Subject: Why don't components sound bad after "break-in"?
Posted by GarMan on Sat, 25 Mar 2006 02:31:54 GMT
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There's something about this practice of breaking-in components that I don't seem to understand. I can buy into this line of thinking that components can change its sound after a period of use. But why do they always seem to change for the better instead of worst? "The amp was shrill out of the box, but after running it for 50 hrs at max power, it smoothed itself out" If something's going to change, it has just as much chance of going one way vs the other. Why do we never hear of amps/cable/etc. sounding perfect out-of-box, but change for the worst after break-in?

Subject: Re: Why don't components sound bad after "break-in"?
Posted by Manualblock on Sat, 25 Mar 2006 03:03:27 GMT
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Wow', my post logged at exactly the same time G-man; I didn't mean to jump your thread. I think the sound gets better because the electrical forces re-form capacitors over time and equalise bias loops etc. Heat and power change compliance's and any materials must seat themselves to function to their best advantage; like an egine runs better after it has locked in.But thats just my guess and it may be 100% wrong. I know my oil-filled caps are finally opening up becuase my jaw dropped suddenly after two weeks of listening and I heard a whole new sound. Must be the heat loosening things up on the molecular level.Hey; did you order the Marchand Kits?

Subject: Re: Why don't components sound bad after "break-in"?
Posted by Bob Brines on Sat, 25 Mar 2006 13:17:14 GMT
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I have always been skeptical of "break-in" of drivers and particularly "burn-in" of components. Drivers do break in. The suspension needs to be exercised because it is very stiff straight from manufacture. With your fingers, push the cone in to Xsus, then push the cone out to Xsus. The driver is now broken in sufficiently for T/S measurements. 1/2 hour, 1 hour, 24 hour break in with 20 Hz signal at Xmax will do nothing further. However, if you do do a long, hard break in, then you must allow the driver to cool for hours if you want to get usable T/S measurements. Is failure to cool the driver the reason for reports that the T/S parameters move after break in?At the high end, drivers also need break in, at least paper full-rangers. I'm not convinced that plastic and metal drivers need significant break in. In a paper full-ranger, there are a lot of membrane break-up modes that exercise the cone. But this break in takes minutes, not hours. I am highly skeptical of of reports that drivers take hundreds of hours to break in.How do I come off saying these things? Well, I manufacture a small number of speakers and get to hear a lot of new drivers. These are drivers I am very familiar with. They are in my HT, they are in my two-channel. This is what I hear:

When the new cabinets are completed, I take the new drivers out of the manufacture's boxes and install them. I then play Bach's Toccata in d at a loud level. This gives some 15 seconds of 37 Hz to the speakers. Bottom end break in is now complete. I then play a mix of things on a demo disk of my own creation, mainly to listen for shakes, rattles and resonances in the new cabinets. This goes on for maybe 30 minutes. The new speakers now sound virtually indistinguishable from my personal speakers that have thousands of hours on them. Interestingly, my customers report that break in takes some one hundred hours. More on that later.Some electronic parts do indeed require break in. Tubes are a good example. The parameters of new tubes change rapidly an sometimes dramatically until they reach a plateau. Then they are broken (burned) in. I do not understand how other components, such as cables, can have a break in, other than perhaps one full voltage cycle. Same goes for capacitors (running for asbestos suit).So what is break in really about? IMO: Two things. One, psychoanalytic. Two, expectations.Psychoacoustic: What ever you are listening to now is what your brain accepts as what music is supposed to sound like. When you get a new pair of speakers or a new amplifier, the new parts are going to sound different, possibly dramatically different, from the old parts. It takes a long time, a very long time for your brain to erase the old sound and accept the new sound as the standard. THIS is the bulk of break in.Expectations: This is particularly important when getting down to very small changes in the sound of your system, things such as changing cables. You drop $500 on a set on interconnects, you expect that they will sound better than the $5 Radio Shack IC's you swapped out, and by golly, they do! On the other hand, if you swap out a pair of high end speaker cables for zip cord, you expect a degradation, and it does. (I'm not suggesting that there is not difference in the sound, only the better/worse outcome.)So, there you are. That's my take. Fire away!Bob