Subject: Re: The subwoofer volume and crossover
Posted by Wayne Parham on Thu, 28 Sep 2017 19:27:15 GMT
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The answer to that can range from simple to complex. So let's start with simple, move towards more complex topics and then leave it to those interested to research further.

The simplest way to setup a subwoofer is the way most home theater systems are made to be used: Connect the subwoofer to the LFE channel and configure the system to use the sub. Mains should be set to "large" if they can handle low frequencies or to "small" if they can't.

The next step up is a primitive multi-sub setup, which essentially feeds two to four subs from the LFE channel. This is better than a single sub, but it may present localization problems. What I mean by that is the LFE channel might have enough midbass content that the subs draw attention to themselves. You don't want that - You don't want to even know the subs exist. They should blend seamlessly. All they should do is to create a foundation.

Next step up is flanking subs, one for each of the L/R mains and distributed multisubs placed further away. These require specialized low-passing for each of the subs: Flanking subs work best with 100Hz second-order low-pass and distributed subs work best with steeper slopes and lower cutoff, e.g. 50Hz fourth-order. Also, flanking subs require a low-passed version of the signal presented to the main speaker they are flanking, while distributed subs require an all-channel-summed signal like what's sent to the LFE channel.