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acoustical tests of custom-made, low-cost bass absorptive
treatment for small rooms

Ioana Pieleanu^a, Jeffrey Fullerton^a and Marc Choiniere^b

^aAcentech Incorporated, 33 Moulton Street, Cambridge, MA 02138, USA

^bUniversity of Nebraska, 101A Peter Kiewit Institute, Omaha, NE 68182, USA

Small music classrooms, practice rooms or small budget recording studios and control rooms are a few of the numerous applications where low frequency absorption is sought and necessary for a well-balanced acoustical spectrum. Often, low frequency absorption is achieved by using pre-engineered products, such as tuned panel resonators. Unfortunately, the cost of these pre-engineered products can be excessive for small budget projects, or projects that involve a large number of such spaces. For these applications, more affordable, custom-made low frequency absorbers are desired. Several types of custom-made treatments were physically tested, to determine if the degree of low frequency absorption they provide would make them an effective replacement for the pre-engineered counterparts. The test samples included glass fiber panels mounted as corner traps, custom-made plywood panel resonators and others. The testing was conducted in a space comparable in size to a small studio room/control room, or a medium practice room. This presentation describes the test method and measurement results.