Re: quick emitter follower question

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- *From*: "tempus fugit" <toccata@xxxxxxxxxxxxxxxxxxx>
- *Date*: Wed, 13 Sep 2006 20:41:59 −0400

Thanks for all the replies.

Michael, since you mentioned the application.....

I currently have a really slick switching system for my guitar effects pedals. To make a long story short, the only problem with it is that it uses relays to switch the effects in and out, and they give an audible "pop" when switched. It's not horrible, but I was trying to find a way to make things cleaner (I can't leave well enough alone). I first thought of using a simple transistor or JFET as a switch in place of the relay, but a friend informed me that it wasn't possible to have the audio pass through the transistor if it was also being used as a switch (or is there a way?). We came up with the idea of using a transistor as an amp with very little gain and switching the amp on and off instead of a relay. Which brings us to this discussion.

Any thoughts on this line of reasoning?

Thanks

"Michael Black" <et472@xxxxxxxxxxxxxxxxxxx> wrote in message news:eea464rpk1@xxxxxxxxxxxxxxxxx

> Eeyore (rabbitsfriendsandrelations@xxxxxxxxxxxxxxxxxxxxxx) writes:
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> > tempus fugit wrote:
> >
> > > Hi;
> > >
> > > I'm thinking about using a simple 1 transistor emitter follower in an
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> audio
>
> > > design (the audio signal will pass thru it). Does the noise figure of
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> the

> transistor need to be taken into account, or will there be no noise

added

> since there is no amplification happening (sort of like the signal just
> 'passes thru' the transistor untouched)?

There certainly will be noise added but not a lot.

Graham

And of course, the real issue is the application. One worries about noise with weak signals, with larger signals the signal swamps out the noise.

A lot of places where emitter followers are used, the issue of noise will never come up.

On the other hand, one reason you see transformers in low level audio signals even today is because they are at a point where the signal is weak, and introducting noise at that point is not a good thing.

So they have those matching transformers between microphones and the preamp, and between those moving coil phono cartridges and the phono preamp, since they need to step up the voltage at those points without adding any noise. Once the signal is stepped up by the transformer, the noise of the following preamp is less important.

Michael

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