

Re: op-amps with wide open-loop bandwidth ?

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- *From:* John Popelish <jpopelish@xxxxxxxx>
 - *Date:* Wed, 15 Mar 2006 00:39:23 -0500
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Dave Moore wrote:

: And since, it is fairly obvious that you are not yet a circuit
: designer, you would probably get a more helpful response if you start
: over in sci.electronics.basics
:
: Good luck.

Well John, that's all fine and well in the world of pseudo-intellectual EE-expertism, however in the real world of empirical evidence, it don't pan out. There are op-amps with specs far exceeding your limited definition of what's necessary to 'disappear the source of sound coloration' that sound entirely different in the same circuit and exhibit very different qualities of dynamics in the feel of a guitar when you're playing it.

Then I suspect that the circuit is not well designed (is making demands on the opamp that do not allow the assumption of excess gain to apply). By the way, sorry if I underestimated your experience. The question just sounded like one from a newbie. I was sincerely trying to be helpful.

I started out designing guitar amps over 20 years ago and quickly learned that the op-amps of the era couldn't compare with my discrete designs. I only recently started to look at op-amps again as a viable possibility due to recent advances in op-amp design.

Like any component, there is some art in getting the expected performance from them. No audio circuit, especially one in an instrument amplifier should ever let the opamp output saturate, even under severe signal overload conditions. That is when you hear the opamp, as it struggles to recover closed loop operation and can do all sorts of strange and prolonged things. The feedback should keep the loop closed for any signal it can reasonable be expected that someone will put through the amp.

I didn't ask for a lecture on tone. I asked for knowledge of any op-amps that have a flat open-loop response beyond 20KHz instead of the typical corner of 100Hz to 19Khz.

Re: op-amps with wide open-loop bandwidth ?

The open-loop gain in V/mv I don't give a rats ass about other than that it's relatively flat to 20KHz or higher.

That is becoming clear.

I realize that I didn't do a very good job of communicating my quest, but cut me some slack here. Ever since hurricane Katrina waxed my estate, I've been averaging 5-7 hours sleep per night sometimes even skipping sleep altogether in an effort to complete a very important project for a rather important person on schedule in spite of the hurricane induced setback.

You have my sympathy.

I can't tell you about the circuit it's going to go in because it's not for any circuit in particular but rather for sonic evaluation for exactly the reason that in the work I do, sonic evaluation is the only thing that means diddly-poop.

I'm interested. What are the test conditions for this test? Will the opamp output saturate during this test?

I've heard the theories of the "experts" on the subject of tone fall by the wayside over the years and watched rather bemusedly as they scramble to come up with new theories as to why the old theories didn't account for fact that people can hear the difference in circuits that so-called experts would logically conclude (according to the theory du jour) should be sonically indiscernable.

There are lots of poorly designed audio (especially instrument) amplifiers out there. The good ones sounds impressively similar.

IOW, the reason I want such an op-amp is to collect empirical data rather than rely on the opinion of self-proclaimed experts such as yourself that don't know near as much as they think they do.

Now, you are the one presuming. If you don't like the advice, you are guaranteed double the purchase price refunded.

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Now, if you want to rail on and hurl insults because I misinterpreted your question and gave a seemingly non-sequitur answer, do carry on.

I guessed wrong on your skill level and made what I hoped was a useful suggestion. People get lots of helpful hand holding on the basics group. The designers are more critical of each other, here, where they are more of a club.

Get over it, please.

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