

category	sound diffusion
description	skyline® diffuser panel
part code	GRG210, GRG220



### Applications

- Recording studios
- Post-production studios
- Mastering studios
- Practice/listening rooms
- Broadcast studios
- Vocal booths
- Home theatres
- Film mix and dubbing stages.

**GRG210 AND GRG220 SKYLINE® DIFFUSER PANELS** scatter incident sound uniformly so that the acoustic glare in all directions is minimised.

Small rooms, where the boundaries are relatively close to the listener, need very efficient surfaces to diffuse interfering rear wall reflections and provide a diffuse sound field.

To solve this problem, Skyline® utilises advanced primitive root number theory to produce the most powerful and aesthetic two-dimensional, omnidirectional diffusing surface in the acoustics industry.



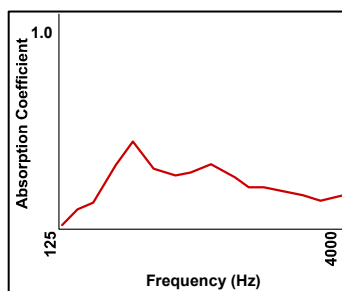
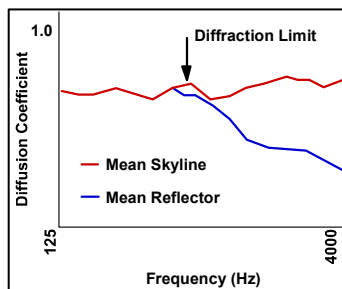
### Properties

- Interfering reflections can be controlled by absorption or diffusion
- Provides an ambient sound field using diffusion instead of absorption
- Easy to install on walls or ceilings, or freestanding on portable partitions
- Lightweight
- 156 distinct phase blocks
- Acoustic industry's highest reflection density
- Design provides natural-sounding ambience
- Spectacular suppression reduces 'mirror' reflection component of the scattering, creating a more diffuse sound field
- The complex number theory topology optimises workspace in small edit and recording control rooms
- Unique sculptured topology enhances decor

### Acoustic Performance

#### Diffusion

The uniformity of diffusion is characterised by the standard deviation of the 1/3 octave polar response for a given angle of incidence. For each of the 37 angles, 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, normalised to the standard deviation of a delta function (1 = ideal diffusion). The data illustrates the exceptional uniformity of diffusion above the diffraction limit (565Hz = 344m/s/50mm) which relates to the 50mm depth of the panel. The diffusion coefficient of a flat reflective panel is shown for comparison.



#### Absorption

The solid expanded polystyrene core of the Skyline® provides useful low frequency absorption.

### Installation

Skyline® is very easy to install on walls or ceilings using either construction adhesive or velcro for permanent mounting (not included).

Skyline® panels can also be inserted into a T-bar ceiling grid. Be sure to apply all Skyline® panels in the same orientation.

#### PLEASE NOTE:

Skyline® is fabricated from high-density expanded polystyrene. It is the nature of this material to have slight surface imperfections and contain steam vent holes.

Some of these imperfections may be partially concealed by a factory paint process.

The Skyline panels may be painted, but as Custom Audio Designs has no control over the painting process outside our premises, we are unable to assume any responsibility for any damage resulting from customers painting the Skyline panels.

### Technical Specification

#### GRG210, GRG220

Product	Skyline Diffuser Panels
Colour	White as standard
Nominal panel size	600mm x 600mm
Nominal thickness	120mm (GRG210) Box of 3 panels 150mm (GRG220) Box of 2 panels

## Guidance for Skyline™ Diffusor from Custom Audio Designs Ltd

More about Skyline™ Diffusor:

### As standard Features:

- Expanded Polystyrene Optimized Two Dimensional Primitive Root Diffusor, moulded from high density Caril-F flame-retardant grade expanded polystyrene.
- Two dimensional optimized primitive-root reflection phase grating principle, using an array of rectangular phase blocks.
- The diffusing panels are installed in the same orientation to preserve the two dimensional orientation of the surface.
- Absorption Coefficients and Noise Reduction Coefficient for the product are measured by an independent, accredited NVLAP facility according to the test methods as defined by ASTM C 423 and ASTM E 795.
- E Diffusion Coefficients for the product are measured in accordance with the recommendations of the Audio Engineering Society Working Group SC-04-02 boundary measurement technique.

### Dimensions:

- Available 600 x 600 x 150 mm deep and 600 x 600 x 120 mm deep.

### Installation:

- Wall mounted - with construction adhesive or hook and loop fasteners or low profile gravity batten.
- Ceiling mounted - with construction adhesive, hook and loop fasteners or in a T-bar grid.

#### NBS

- Manufacturer: Custom Audio Designs Ltd
  - Web: [www.customaudiodesigns.co.uk](http://www.customaudiodesigns.co.uk)
  - Tel: +44 (0) 1730 269572
  - Product reference: Skyline acoustic diffusor panel.
- Size: **[600 x 600 x 150 mm].**  
**[600 x 600 x 120 mm].**
- Colour: **[White]. - Standard**  
**[RAL, colour ???].**
- Mounting : **[Ceiling].**  
**[Wall].**