

**LOREN ALLDRIN**  
*tests the  
application,  
and evaluates the  
performance  
of the  
MIXSTATION  
from Acoustic  
Sciences Corporation*

## Inside and out

Think of your room as an instrument you make music in, with its own unique frequency response and sonic character. Like any guitar, drum set or viola you record, your project studio should be tuned-up and sounding sharp. Before buying your next microphone, effects processor or tone module, you should consider whether your room could use some acoustic help.

## Small rooms are a challenge

Few project studio owners have thousands of square feet of space at their disposal. Most project studios are one-or-two-room affairs, and have the approximate dimensions of a bedroom (odd coincidence). For every pro-

Rooms less than a few thousand cubic feet in volume (a 10' x 11' x 8' bedroom is just 880 cubic feet) generate a smattering of early reflections instead of a smooth decay.

For these reasons, the best-sounding small room is the one you don't hear much of. This means eliminating a large percentage of the reverberant sound with acoustic absorption, preferably designed and installed with some semblance of a plan.

Acoustic absorption comes in many shapes and styles, but it's all designed to do the same thing: absorb sound and quickly dampen room resonance. Where acoustic products and materials differ is in the quantity and location of the frequencies they damp. Some work well

# MIXSTATION

## COMPLETE STUDIO ACOUSTIC PACKAGE

fessional studio with a 24' x 40' x 16' tracking room, there are hundreds of back-bedroom studios in the 10' x 11' x 8' -size range.

Though it is possible to get great sound out of small spaces, such small rooms have their

own unique challenges and problems. These small rooms are rarely designed to sound good and their dimensions often cause build-ups and gaps at lower frequencies. Because wall-to-wall distances are small, peaks and valleys occur in the crucial

low and low-mid frequencies.

Perfectly square rooms (10' x 10', for example) are the worst offenders, because the frequencies of reinforcement and cancellation are the same between all four walls. The second drawback to smaller rooms is that the sound that bounces and decays isn't really reverb in the strictest sense.

at low frequencies, others high. Some resonant (high-Q or tuned) devices effectively absorb a small band of frequencies, while broadband absorbers evenly damp frequencies across five or more octaves.

## Do-it-yourself acoustics

Project studio owners need to understand a key principle of sound absorption: taming bass resonance requires either a deep acoustic cavity or a specially designed bass trap. Thin acoustic treatments (squares of 1/2" thick acoustic tile, hospital bed foam, shag carpet, etc.) only affect mid-range and higher frequencies.

The end result of such treatment is a dark-sounding room that's very dead in the upper frequencies but still resonant and colored in the lower ones.

Bass traps used throughout the past few decades included deep fiberglass-filled chambers at the back of a room, tuned membrane enclosures, tuned perf-board chambers and other designs. Since bass builds up in the corners of rooms, that's the best place to eliminate it. Corner-loaded bass traps are an effective solution for smaller project studios.



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## Ready-made solutions

For those not inclined to build their own acoustic treatments, premade products are available.

I installed the Mix Station into a programming/mix room with dimensions of 11' by 11'7" with 9' ceilings. With its small size and nearly square shape, this room posed some serious acoustic challenges. Before treatment, the room had a live, colored sound prone to flutter echoes and ugly low-mid resonances. Bass response was weak except in the corners, and stereo imaging was indistinct even directly in front of the close field monitors. In its untreated state, the room bordered on unusable for music production.

## ASC Mix Station System

Acoustic Sciences Corporation (ASC) is a company best known for its Tube Trap bass trap. The company manufactures a full range of acoustic products in addition to the Tube Trap, including the Mix Station system. The system consists of twelve 16" x 60" compressed-fiberglass board panels that are curved into a wall-mounted frame. After removing the Auralex MAX-Wall system, I installed the Mix Station.

The system uses three groups of four panels; one group sits flush against the ceiling directly behind the monitors, while the other two flank the monitors on either side.

Adjacent fiberglass panels are separated by a thin baffle board and the two sidewall-mounted units have cosmetic end baffles as well. Interior baffles have a large hole cut in them to help dissipate bass energy.

In addition to reducing low-mid, midrange and treble bounce, the Mix Station units are effective at bass-frequency control as well. This is due to the air space behind each panel, the baffle ports between panels, and the fact that a large percentage of the system's area sits in the corners of the room (where bass energy builds up).

**"Mix Station is awesome!"**

**-Loren Alldrin,  
Pro Audio Review**



To supplement the fiberglass board modules, the Mix Station also includes 10 ASC Sound Planks. These 6" x 2" x 60" fiberglass boards effectively damp reflections down into low-mid frequencies and bring the Mix Station's total area of sound treatment to just under 100 square feet.

ASC recommended spacing the Sound Planks about six inches apart, with clusters on the back wall directly behind the mix position as well as on the side walls near the back of the room.

Installation of the whole Mix Station system took less than two hours and required little more than a tape measure, pencil and drill. Drywall anchors are provided, but it's best to screw the wall mounts to a stud or ceiling joist where possible. Sound Planks hang easily on a single screw, just like a picture frame.

With music filling the room, the improvements brought about by the Mix Station were striking. Bass energy was more evenly distributed throughout the room, transients hit harder, and stereo imaging was greatly improved from mix position to back wall. A veil of room coloration had been lifted from the sound, making it much easier to localize instruments and pick out crucial details in the mix. The Mix Station system completely transformed the sound of the room, taking it from virtually unusable to downright pleasing.

The ASC Mix Station also garners high marks for aesthetics. The curved panels (in a rich green color as tested) will enhance most any room, and the glossy black mounting boards and baffles add nice visual contrast. The matching Sound Planks look very professional as well. Construction and finish of the ASC products couldn't be better.



## INFORMATION

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