



# Creating a Virtual Mannequin using 3M Vikuiti™ Rear Projection Film

Vikuiti Rear Projection Film provides high contrast, high resolution displays with ultra-wide viewing angles in all lighting conditions. These characteristics, together with the capability to cut the film to any size and shape, allow the creation of an exciting new promotional tool – **The Virtual Mannequin**.

## How it's done

### Create a script

- Keep it simple
- Short sections with pauses between work best as in most applications, people can pass by at any point in the loop

### Find a presenter

- Strong facial expressions work well as there is limited opportunity for expression through hand or body movements

### Film the video

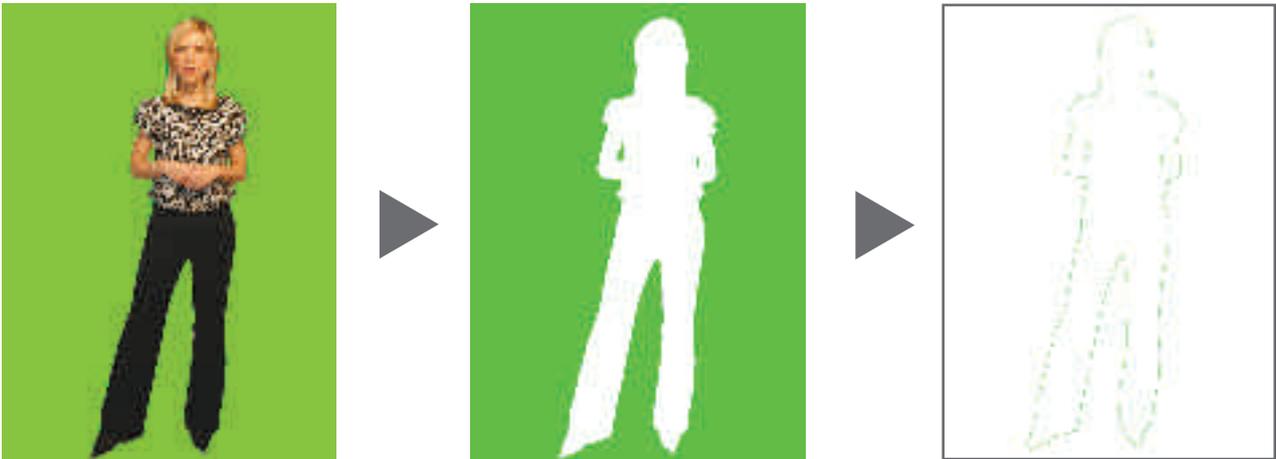
- Use a plain background with a strong contrast to the colours being worn by the presenter
- Minimise body movement
  - A hidden head support behind the presenter can be useful in minimising movement and in ensuring reproducibility between takes
  - If the script is too long to be memorised completely it is better to use a teleprompter rather than a written script as it reduces the need for head movements
- Hand gestures can be used for emphasis as long as care is taken that the movements do not alter the silhouette of the presenter
- Make sure the presenter returns to the same pose and facial expression after each section of filming as this will allow for more seamless editing

The Virtual Mannequin



## Use a snapshot from the video to create a cutting profile from the presenter's outline

- The use of a plain contrasting background for filming allows the shape to be produced using the auto edge detecting capabilities in most standard image editing software.



- It is preferable for the profile to be slightly too small, rather than too large as a black border around the presenter is more noticeable than a slight cropping of the image.

## Use the cutting profile to mask the video

- Most video editing software will allow a mask to be used to crop all frames of the video to the same outline.
- This should leave the image of the presenter surrounded by black, so that when it is projected, only the image of the presenter will be seen.
- The video also needs to be rotated through 90 degrees counter clockwise and adjusted so that the presenter's body fills as much of the image as possible. This will allow the greatest use of the light output from the projector.



Rotating video 90 degrees allows the presenter image to be as large as possible for a brighter, higher impact result



## Use the cutting profile to cut the presenter's life-size shape in acrylic

- Use 18mm thick acrylic for rigidity
- Cut the full body shape, but can choose to only project from waist up
- Cut by laser or router on a flat bed cutting machine

## Apply the Vikuiti Rear Projection Film to the acrylic

- Either whole or top half
- Wet application

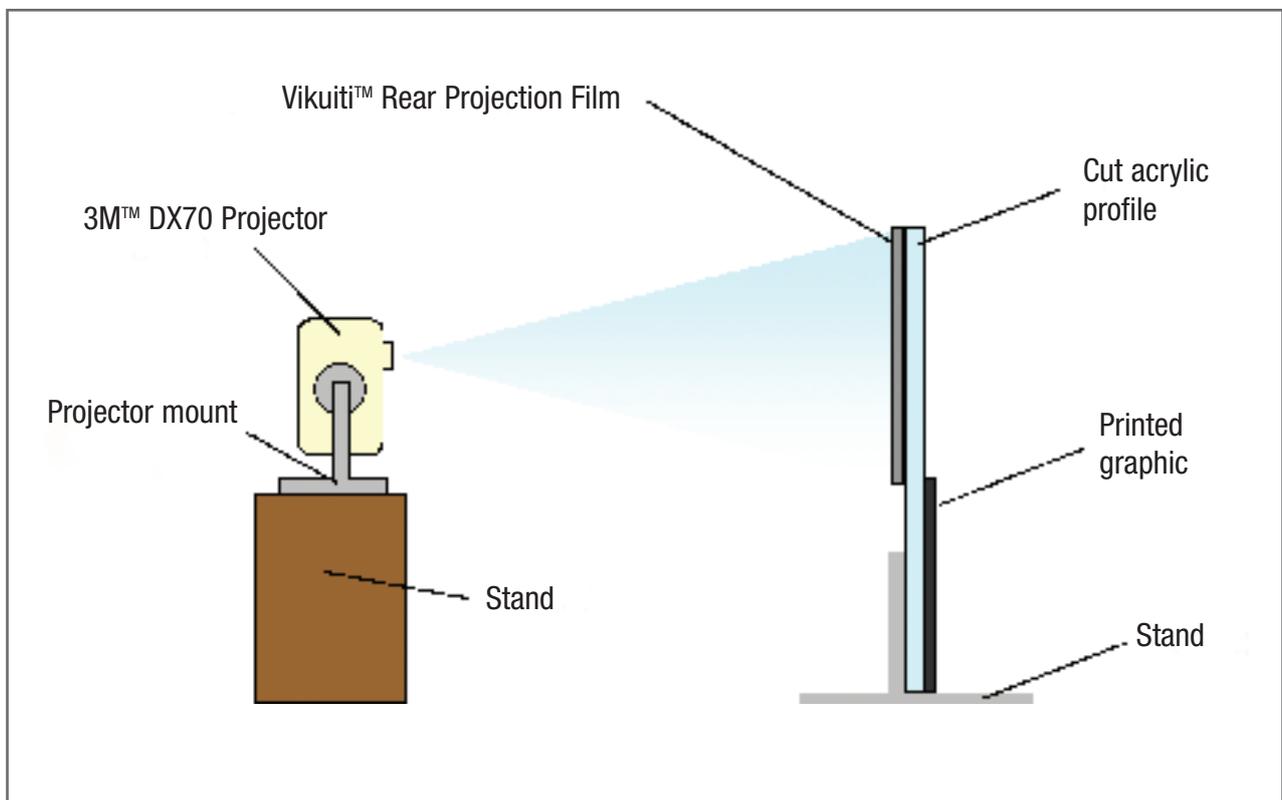


- Apply film with a small overlap all round, allow to dry, then trim with a knife
- The film must be applied to the back side of the acrylic
- If only projecting the top half, use static graphics for lower body
  - Printed from an image taken whilst filming
  - Applied to the front of the acrylic



## Set up the display

- The configuration is as follows:



## Set up the display

- 1 A 3M™ DX70 projector is recommended
- 2 The mannequin needs to be held rigidly to prevent movements affecting the image. The stand shown in this image worked well
- 3 Care should also be taken that the projector stand is rigidly mounted and not affected by vibrations from people moving nearby
- 4 Alignment of the projected image is simplified by using a plain white board behind the mannequin during set up



## And the finished result?



A real crowd stopper!



**3M**

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