Memtech Acoustics

ROOM ACOUSTICS

BEFORE THE MUSIC BEGINS, THE PERFORMANCE STARTS WITH THE ELEMENTS OF THE ROOM



THE MANUFACTURER

ACOUSTIC PRODUCT EXPERTS SINCE 1958

DIVERSITY OF PRODUCT SOLUTIONS AND FINISHES

CUSTOMIZABLE, FULL-SCALE MANUFACTURING

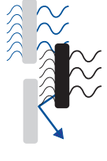
WORLDWIDE PRESENCE

The manufacturer produces the industry's largest selection of innovative acoustic and noise control products and solutions. You can count on an expert team of sales, manufacturing, engineering, and customer support professionals to help you achieve your acoustical and design objectives.

ONE SOURCE | COUNTLESS POSSIBILITIES



TYPES OF PRODUCT



ABSORBERS

Reduce reverberation (echo) in a variety of settings. Multiple products offered to address any application.

OFFICES & OPEN SPACES
EDUCATION
ATHLETICS



DIFFUSERS

Distribute sound evenly throughout the listening space and control undesirable pitches and tones.

AUDITORIUMS
MUSIC EDUCATION
WORSHIP SPACES



REFLECTORS

Redirect sound towards the audience. Reflectors on walls and ceilings enhance the listening experience.

PERFORMANCE HALLS
AUDITORIUMS
WORSHIP SPACES

ABSORBERS

Environmental Acoustics



MUSIC RATED

Creates acoustic balance across all frequencies. Specially engineered, fabric-wrapped absorbers compensate for the loss of acoustical balance produced by conventional panels.

VERSATUNE

Common acoustical panels are most effective at absorbing mid-to-high frequencies. VersaTune's engineered composite core boosts low frequency absorption to create balanced performance across all frequencies.

TAD

Typical acoustical panels can over-absorb high frequencies. TAD panels scatter high-frequency sound waves, so rooms are lively and authentic.

VTLF

VTLF is an extraordinarily low-frequency absorber, with bass trap style performance at 80 Hz where it removes 85% of reflections while limiting absorption in the high frequencies, all in a slim 2 1/8" thick panel.

WOOD ABSORBERS

Control reverberant spaces with the warmth and beauty of wood in a variety of patterns, veneers, and finishes.



ALTO

The Alto grooved wood surface adds visual refinement to the project, with small openings that allow sound to be absorbed.



SERENO

Sereno features symmetrical hole patterns of various sizes for the passage of sound into the concealed absorber.



PICADO

Picado highlights a veneered wood surface with pinholes that are invisible from a distance, concealing a perforated core that provides excellent sound absorption.



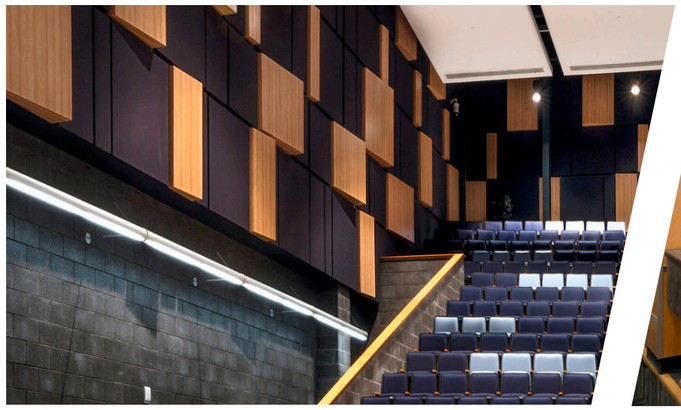
TAD REVEALED

TAD Revealed has the acoustical benefits of TAD panels with the beautiful look of wood. Available in a variety of hardwoods and finishes.

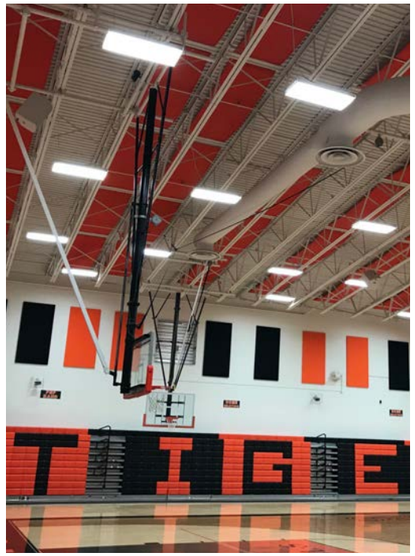
ENSEMBLE

This all-in-one prefabricated panel comes complete with fiberglass for easy installation.

Choose from any of the above wood patterns.











GREATER IMPACT

SPORTSBOARD ELITE

GYMNASIUMS | MULTI-PURPOSE | TRAINING FACILITIES

The tough, perforated copolymer surface of SportsBoard Elite can tolerate extreme impacts such as baseballs and basketballs. Wrapped in a variety of fabric options.

SPORTSBOARD CONFORM

GYMNASIUMS | MULTI-PURPOSE | TRAINING FACILITIES

A highly protective, perforated copolymer shell covers the edges and face of the panel, making the surface capable of withstanding the toughest of impacts. The SportsBoard Conform's hard surface is easy to clean and can be matched to many team colors.

HIGH IMPACT HARDSIDE

HALLWAYS | LOBBIES | ACADEMIC SPACES

A fabric-wrapped panel featuring a special surface layer that provides greater durability than traditional panels. Ideal for high-traffic common areas.

KNP PERFORATED METAL PANEL

GYMNASIUMS | NATATORIUMS | RECREATIONAL CENTERS

A perforated steel or aluminum shell with a powder-coated finish encases an absorptive core for a rugged, clean appearance with excellent absorptive properties. Available with either a flat or ridged face.

ACOUSTIGRAPHIX®

Increases the dynamics of any space with high-resolution graphics or photo-images in an acoustically transparent fabric. Use in any environment with any of our fabric-wrapped panel solutions.



PROJECT SPOTLIGHT

UNIVERSITY OF CINCINNATI PRACTICE GYMNASIUM

When the University of Cincinnati (UC) Bearcats basketball team required a quieter practice gym, supplied products that reduced reverberant noise while proudly displaying the UC brand. The University of Cincinnati Design and Construction Department worked with the manufacturer local representatives to create a quiet and more impactful setting for press conferences, and a better learning environment for players and coaches. The Lindner Athletic Complex is now a more purposeful and attractive facility, as well as a great recruiting tool!

PRODUCTS USED

- **AcoustiGraphix**
- **HardSide Panels**
- **Wave Baffles**

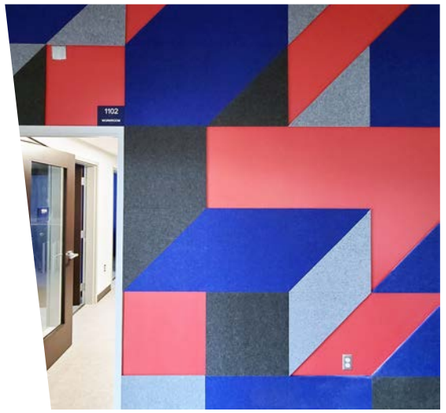




HARDSIDE

OFFICES | AUDITORIUMS | CLASSROOMS

HardSide is a conventional panel available in many thicknesses, sizes, and shapes and can be wrapped in a variety of fabrics.



HI-TACK PANEL

OFFICES | COMMUNITY CENTERS | CLASSROOMS

This non-absorptive panel captures the same look as other fabric-wrapped panels while providing a highly-tackable bulletin board surface.

BOLD COLORS
USE BOLD COLORS TO ELEVATE NOT ONLY THE SOUND QUALITY BUT ALSO THE VISUAL DYNAMICS







HEALTHGUARD

Reducing noise creates atmospheres of healing, learning and productivity. Features a polyester core with no VOCs or formaldehyde binders. The antimicrobial fabric can be cleaned with a bleach solution.

HEALTHGUARD UI

The Ultra-Impact resistant facia can stand up to kids, carts, and overall daily abuse making it ideal for daycares, hallways, and waiting rooms, HealthGuard UI is the perfect sanitary sound solution for environments brimming with activity.

RAVEN BOARD

Black acoustic tiles are the effective and affordable way to build acoustic ceilings that have excellent sound absorption properties.







BENEFITS:

- Effective sound absorption
- Eliminate unwanted ceiling boundary reflections
- Control excessive room reverberation
- Eliminate slap-echo between parallel floor and ceiling surfaces
- Improve signal-to-noise ratio for listening, recording, and conversation



STRETCHTRAK

The StretchTRAK system conceals various absorptive cores with large, often seamless runs of fabric with a field fabricated system. This expands the options typically associated with pre -fab acoustical panels, which can be limiting in size and design. Whether selecting a white fabric that has the appearance of standard drywall; or a colorful, impactful fabric, your options are nearly limitless.

ELEMENTAL ELEVATION

Suspending acoustical materials from the ceiling offers absorption for reverberant noise problems while achieving acoustic goals. Horizontal and vertical orientation of clouds and baffles is proven to be highly effective, boosting low and mid-frequency absorption by 20-40%.



WAVE BAFFLES

ARENAS | GYMNASIUMS | MULTI-PURPOSE ROOMS

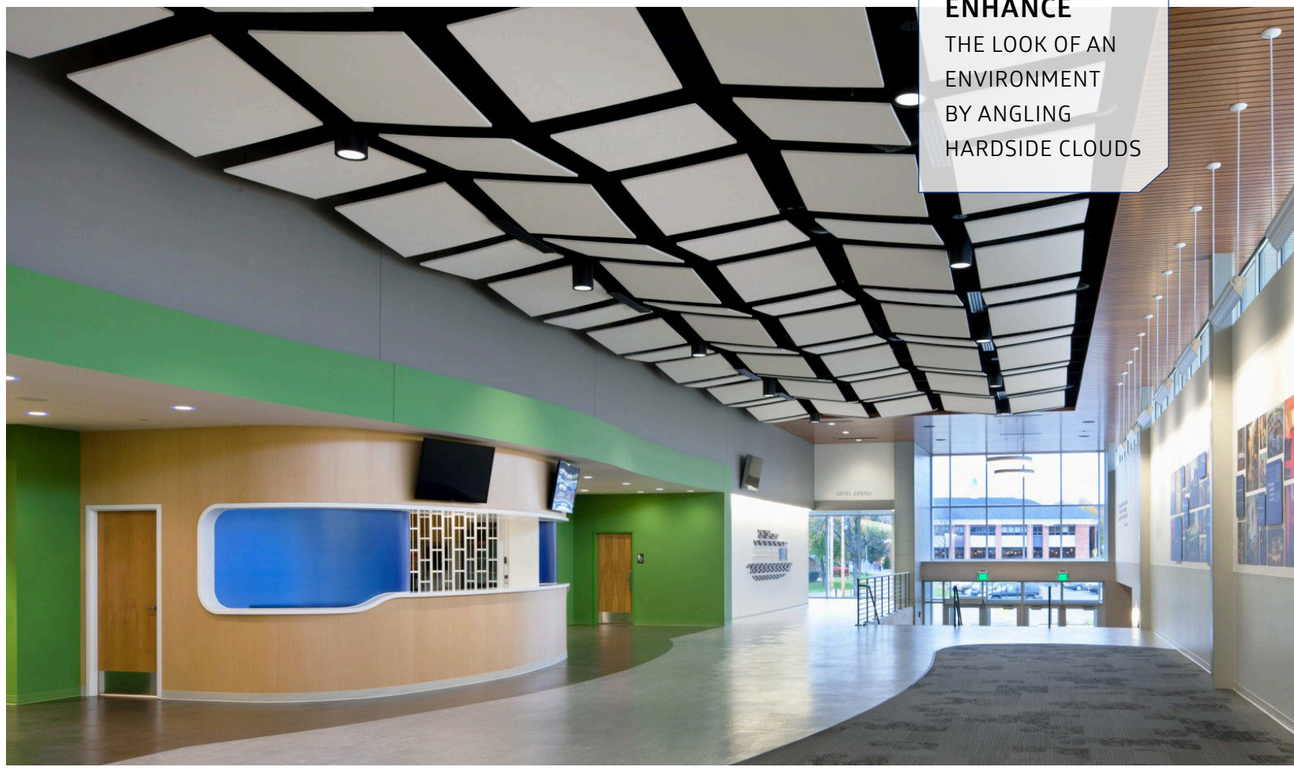
Create a stunning visual effect with dramatic acoustical results in large, reverberant spaces.



KB803

CAFETERIAS | RESTAURANTS | NATATORIUMS

Vertically mounted, vinyl-wrapped baffle for efficient and cost-effective absorption.



ENHANCE
THE LOOK OF AN ENVIRONMENT BY ANGLING HARDSIDE CLOUDS

HARDSIDE CLOUD

LIBRARIES | CORRIDORS | ACADEMIC SPACES

Modify our fabric-wrapped HardSide panel into a suspended horizontal cloud to create a dramatic architectural feature.

HARDSIDE BAFFLE

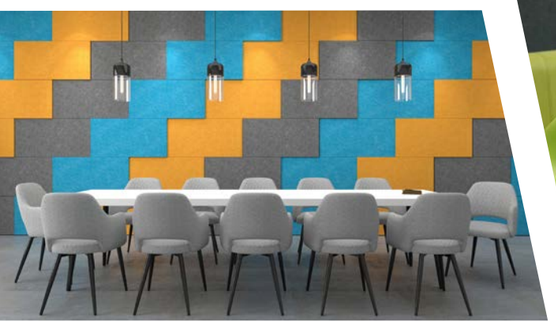
OPEN OFFICES | MULTI-PURPOSE ROOMS | ACADEMIC SPACES

Fabric-wrapped, two-sided, vertically oriented baffle.









KLEEN

The kleen family of products feature recycled PET, offering ultra-low VOC emissions and bleach cleanability. The material is formaldehyde free and 100% recyclable. kleen balances acoustical design with an emphasis on environmental wellness. Harmony you can see and hear.

KJIAN

Appearing like the sword of its namesake, the kJian Baffle offers sleek, smooth lines on all of its visible surfaces.

KBLOCK 3D

The kBlock 3D secretly creates an acoustic boosting airspace inside a full panel look.

KBLOCK

Absorptive tile – resembling a brick wall after installation, kBlock can be tiled and used as acoustic wallpaper.



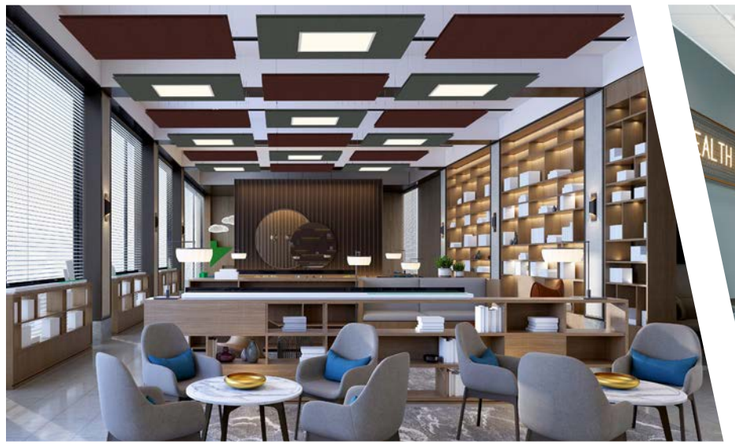


KBAR / KBAR LITE

Absorptive Baffle – beautify your space with abundant color choices while taming noise. Available as absorptive ceiling light.

KWOOD

Linear lengths of wood secured to PET perfectly marry acoustic function with aesthetics.





KCLOUD / KCLOUD LITE

Absorptive Ceiling Cloud – a modern take on a ceiling-mounted sound absorber. Available as absorptive ceiling light.

KPANEL

Absorptive panel – the building blocks of the kleen lineup.





WOOLF

CEMENTITIOUS WOOD WOOL

Woolf is a sustainable and ecofriendly material that is fire-resistant and moisture-resistant. The panels are available in a variety of colors, finishes, and shapes so they can be customized to match any décor.

The result is a clean-air rated sound absorptive tool that can be mounted to walls and ceilings, used as a ceiling tile, or suspended as a cloud or baffle.

WOOLF PANEL THICKNESS	MINERAL WOOL THICKNESS	NRC
5/8"	1"	0.85
1"	1"	0.90
1"	2"	0.95

WALL APPLICATIONS

Add decoration, acoustic performance and impact resistance with one product.

CEILING APPLICATIONS

With three different mountings to choose from your ceiling will look and sound great.

TILE / LAY-IN CEILING GRID

Lay-in ceiling grids never looked better with these natural wood panels.

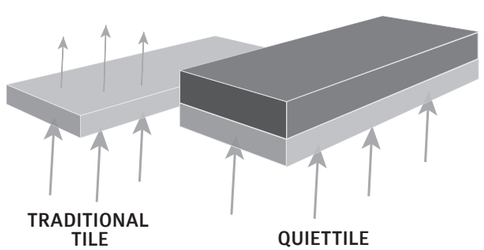




QUIETTILE LAY-IN CEILING TILES

ABSORBERS/BLOCKERS

Achieve the highest speech privacy and sound control in an acoustical ceiling tile system. When walls don't extend to the deck, QuietTile composite ceiling tiles are specifically designed to control noise between spaces. QuietTile is an engineered composite panel consisting of multiple layers faced with any acoustical ceiling tile.



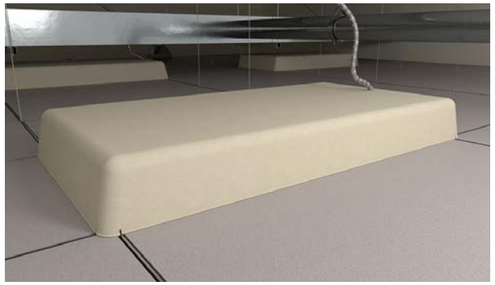
STANDARD SIZES

2 ft. x 2 ft. / 2 ft. x 4 ft.

COMPOSITION

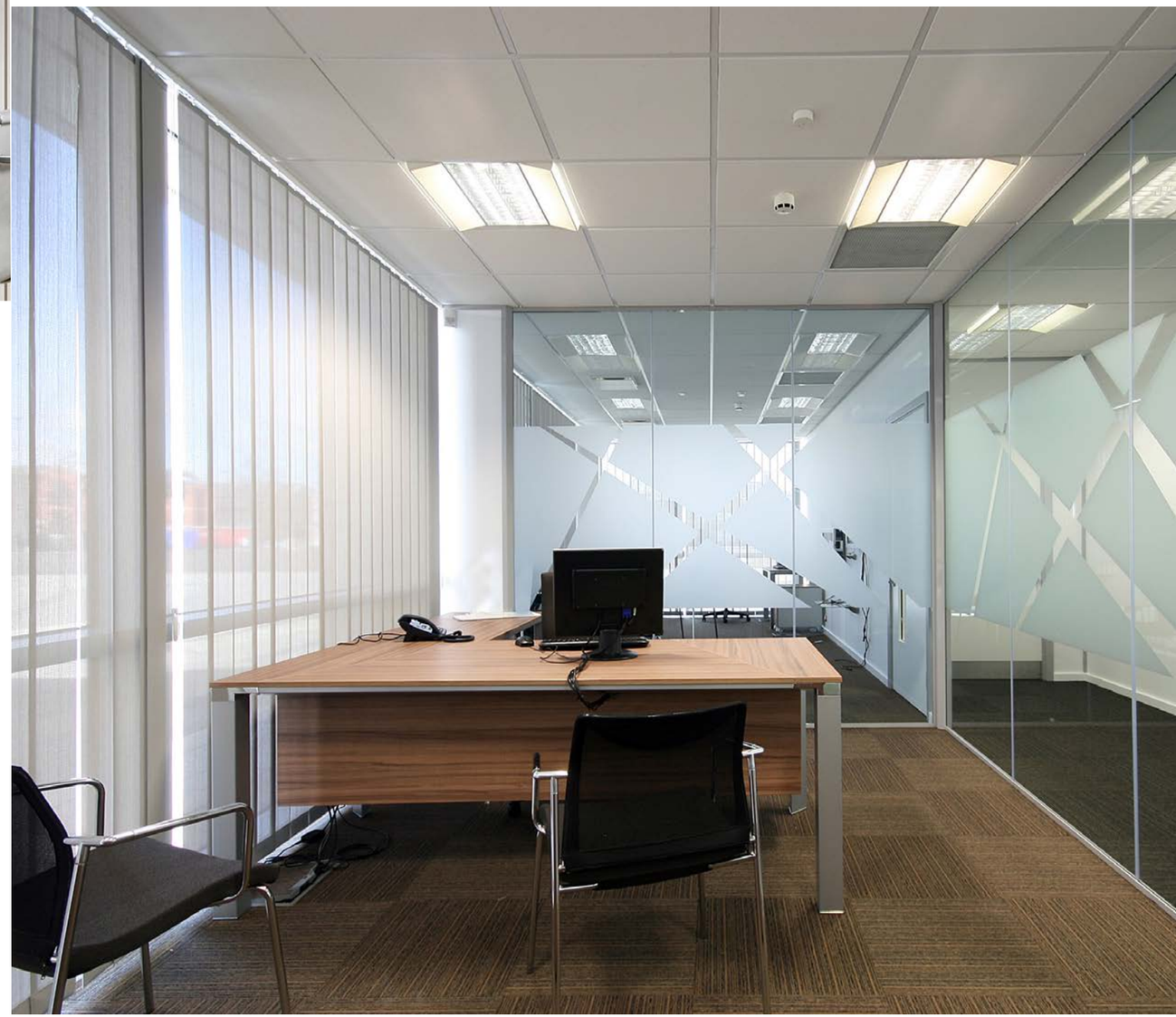
Acoustical Ceiling Tile (ACT)
Composite Sound-Damping Backer

TESTED AND PROVEN TO PROVIDE THE HIGHEST REDUCTION OF SOUND TRANSMISSION IN THE INDUSTRY.



LIGHTHOOD FIXTURE COVER

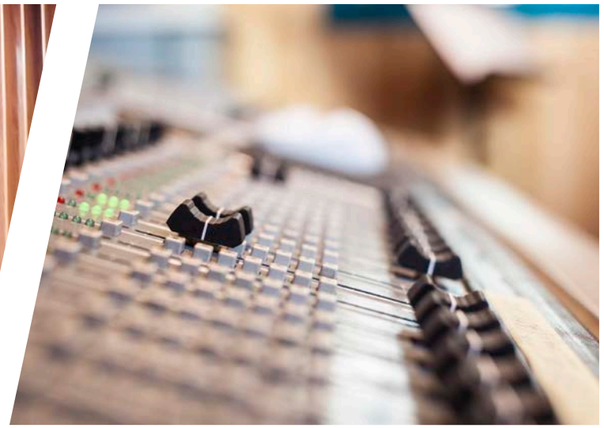
Light fixtures are constructed using low mass steel and create a noise "gap" in a ceiling. QuietTile LightHood prevents unwanted re-verberation from making it through the noise "gap" by simply laying over the light fixture. QuietTile LightHood options are both versatile and flexible, making installation and field customization painless. The material can also be easily cut for electrical wire and aircraft cable routing. LightHood is Class "A" and Plenum Rated per ASTM E84-20.



DIFFUSERS

Sculpting Sound





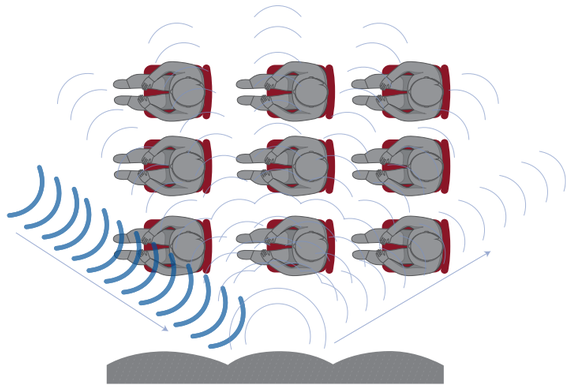
CRITICAL LISTENING ENVIRONMENTS

Control dispersal of sound reflections throughout the listening or recording space. Diffusers create a clearer and more consistent listening environment for audiences and performers.

GEOMETRIC SOUND

CHURCHES | BAND ROOMS | CAFETORIUMS

Make rooms look and sound more dynamic. Geometric Diffusers placed on walls and ceilings add visual dimension and disperse sound in multiple directions to improve the sound quality within the space. Perfect for churches, band rooms, and other performance spaces. Available in molded copolymer finishes, or wrapped in fabric of the client's choice.



DIFFUSERS

SCATTERBOX

RECORDING STUDIOS | HOME THEATERS

The premium choice of musicians, artists, and engineers in professional recording environments. Beautiful wood, striking visuals, and two-dimensional diffusion.

HIGHTONES & MIDTONES

RECORDING STUDIOS | ACADEMIC SPACES | AUDITORIUMS

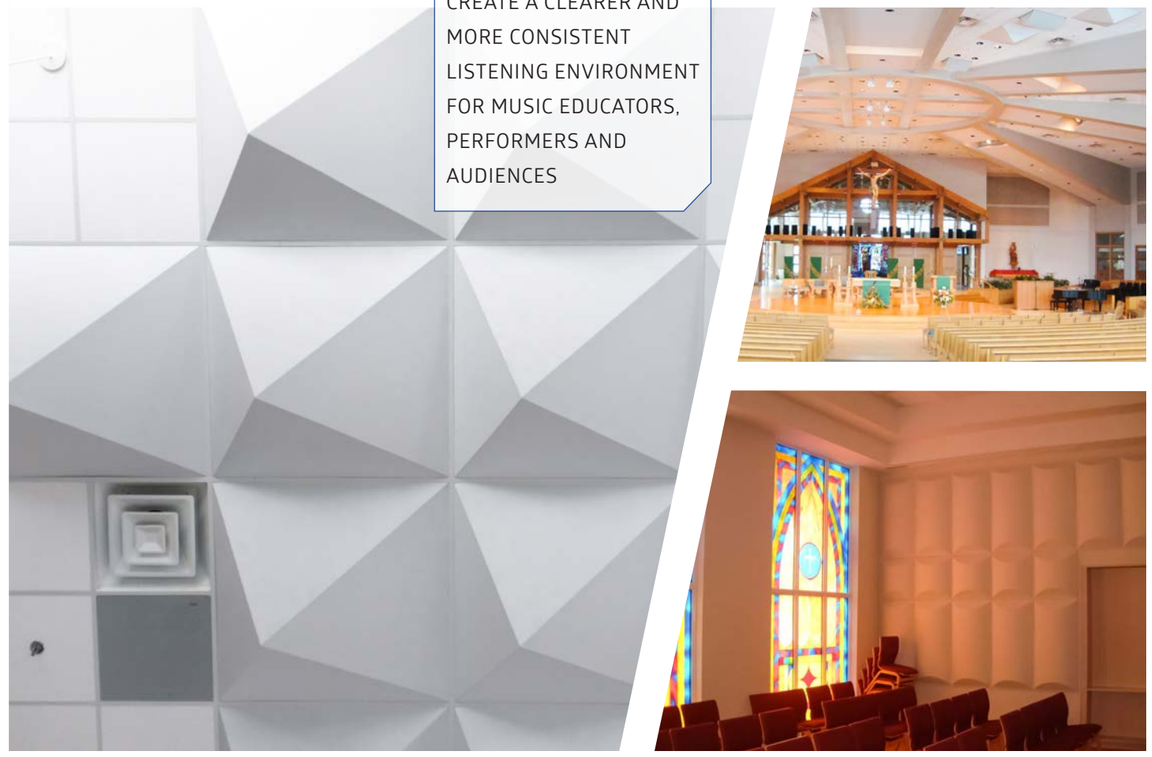
Design critical listening spaces with precise diffusion across specific frequency ranges. Elegant and beautiful diffusers are available in a variety of hardwoods and finishes.





HIGHTONES CONTROLS HIGH FREQUENCIES FOR HIGHER-PITCHED INSTRUMENTS. THE WIDER, DEEPER WELLS OF MIDTONES CONTROL FREQUENCIES BETWEEN 500 Hz AND 2,500 Hz.

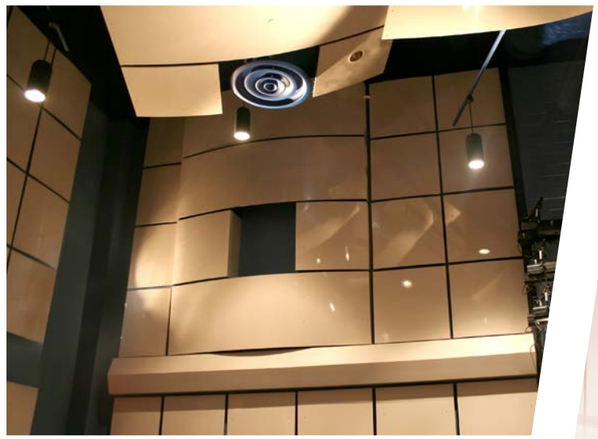
DIRECT HARMONY
CREATE A CLEARER AND MORE CONSISTENT LISTENING ENVIRONMENT FOR MUSIC EDUCATORS, PERFORMERS AND AUDIENCES

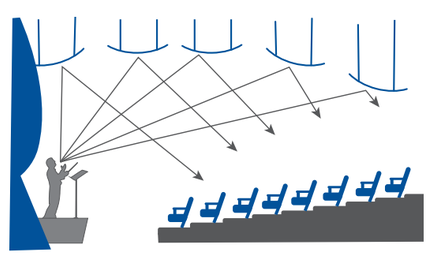


REFLECTORS
Perfect
Performers









REFLECTORS ARE SHAPED TO DISPERSE SOUND EVENLY ACROSS THE AUDIENCE

OVATION REFLECTORS

PERFORMANCE HALLS | AUDITORIUMS | WORSHIP FACILITIES

Reflectors create a visually stunning space and assure the timing and strength of live performances by eliminating late reflections.

Architects and designers have many creative options, from traditional wood and wood-like surfaces to a variety of gel coat colors. Reflectors add shape and dimension to walls and ceilings. A retractable version is also available and is ideal for multi-use environments.



PROJECT SPOTLIGHT

WILBUR WATTS INTERMEDIATE SCHOOL AUDITORIUM

When Wilbur Watts Intermediate School was being repurposed, the auditorium was designed to be available for the school and the community-at-large to use. The acoustical consultant focused on three areas of opportunity in the auditorium: assuring that stage sounds would reflect evenly from the ceiling, enveloping the audience by diffusing sound from the sidewalls, and adding absorption to maintain a proper level of reverberation. The result was a visually beautiful space with incredible acoustic accuracy.

PRODUCTS USED

- **Ovation Panels**
- **HighTones Diffusers**
- **HardSide Panels**

DRAMATIC RESULTS

BALANCE THE USE OF REFLECTORS, DIFFUSERS, AND ABSORBERS TO CREATE A DYNAMIC LISTENING ENVIRONMENT

SOUND IN MOTION

THE WORLD OF ROOM ACOUSTICS

The size, shape, and finish materials of a room define its sound quality – good or bad. Have you ever experienced a restaurant where dinner conversation is nearly impossible because of reverberant noise? Have you ever listened to a public address announcement in a gymnasium or at the airport where the words were unclear? Proper application of the right acoustical materials will solve these problems.

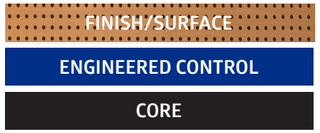
REVERBERATION CONTROL & SOUND ABSORPTION

Reducing reverberation will lower the background noise level and improve speech and music clarity. An easy way to analyze a room is to calculate its T60 reverberation time. This is simply the amount of time it takes (in seconds) for sound to decay 60 decibels in a room. Adding absorptive materials reduces T60 time in predictable levels.

It's easy to understand how different rooms should have different acoustic characteristics. For example, a concert hall's acoustic field should be rich and full, with some reverberation. In contrast, a classroom should be much less lively, so the instructor is clearly heard and easily understood.

ROOM TYPE T60 (SEC)	OPTIMAL T60 TIMES
Classrooms	0.6-0.7
Band Rooms	0.9-1.1
Movie Theaters	0.9-1.2
Choral Rooms	1.2-1.6
Multi-Purpose Rooms	1.6-1.8
Concert Halls	1.7-2.2

PANEL CONSTRUCTION
(Application Driven)



REFLECTION | DIFFUSION

Another goal in room acoustics is to create even sound fields. Controlling the timing and direction of sound reflections is an important part in the design of critical listening spaces, from recording studios to rehearsal rooms to performance halls.

Reflectors and diffusers enhance listening environments by controlling strong reflections and dispersing sound evenly across audiences and their listening space.

A NOISE REDUCTION OF 8-10 DECIBELS LOWERS REVERBERATION IN A ROOM BY 40-50%

ACHIEVE THE LOOK YOU WANT WITH THE ACOUSTICAL PERFORMANCE YOU NEED

