Subject: Re: Subwoofer Pre-amp out vs. Speaker Line Out and Lighting
Posted by Wayne Parham on Wed, 14 Mar 2012 20:41:30 GMT
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Yes, the speaker wire is balanced and that combined with its low impedance makes it very noise tolerant. But I would not choose to use the speaker outputs as the inputs for another amplifier, like connecting an old car-stereo to a booster amp. It can be made to work, sure, but it means you have a lot more stuff in the signal path. That kind of interface is what I'd consider a jury rig: The first amp has a ton of gain (and the unintentional signal modification that inevitably comes from it), which you then throw out, just to run it back into a second amplifier. By going with the preamp output, you bypass the gain stages of the first amp, applying the low-level signal directly to the subwoofer system. This is a better approach.

About fluorescent lights, the reason they are electrically noisy is actually due to a switching circuit in the ballast. There is a resonator or other switching circuit that provides a ~10kHz signal to drive the bulb. It doesn't require this frequency, some are driven directly with 120Hz power through a passive (usually inductive) ballast. But the bulb is much brighter when driven at 10kHz, so most of the time, the ballast is an active circuit that provides both protective current limiting and higher drive frequency.