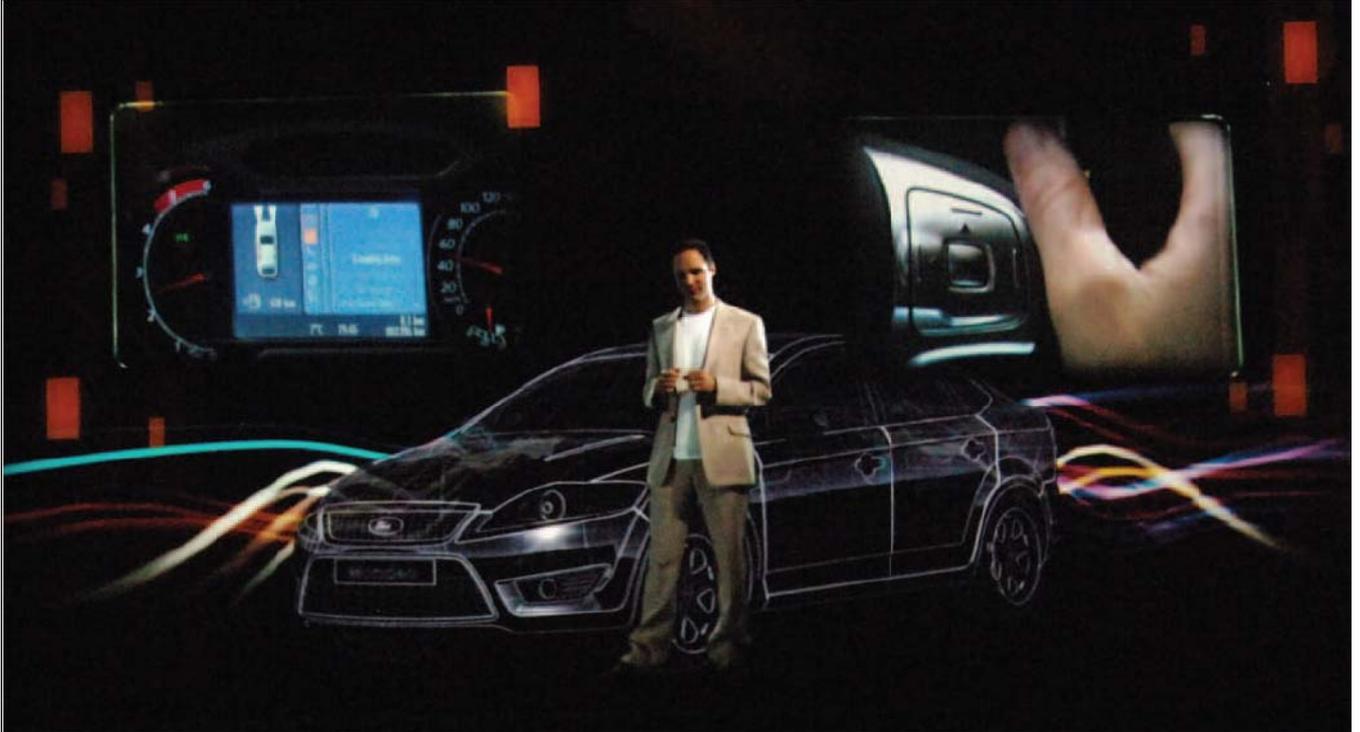




# Experience a new dimension

Musion® Eyeliner™ System



## *3D holographic projection system*



# 3D has Arrived!

**Musion® Eyeliner™System** is a new and unique high definition video projection system allowing spectacular freeform three-dimensional moving images to appear within a live stage setting. **Musion® Eyeliner™System** brings dramatic, previously unseen 21st century video film effects to the live set mediums of stage, AV - artistic performances, conference or trade show presentations, retail window displays and large scale out-of-home digital signage.

Live or virtual stage presenters appear alongside and interact with virtual images, humans or animated (think of the effect created for Warner Brothers movie, "Who Framed Roger Rabbit?"). The **Musion® Eyeliner™System** is unique worldwide and protected by patents granted in countries all over the world, including Canada, USA, Japan and Europe.

The **Musion® Eyeliner™System** does not require any special audience props, such as the use of 3D glasses. Yet, the audience viewing 3D hologram shows are always left awestruck by the startling realism of our 3D virtual shows.

When using **Musion® Eyeliner™System**, your imagination is the only limit.

Using sets starting from just 2m<sup>2</sup> sized cubes, projected images range in size from 50cm square, up to a massive 20m x 100m. Content can be live or virtual humans, animations (cartoon or computer generated), full sized trucks or automobiles, landscape, property or scenery, even machinery, pharmaceuticals and electronic components and appliances.

Watch all of your creative content come alive as dramatic moving 3D images of amazing clarity. Even existing 'made for TV' 2D video material is transformed into compelling footage running in giant floating 3D virtual screens created by the **Musion® Eyeliner™System**.

Any image types can be created and mixed together using conventional animation software such as 3D Studio Max®.



# 3D is exciting, affordable and available!

## How the **Musion® Eyeliner™** System works

### Equipment Specifications

The Musion® Eyeliner™ system incorporates some video principles and all equipment used is readily available to hire or purchase.

The primary components of a **Eyeliner™ System** set up are:

- A video projector, preferably DLP with an HD card/minimum native resolution of 1280 x 1024 and brightness of 5000+ lumens.
- For smaller cabinet installations, a high quality TFT Plasma or LCD screen can also be used.
- A hard-disc player with 1920 x 1080i HD graphics card, Apple or PC video server, DVD player.
- A Musion® Eyeliner™ Foil and a stage set.
- Lighting and audio as required
- Show controller (on site or remote)

Subjects are filmed in HDTV and broadcast on to the foil through HDTV projection systems, driven by HD Mpeg2 digital hard disc players, or uncompressed full HDTV video/Beta-Cam players.

The Eyeliner™ system setup is erected in either a bespoke cabinet or a self contained four legged ground support. Alternatively, the foil can be stretched into a truss framework and flown from its own hanging points.

In either configuration, allows for a full working stage or set to be constructed behind the foil. In so doing live actors or performers, as well as virtual images are able to interact with other projected images in such a way that it appears to the watching audience that all of the objects they are seeing are in stage.

It is therefore quite conceivable to have a live performer sing a duet with a 'virtual' partner, a cartoon character or even his/hers projected double.

All the images used on an Eyeliner™ system are three-dimensional images, but projected as two-dimensional images (2D/3D) into a 3D stage set. The mind of the audience created the 3D illusion. This means that production costs are minimal, needing only a single projector for the playback – hence the phrase 'Glasses-free viewing'

**Any one of the set-ups will allow a user of Musion® Eyeliner™ system to create the largest 3D floating images ever seen in the world.**

### Why Musion® Eyeliner™ system - Advantages of the System

#### 1 - Scale

A typical piece of Musion® Eyeliner™ system Foil is a maximum of 4.1m high in a continuous roll up to several hundred meters in length. A thinner, 8m high foil can also be used for larger installations.

In instances where even taller images are required sections of the 4m foil can be installed in a "portrait format" where each section is a maximum of 14m high by 4m wide, giving images approximately 11m high. Individual sections of foil are then overlapped and cut to fit leaving 1mm seams, which are barely visible from viewing distances over 7m.

#### 2 - Clarity of image

Musion® Eyeliner™ system foil is less than 100 microns thick yet retains its durable characteristics once installed. Because the foil is so thin there is no drop shadow created when objects are projected onto it, as there would be if a system were using glass or perspex. Foil allows greater amounts of projected light through for brighter images – even in brightly lit shopping centres.

In simple terms this means that the Musion® Eyeliner™ system medium creates crisper, sharper and consequently more realistic representations of the object or person being projected than any other medium.

#### 3 - Foil can be cut

Unlike glass, Musion® Eyeliner™ system Foil can be cut even when it has been fully installed. This means that doorways and holes for props to protrude through the foil can be easily rigged up.

This opens up lots of creative avenues for stage designers and choreographers to explore when using Musion® Eyeliner™ system in conjunction with their other show plans.

#### 4 - Transportation

Quite apart from the obvious health and safety issues concerned there are more practical issues to think of such as gaining access to some venues through small doorways and rigging/lifting issues once on site.

There are no such limitations with Musion® Eyeliner™ system Foil which is transported in 5m x 30cm lightweight pipes that can be easily carried by a couple of crew.

# How the **Musion® Eyeliner™** System works

## 5 - Safety

**Musion® Eyeliner™ Foil** is a far simpler and safer option than transporting large sheets of glass from venue to venue.

**Musion® Eyeliner™ Foil** cannot shatter and poses no danger to crew installing it or working along side it. It can be installed into moving scenery without fear of it breaking as it is moved. This means that it is a very straight forward process to fly the system in and out of stages as required. **Musion® Eyeliner™ Foil** is also certified fireproof to grade B1.

## 6 - Rigging time

Foil is typically rigged in a couple of hours. The rigging process is straight-forward and **Musion® Eyeliner™ Foil** installers can work alongside other technical crew. Once installed the process of tensioning the foil literally takes a few minutes of adjustment.

## Practical Considerations When Using Musion® Eyeliner™ Foil Environmental

### 1 - Wind

**Musion® Eyeliner™** Systems has undertaken numerous outdoor jobs already but there is always the chance that wind will blow onto the foil and affect the projected image. (If the wind is anything more than light, the foil may bow like a sail causing the projected image may appear to 'bounce' up and down on stage).

The only way to alleviate this problem is to build a wind-break around the installation. This has been done in two venues that were actually on the coast (one on the Arabian Sea and one on the Mediterranean). Both events were not affected by the wind.

### 2 - Strong daylight

This issue is pertinent in any situations where projectors are being used as a source of video. Despite manufacturers having made great strides in the last couple of years with the brightness of their projectors (at the time of writing Barco are about to launch a 27,000 lumen projector) there will never be anything available that will be able to compete with natural daylight.

In circumstances of strong natural daylight the options are either to create a controlled light environment or use the **Musion® Eyeliner™** system with widescreen High Definition 3mm/6mm LED walls.

### 3 - Space

It is important to remember that you need an area in front of the stage where the white reflective screen is positioned in the projection pit. (Imagine a moat without water, if you will).

You should allow a space of at least the height of the foil divided by a figure of 1.4142 (this is the perceived vertical height of the foil when set at a 45°). The width of the projection pit area should match the width of the proposed foil. As an example, a 4m high foil that is 10m wide would require a 2.82m by 10m space for the projection pit.

### 4 - Stage Depth

In addition to leaving space for the projection pit, one needs to leave an area behind the foil in order to add depth to the illusion. A minimum of 1m should be allowed.

In practice this means that the footprint of an **Musion® Eyeliner™ System** installation will be at least 5-9m deep.

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