

sound technology

sound **Innovations:** the manufacturer's view

Rock Steady

Primacoustic Recoil Stabilizer Monitor Isolation Pads

by FrankW ells

In today's studio environment, most engineers are working with modestly sized loudspeakers, often dropped directly on top of the same work surface as our monitors, keyboard and mouse. With such resonant surfaces (knock on your desktop and you typically get a resounding thud), vibration is spread throughout the structure, altering and adding to the original sound.

For this reason, it has become common practice to isolate the loudspeakers from the surface they are mounted on. Most commonly, this isolation is accomplished with decent effectiveness by using a piece of dense foam for decoupling the sound

source (your speakers) from the resonant work surface.

Primacoustic has taken the concept of the isolation pad one step further with its Recoil Stabilizer. While the best acoustic foams



used for speaker isolation is fairly rigid, Primacoustic noted that the mechanical motion of the speaker elements (primarily the woofer) can produce a recoil effect, a lesser version of the force of a shotgun slapping backwards into your shoulder when its buckshot load is fired forward. Primacoustic, thinking further than most of us who regularly use isolation pads under our speakers, reasons logically that this recoil can redirect energy that should be propelling a sound wave forward into mechanical energy moving the loudspeaker cabinet backwards, thus changing the sound, primarily affecting low-end transient performance. There is a reason that the tightest-sounding studio main monitor systems

are encased in a concrete surround, or at least into a very rigid wall structure the speaker doesn't (can't) move, and the wall is too rigid and dense to become a resonant vibration source.

The Primacoustic solution is

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to mount a heavy, neoprene-coated steel plate to the top of the isolating foam. The mass of the plate is sufficient that the speaker cabinet remains in position, with the foam still providing decoupling. There is a physical front to the Recoil Stabilizers, where curved, coated steel wraps over, said to add mass without increasing size and to vary the impedance, thus reducing internal standing waves. This is one of those logical-sounding "makes sense" ideas, but does it stand up in use? In a word, yes.

I used the Recoil Stabilizers with a few different conventional rectangular monitors, ranging from relatively inexpensive to high-end, comparing direct surface mounting and mounting on both a conventional foam product and the Recoil Stabilizer. The performance improvements

(continued on page 44)

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Primacoustic

(continued from page 43)

using the Recoil Stabilizer were well beyond subtle. These were all monitors near the 4:1 speaker:stabilizer weight ratio recommended by Primacoustic. In one case, with a pair of smaller and lighter monitors in the same family as a larger model used in the evaluations, the improved performance was marginal compared to the same speaker on conventional foam isolators and nothing close to the improvement the Recoil Stabilizer afforded their big brother, so note that the Recoil Stabilizers come in different sizes.

The different models also include more options than just size and mass. There are up and down angled models in the smallest size (an up angle being particularly well suited for desktop operation with smaller monitors), down angles (useful, for example, when a speaker is on a tall console meter bridge) and a wider than deep version (for horizon-

tal speaker mounting) in the larger sizes. Primacoustic's website has a handy chart of speaker models and recommended Recoil Stabilizer sizes.

When the recommended ratios were maintained, bass performance in particular was enhanced, tighter low end with improved clarity on the lower mids and detail in the bass and kick, particularly on the attack. Phantom center was tighter and overall imaging improved. The effect was particularly pronounced on desktop, and less so on a good set of massive speaker stands, but still apparent. At a street price of \$99 for the tested RX7 pair, you cannot go wrong! The performance improvement is decidedly more significant than a corresponding increase in your loudspeaker budget.

Product information

Recoil Stabilizer: \$120-\$150 (each)
Primacoustic
www.primacoustic.com

