Subject: Re: Will Longer Wires Reduce Sound Quality?
Posted by Wayne Parham on Thu, 17 Mar 2011 14:41:45 GMT
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With speaker wires, it really is just a matter of resistance. That's not always trivial, though. I think in most cases it can be disregarded but if you have to run a long wire, it would be better to use larger wire. I would not want resistance to rise above about 25% of the load impedance. It's not just a matter of reduced signal, but also about the change of effective Qes, which shifts the woofer alignment. If the shift is large enough, it can make a speaker sound a little bit tubby.

The situation with (preamp level) signal cables is different because the circuit impedance is different. As Bill said, internal capacitance can be significant. The phono stage actually requires a pretty specific amount of shunt capacitance, too little and the pickup coil peaks, too much and

to create a filter in the audio band. A 220pF capacitor will rolloff the top octave, for example, starting around 15kHz. By the time you reach 470pF, the rolloff begins at 6800Hz. So you'll definitely hear the highs go away if you use a cable that has 470pF internal shunt capacitance. Say 25 feet of cable that has internal capacitance of 20pF/foot, for example.