

# PULSN

PROJECTION LIGHTS & STAGING NEWS

## LIGHTS ON **LASERS** **OUTDOOR LASER SHOWS**



By David Lytle

### Show Basics: Recipe for an Outdoor Show

Thinking about a big outdoor laser extravaganza for the summer season? We asked laser show producer Doug McCullough to list the most critical factors in creating outdoor shows. McCullough, who founded Audio Visual Imagineering in 1977 and launched Laser Show Design in Orlando, Fla., in 1997, has produced large-scale, outdoor displays for Orange Bowl Halftime Shows, city-wides,

celebrations, submarine christenings, and Fortune 500 companies. Here's his quick checklist for a large outdoor show with beams and projected graphics:

- 1) Control ambient lighting to make sure the lasers look their brightest. That means that any source that could wash out the lasers—such as parking lot lights, building lights, even lights from a carnival midway—should be dimmed or doused during the laser show.
- 2) Don't scrimp on the size of the screen for laser graphics. McCullough says a 30 x 40-foot screen should be considered a minimum. He prefers a 40 x 60-foot screen, which can work for crowds as large as 70,000 in a stadium.
- 3) Have sufficient laser power for the needs of the site. "What looks good in a studio might have zero impact outdoors," said McCullough. He prefers, at a minimum, to have a 4-watt YAG laser or a 10-watt argon for mid-air beam effects (the green color of a YAG laser is about 2.5 times brighter than the blue/green argon color). For full-color graphics, he recommends a white-light laser at a minimum 13-15 watt power level.
- 4) Use foggers to enhance beam brightness. McCullough has developed his own system of radio-controlled blowers and theatrical fog machines to produce fog coverage that is ideal for outdoor laser shows. In addition to increasing the apparent brightness of the beams, theatrical fog allows for subtler—yet still spectacular—atmospheric laser effects such as cones, fans and waves that may not be visible without fog.
- 5) Make sure the audience "feels" the music, because the quality of the sound system has a major impact on the success of the laser show.
- 6) Tailor the show's content to fit the audience. "You need to take into account the age, background and culture of the audience. Every show needs to be conceived on an individual basis."