



# QRD<sup>®</sup> 734



*The First General Purpose QRD<sup>®</sup> Diffuser  
From The Acoustical Industry's Leading Innovator*

The QRD<sup>®</sup> 734 has proven to be the most popular and versatile diffuser in the RPG<sup>®</sup> product line. Its wide bandwidth, low cost, and broad selection of finishes make it a logical choice for music education facilities, recording studios, worship spaces, auditoriums, theaters, and performing arts facilities. This one dimensional diffuser is a modular, computer designed phase grating which produces a directional hemispherical response that can be oriented in any direction.

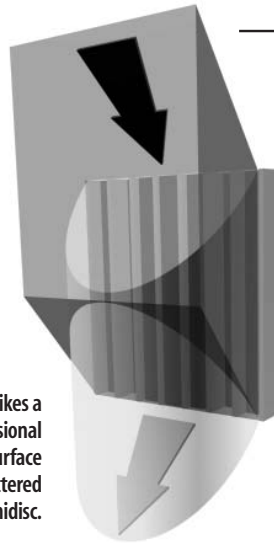
# Problem and Solution

## Problem

Interfering reflections that degrade speech intelligibility and music quality can be controlled by absorption and diffusion. Since commercial surfaces that provided uniform diffusion over a wide frequency range and for all angles of incidence were not available, absorption was used solely to control reflections. This approach creates "dead" spaces.

## Solution

In 1983, RPG® introduced the first commercial QRD® Diffusor, based on mathematical number theory. Now a predictable diffusive surface treatment is readily available.



Sound strikes a one dimensional diffusing surface and is scattered into a hemidisc.

## FEATURES

- QRD® sound diffusion
- Natural wood finish, paint finish, or transparent plexiglass
- Distinctive textured appearance
- Can be surface or flush mounted
- Can be oriented to provide two dimensional diffusion in the far field
- Units join together seamlessly for a continuous appearance

## BENEFITS

- Attractive finish allows its use in a variety of decors
- Can be used to control unwanted reflections, without adding additional absorption

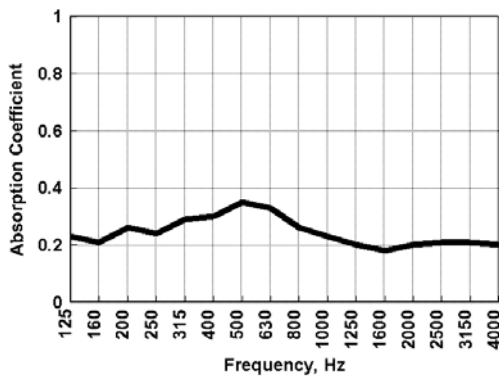
## APPLICATIONS

Music education facilities, Band rooms, Recording studios, Post production studios, Home theaters, Worship spaces, Auditoriums, Performing arts centers

## SPECIFICATIONS

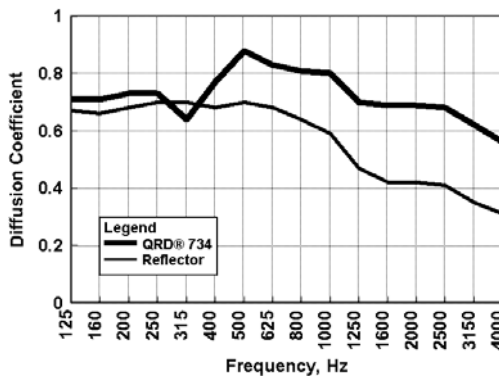
- Sizes and weights:  
23-5/8" (H) x 23-5/8" (W) x 9-1/8" (D): 26 lbs.  
47-1/4" (H) x 23-5/8" (W) x 9-1/8" (D): 50 lbs.
- Custom sizes available
- Standard finish: Uniform white birch clear coat
- Custom finishes available
- Class A fire rated

# Performance Specifications



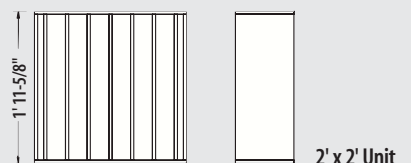
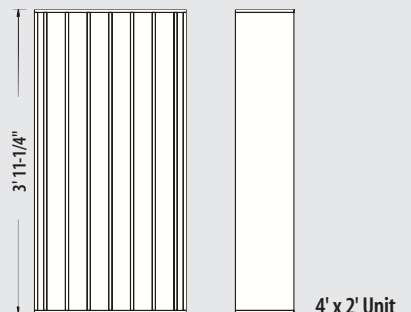
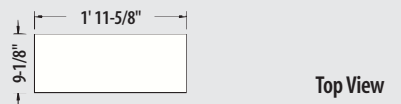
## Absorption

The wooden QRD® 734 or plexiglass Diviewisor™ contribute minimal absorption.



## Diffusion

Compared to a flat reflector panel, the QRD® 734 offers significant diffusion above the diffraction limit of 565Hz, which is equal to the speed of sound (1130ft/sec) divided by the 2' dimension of the panel. As the frequency increases above 565Hz, the graph indicates how the reference reflector becomes more and more specular, whereas the QRD® 734 provides uniform diffusivity.



# Installation

The QRD® 734 is typically mounted on a cleat and secured. For installations that require a flush mount the units are framed out much like an opening for a window.