QUICK AND EASY SUBWOOFER SETUP

In general, setting up a sub is a pretty straightforward process, but one that must be done in its entirety. We've written this little primer to assist you in setting up your subwoofer - retail or DIY. These instructions assume your sub has phase, gain, and crossover settings (like our products); if yours doesn't just skip that part.

The first part is where to place the subwoofer itself. Many advocate placing it in the corner, and while it can result in objectively flatter bass, it is not necessarily the best when frequency response, image, and envelopment are taken into account. We recommend placing the sub near the floor/front-wall junction, and somewhere between the main speakers, if at all possible (so the sub is essentially against the front wall). This keeps the total sonic image all together at the front.

When the sub does generate distortion (and it will; all speakers do), the distortion products will come from the sub location. Distortion products are easily localizable, being in the 200-800 Hz range, and are the primary reason why you can often audibly localize a sub located off in a corner, or off to your side. Keeping it between the main speakers keeps ALL the sonic energy from the sub up front with the mains, which does not detract from the image.

Start by setting the crossover to 80 Hz, phase to 90 (or if a switch, to in phase/0 degrees), and gain about 1/3rd the way up. This is the initial start position to work from. You'll need a test CD (with pink noise and warble tones) and an SPL meter (you can go by ear, as well, but with a meter is more precise).

Then we set the phase - set the volume of the sub and mains to a comfortable level. Then using warble tones around the 80 Hz point, adjust the phase for the maximum sound level at the listening position; it's best to have a friend adjust the phase slowly while you measure/listen in the normal listening position. Once the level is maximized, the sub and mains are in phase (or, in the case of a phase invert switch, as close as they can be).

Next we set the crossover frequency - set the volume of the sub and mains to a comfortable level. Start with it set down to 40 Hz. Use warble tones at 40, 63, 80, and 100 Hz to determine the levels. Look to get the SPL levels for these 4 points as close together as possible by only adjusting the crossover frequency - do not adjust the other knobs at this time.

Lastly we set the level - set the volume of the sub and mains to a comfortable level once again (only adjust the gain knob, not the phase). Now play pink noise through the mains only, and measure the SPL level. Then disconnect the mains, and play the pink noise through the sub only. Set the sub gain knob so it reads the same SPL as the mains.