

## Optical blend masks for night visuals

Most of today's projection technology cannot display pure and smooth black. This leads to visible grey areas in the overlapping regions of multi-channel projections. While the effect is hardly visible when day scenarios are projected it becomes a major disturbance when dark content and night visuals have to be displayed.

The common approach is to mitigate the effect by increasing the black level in the non-overlapping areas. This leads to the disadvantage that the contrast of the system – which is crucial for a good perception of the projected visual – will be severely affected and lowered.

Using so-called optical blending masks is the best way to get the overlapping areas under control. This technology works with blending patterns on foil or glass based filters which are put in front of the lens. The blending pattern is "filtering" the additional light in the overlapping areas and leaves the non-overlapping areas unaffected. The technology is sophisticated and expensive but widely known.

## Obstacles of the existing technology

Though optical blending mask technology has been used for a long time it still poses a lot of challenges. Usually the manufacturing is done based on a "theoretical" design where a lot of parameters are either not exactly determinable or the final projection system installation deviates from the original design.

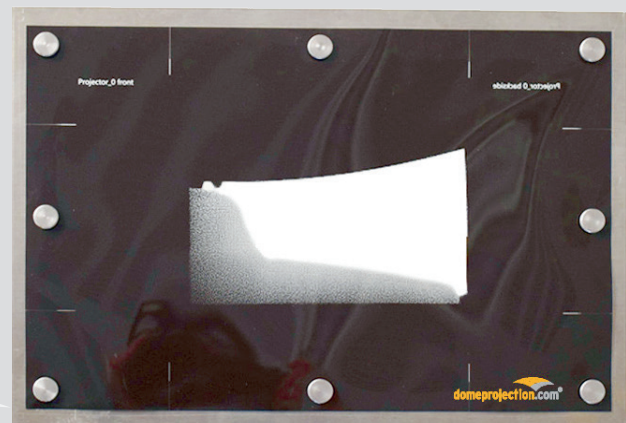
Many degrees of freedom for positioning and orientating the projectors and the optical blending masks need to be provided. Thus manual adjustment is time consuming and cumbersome. When maintaining the system, the same time and effort are required as during initial set-up.

## Patented NBlend Optical Blend System

With the patented NBlend optical blending mask technology of domeprojection.com® the process and complexity of designing and installing the optical blend mask will be significantly reduced. Moreover, this technology allows to produce blend masks in outstanding quality.

Our industry-leading camera-based autocalibration technology is now featuring calibration of optical blend masks. NBlend can calculate the optical blend mask based on accurate calibration data gathered from the visual system and the mask kit.

The newly developed combination of mask holder mechanics and optical blend mask features in domeprojection.com® ProjectionTools will push optical blending to an entirely new level.



## Features

- NBlend mask design using real calibration data
- Camera-based mask calibration
- Robust mask holder mechanics
- Motorized mask removal (option)

## Benefits

- Dramatically reduced installation and maintenance cost
- Minimized adjustment effort
- Unprecedented blending accuracy
- Independent from screen shape
- Perfectly integrated into domeprojection.com® ProjectionTools

## Target Markets & Application

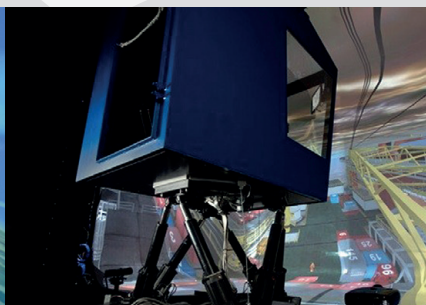
- Civil and Military Simulation and Training
- Dusk & Night Training Applications
- NVG (Night Vision Goggles) based Simulation and Training
- Planetariums & Dome Cinemas
- VR Centers
- Theme Parks and Dark Rides
- Culture and Entertainment Attractions

## Basic Requirements

- Windows or Linux based display system
- Windows 7/8/10 based control computer



## ProjectionTools for Simulation, Training & Entertainment



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