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GRAPHIC PROJECTORS

DESIGN CONSIDERATIONS

Creating images, logos or text in light is different than using other signs. Several factors can affect the degree of success: light sources, ambient and competing light, reflectivity and color of the projection surface, distance of the surface from the light source, size of the image, color filters, and finally, special effects you may choose to use. Let's address each of these factors.

LIGHT SOURCES - The lamps used in ARTICULIGHT GRAPHIC PROJECTION SERIES vary by model. Generally, lamps with higher wattage produce more light. Output is rated in lumen. Lamps used in ARTICULIGHT units have a light output ranging from 2,600 to 110,000 lumen. Color temperatures also affect how brilliant a projected image is. Color temperatures are rated in degrees Kelvin. Lamps with a Higher color temperature produce whiter light. Available color temperatures range from 3,200° Kelvin (a warmer halogen light) to 5,600° Kelvin (a medium source daylight).

AMBIENT AND COMPETING LIGHT - Light is always in competition with other light. There is no light stronger than the sun. Projecting images in light on surfaces that are exposed to daylight is ineffective. A good rule of thumb: the lower the ambient and competing light, the more brilliant and striking the projected images are. But even in areas of high ambient light it is possible to achieve high contrast, as long as the projection surface itself is shielded from competing light.

REFLECTIVITY, COLOR AND TEXTURE OF THE PROJECTION SURFACE - The optimum surface to project images is on a light colored, matte surface. Darker surfaces (black, dark red or dark blue) are likely to absorb much of the light and will, therefore, be less effective. Sometimes, darker paints have special reflective qualities and may be suitable to project images on. The best way is to check how well the beam of a flashlight is visible on the surface under actual lighting conditions. Generally, matte or textured surfaces produce better results than shiny surfaces. Certain building materials are particularly suitable to project images on: plaster, painted walls, concrete and aggregate, brushed metals, brick and light wood. Glass mirrors and certain high glass metals are less suitable.

DISTANCE OF THE SURFACE FROM THE LIGHT SOURCE - The shorter the distance, the brighter the image. It is, therefore, important to select a system with sufficient power to project the image over the desired distance. The ARTICULIGHT IMAGINAIRE™, a small unit, is suitable for distance of up to 8 or 9 feet, depending, of course, on the ambient light. In near darkness, this system can project much farther. This unit uses halogen lamps and produces a warm light with a color temperature of 3200°K. The IMAGE MAKER™ has a color temperature of 4200°K and the LOGO LIGHT™ has 5200°K and both are capable of projecting images up to 30 feet (10M). The DV-200, DP- 200, ADVERTISING SCAN

and the MOVER use the MSD-200, a 200W metal halide lamp with 5600°K color temperature capable of projecting images up to 30' (10M). They produce a more brilliant, whiter light - the higher the color temperature of the light source, the whiter the image. The DP-H250 uses a 250W lamp source with 3200°K capable of projecting images up to 30' (10M).

LAMP LIFE - At ARTICULIGHT, we put a lot of thought into the light source before designing the projector. We have chosen long life bulbs ranging from 2,000 to 10,000 hours reducing maintenance and saving on lamp replacement.

SIZE OF THE IMAGE - Tradeoffs: the smaller the image, the stronger its intensity. Basically, you trade off brightness for size. Under difficult circumstances, powerful special lenses can be used. A wide angle lens, for example, can project an image as high and as wide as the unit is from the projection surface. Example; A unit mounted only 6 feet from the projection surface can project an image 6 feet high or wide. In cases where the unit must be mounted far from the projection surface, a telephoto or zoom lens can be deployed to compensate for the greater distance.

COLOR FILTERS - All color filters absorb light, some more than others. As a rule, red and blue filters absorb more light than green or yellow. When using color filters, you trade color for brightness, although images projected with green or yellow dichroic filters can be quite brilliant.

SPECIAL EFFECTS - These accessories can be used to set images in motion (horizontal, vertical, circular or elliptical), to fade images and make them reappear; or to create special effects such: as rotating images, realistic images of water or clouds; images "flowing in the wind" or multiple images created from a single one, using a two or four-fold prism. To use these special effects, please contact an ARTICULIGHT Lighting Consultant.

For some examples of how the ARTICULIGHT GRAPHIC PROJECTION SERIES can be used in various environments please refer to our application brochures. Your applications can be as unique as your ideas. To assist you in designing with light, please call an ARTICULIGHT lighting specialist for a free consultation.