Subject: Re: Futzing with vibration control
Posted by Wayne Parham on Fri, 13 Nov 2020 22:36:46 GMT
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It's an interesting observation, isn't it Barry?

You know, in the 1980s and 1990s, I used only solid-state amps. I was quality conscious, so I used good equipment but none of it was tube gear. So I was familiar with these speakers on amps that could deliver 100 watts easily. Some of my gear went as high as several thousand watts - and the speakers could handle it - but it was silly power for home hifi or even home theater. It literally damages the house. Drywall shakes loose, exposing the fasteners and built-in cabinetry becomes loose too. It's just nuts.

Still, a good 100 watt amplifier sounds great on these speakers. It's more than enough, so dynamic range is great. And as you said, the woofers really "wake up" when you give 'em a little juice.

Now you're seeing something about the 2226 that we've talked about, but not lately. You may remember a few discussions that we've had over the years. The 2226 actually changes its electro-mechanical characteristics when it's used at power levels over a few watts. All speakers do this, but the 2226 is noticeably so. It was made to be used at several hundred watts, after all.

So it's not just the damping factor here. In fact, in this case, it's mostly not the damping factor but the electro-mechanical parameter shift. The loudspeaker system was designed with this in mind, and it uses an alignment that prevents the thermal shift from going into an underdamped condition at extended full-power periods. It is slightly overdamped at moderate power levels, and a little more overdamped at low power levels. It doesn't shift far enough to be underdamped even at full power, so you can throw hundreds of watts at it and it won't get a peaky underdamped curve. But it is much more overdamped under a watt than it is over a watt.

This is one of the handful of reasons why flanking subs are so nice for these speakers. Even with moderate to high power levels, flanking subs provide extension and baffle step correction and mitigation of SBIR and higher-frequency room modes. But when low-power tube amps are used, it is even more helpful because we're not just facing baffle step but also the overdamped alignment.

Anyway, all that to say I can understand your impressions here. I'm really familiar with these speakers at higher-power levels and the effortless impact and punch they give. You don't ever get there on just a watt or even ten watts. They're much more polite with SET power. Hit 'em with fifty or a hundred watts though and they show their other side. They remind you of all the best and most powerful concerts you ever heard. I kinda like to give the knob a twist every so often to get 'em back there. :)