

The Next Generation of High-Definition Bass Devices

INTRODUCTION

In audio, bass is king. It's the first thing that people notice, the first thing they talk about. Bass sells audio equipment.

"How's the bass?"

"Did you hear that bass?"

"Wow, now that's impressive bass!"

Amateur or professional, home theater or car stereo enthusiast, even an avid video gamer, it's the bass that grabs your attention.

MARKET BACKGROUND

There is a new development in the audio industry that capitalizes on this reality, and that is the emergence of a new class of products: Vibro-tactile devices, or transducers. Previous attempts at these products were commonly referred to as "bass shakers," because the major effect was a shaking sensation, not sound augmentation.

Just as subwoofers were the fastest growing speaker category of the last ten years, the vibro-tactile device is poised to be the most important, fastest growing bass-generating product category in the next decade.

These vibro-tactile devices augment the audible reproduction of low frequencies by traditional loudspeakers, such as subwoofers, by producing a physical vibratory stimulus recognized by the brain as sound. In other words, these new transducers produce the physical vibrations associated with high-level bass frequencies, and thus reinforce the perception on the part of the listener of experiencing powerful, deep bass. Companies that offer these devices will be able to take full advantage of this increasingly important market trend.

One of the problems with conventional acoustic transducers like subwoofers is that in order for the listener to experience the satisfying bass sensation of the "thump in the chest," the actual bass SPL (sound pressure level) has to be far higher than is usually desirable in a home/domestic environment. While live pop/rock concert SPLs are often in excess of 110dB, SPLs at home rarely exceed 95dB. Any louder is often just not pleasant or practical. Problems such as pictures rattling on the wall, objects buzzing on the shelf, and disturbing other people in the home (or neighbors) usually limits the maximum allowable domestic playback levels. At these relatively modest, normal house listening volumes, bass performance simply does not have the "kick" most listeners are looking for.

That's where the I BEAM™ Transducer comes in. The I BEAM™ represents the very latest and most advanced vibro-tactile

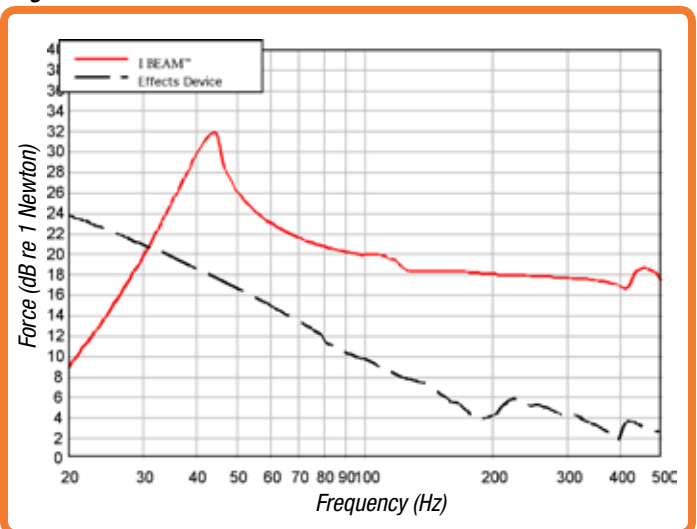
Figure 1



Sonic Immersion's Technical Advantage
As can be seen above, the Sonic Immersion Technologies I BEAM™ transducer is a compact

device that mounts simply and unobtrusively to any physical object where people sit or stand (such as the sofa or floor) in close proximity to the primary listening position. Examples are: home theater seats, traditional chairs or sofas, floors, cars, recreational vehicles, etc. It connects to the audio playback system by using regular speaker wire and an amplifier like the traditional subwoofer.

Figure 2 — Class 1 device versus Class 2 device



The graph above demonstrates the wide bandwidth of the I BEAM™ transducer, essential for the most satisfying and realistic sound compared to a conventional "effects device."

I BEAM™

by Sonic Immersion Technologies

transducer available and overcomes the shortcomings of previous “bass shakers.” It performs with a higher level of accuracy, greater efficiency, and exhibits a wider bandwidth than the other devices. By utilizing the Patent Pending technology in the I BEAM™ transducer, a partner company will enjoy the competitive market advantages that come with best-of-class equipment.

CONCLUSION

The I BEAM™ transducer can be used to great advantage to enhance the listening experience, by producing the physical sensations associated with high-level bass. This is accomplished without massive subwoofer systems and their drawbacks: high costs, huge speaker enclosures, massive amplifiers, acoustic treatments, challenging installations, etc. Better still, the I BEAM™ works “locally,” since it’s attached to the listener’s seating or floor structure near the listening position.

Even when the volume level of the audio system is set relatively low, the auditory stimulation delivered to the listeners by the I BEAM™ results in a far more satisfying bass listening experience. In addition, the I BEAM™ does not project its energy omni directionally into the room the way traditional subwoofers do, so rattling distant objects 10 feet away on the wall or disturbing the upstairs neighbor is no longer a problem.

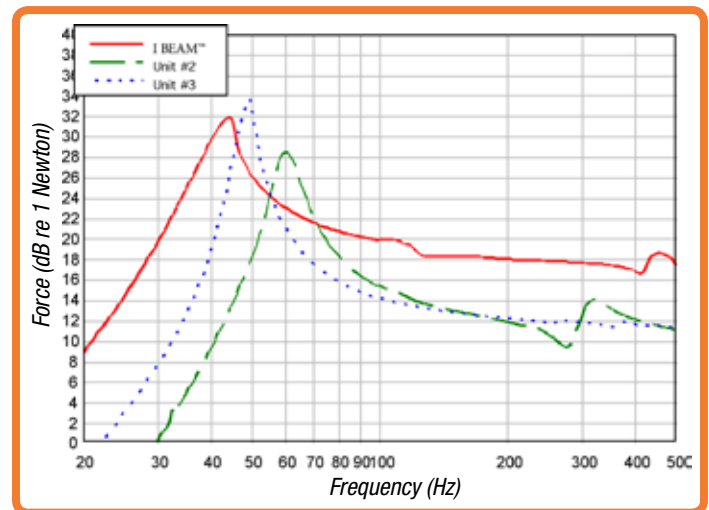
It is clear that the I BEAM™ device represents a significant advance in the quality of a personal listening experience and is the next explosive growth category in audio entertainment systems; which makes the I BEAM™ technology a unique marketing opportunity. It provides extended low frequency response to the audio playback system without the undesirable side effects of rattling walls, furniture, shelves, car panels, or disturbing nearby people. It also adds to the overall listening experience by providing additional musical information that is most often associated with live performances and real events. Most importantly, however, the I BEAM™ overcomes the bandwidth and output shortcomings of other transducer designs. Thus, it will markedly improve any system with which it is used, without any operational or sonic drawbacks, and for surprisingly reasonable cost. The high performance bass experience becomes much affordable with the I BEAM™ transducer.

BACKGROUND ON THE COMPANY

Renaissance Sound LLC, a California technology company owns the I BEAM™ technology and has entered into a working partnership with Sonic Immersion Technologies, a Manufacturing & Technology Fulfillment group, and The OAC Group, a Sales, Marketing, Design

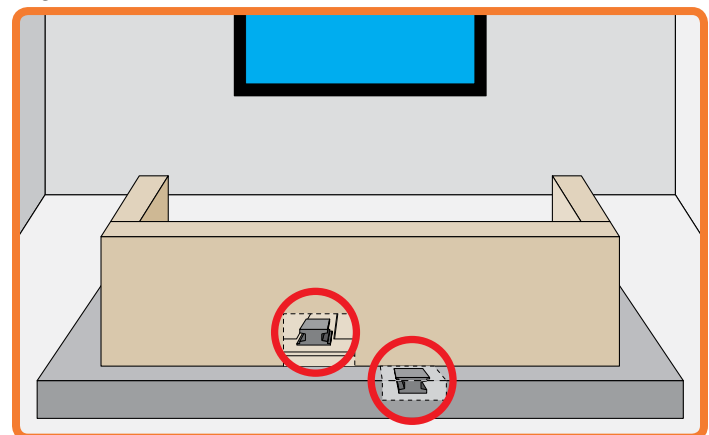
and Licensing group. Combined we have the capability to begin with a design and then deliver large quantities of custom manufactured products with world-class quality and efficiency along with a proven track record in technology and brand development, product positioning, licensing and marketing. This team has the ability to create successful partnerships.

Figure 3 — I BEAM™ versus competitive products



The I BEAM™ device’s greater available lower frequency bass output and broader frequency range vs. the conventional “bass shakers” is clearly demonstrated. In engineering parlance, the “total energy under the curve” of the I BEAM™ (red) is 52% greater than competitor 1 (green) and 41% greater than competitor 2 (blue).

Figure 4



Installs in minutes. A digital wireless transmission system is available when running signal wires to the seating area is not practical.