Skyline®

The First Two Dimensional Primitive Root Diffusor From The Acoustical Industry's Leading Innovator

Interfering reflections can be controlled by absorption or diffusion. In small rooms, it is often desirable to control interfering reflections and provide an ambient sound field using diffusion instead of absorption. When the room's surfaces are relatively close to the listener, a very efficient diffusing surface is needed. To solve this problem, RPG® patented the Skyline®. It is the industry's first — and most efficient — omnidirectional primitive root number theory two dimensional diffusor. The Skyline® scatters incident sound uniformly so that the acoustic glare in all directions is minimized.

Problem and Solution

Problem
Small rooms like Project Studios need a very efficient surface to diffuse interfering rear wall reflections and provide a diffuse sound field.

Solution
To solve this problem, RPG® utilized advanced primitive root number theory to design the most powerful two dimensional omnidirectional diffusing surface in the acoustical industry.

1' - 11 3/8"
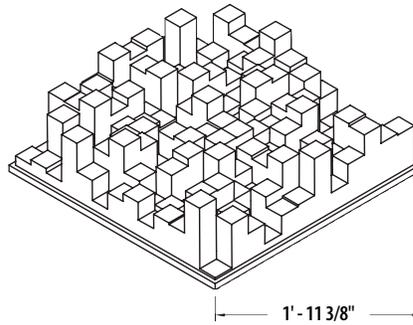
Performance Specifications

Diffusion
The uniformity of diffusion is characterized by the standard deviation of the 1/3 octave polar response for a given angle of incidence. For each of the 37 angles of incidence, 37 backscattering impulse response measurements are made at 5° increments between 0° and 180°. The Diffusion Coefficient is the mean standard deviation for all angles of incidence, normalized to the standard deviation of a delta function (1 equals ideal diffusion). The data illustrate the exceptional uniformity of diffusion above the diffraction limit (565 Hz = 1130 ft/sec/2'), which is related to the 2' dimension of the panel. The Diffusion Coefficient of a flat reflective panel is shown for comparison.

Diffraction Limit

Mean Skyline
Mean Reflector

Diffusion Coefficient
Frequency (Hz)
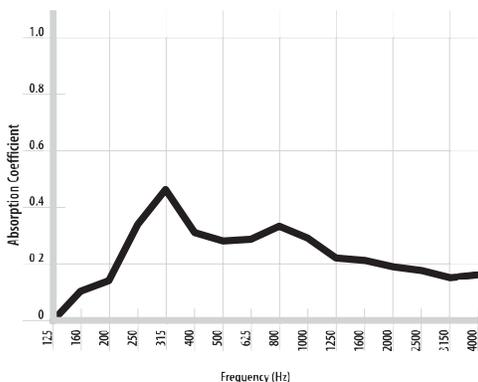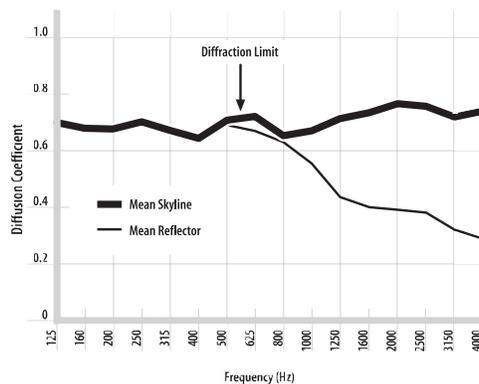
Absorption
The solid expanded polystyrene core of the Skyline® provides useful low frequency absorption.

Absorption Coefficient
Frequency (Hz)
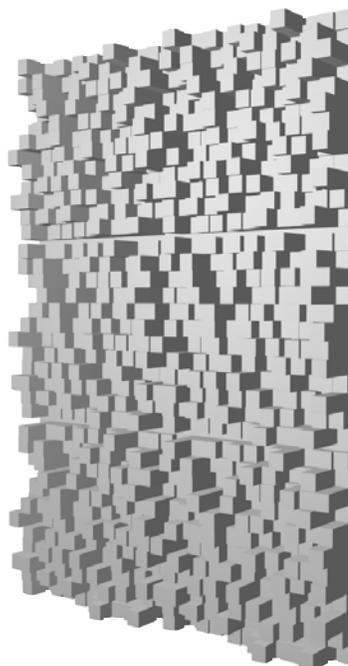
Installation

The Skyline® is very easy to install on walls or ceilings using either construction adhesive or the supplied hook and loop fasteners. Apply both sides of the hook and loop fastener to the rear of the Skyline® in each corner on a flat area. Remove the protective paper from the exposed side and apply to the wall. For permanent mounting you may wish to also apply construction adhesive along with the hook and loop. Skylines® can also be inserted into a T-bar ceiling grid. Be sure to apply all Skylines® in the same orientation.

FEATURES
- Patented optimized primitive root reflection phase grating
- 156 distinct phase blocks
- Suppressed specular scattering
- Universal mounting design
- Portable, lightweight construction
- Unique acoustic sculpture

BENEFITS
- The large prime number design offers the acoustical industry's highest reflection density. This design provides a natural sounding ambiance and the most effective diffusive control of interfering reflections
- The specular suppression afforded by the primitive root number theory design means the "mirror" reflection component of the scattering is reduced creating a more diffuse sound field
- The lightweight and universal Skyline® design with perimeter flange permits mounting on a wall, ceiling, or free standing portable gobo partition with hook and loop fasteners or in a T-bar suspended ceiling grid
- The complex number theory topology allows one to work closer to a wall surface than would normally be the case. Thus, small edit and recording control rooms can be optimized
- The Skyline®'s unique sculptured topology makes it a welcome aesthetic addition to the decor of the room

APPLICATIONS
All critical listening rooms, including recording studios, broadcast studios, vocal booths, home theaters, quality control rooms, CD mastering, film mix and dubbing stages, and music practice rooms

SPECIFICATIONS
- Size: 23-3/8" (H) x 23-3/8" (W) x 7" (D)
- Standard finish: Painted white
- Custom colors available
- Unit weight: 4 lbs.
- Shipped 2 per box
- Shipping dimensional weight: 30 lbs.