via yahoo.