
Optics of Digital Projectors: DVD Technical Short Course from Optical Short Course International

(Wednesday, Apr. 12, 2006) - Contributed by Richard Cadena

Just when you were getting comfortable with automated lighting, along comes this new technology that demands that you get up yet another steep learning curve. Digital lighting, LEDs, low-resolution and high-resolution graphics displays and DMX-controlled media servers are little more than video with a new skin. But they are invading the lighting industry like it's Omaha Beach on D-Day. Pause—press reset—reboot and begin again.

What it is: "Optics of Digital Projectors"

What it's for: Technical and general training on digital projectors for anyone involved in video and/or lighting.

Pros: Lots of information, very well presented and illustrated, easy to understand.

Cons: DVD format is not as easily searched as paper.

How much: \$749 Fortunately for us squints, there are abundant resources to help us gather and assimilate information about the crazy world of video and all the secrets of formats, lingo and interconnectivity. One of the most comprehensive is a DVD short course titled "Optics of Digital Projectors." And when we say "comprehensive," we mean 7½ hours worth of comprehension on three DVDs. It kind of makes you wonder where the term "short course" comes in. It's certainly not short on subject matter, which covers a range of topics beginning with the very basics and going through measurement and testing. The basics include such topics as the projection environment, mercury and xenon light source chemistry and physics of operation, ballast info and more. As the DVD progresses, it gets into illumination systems such as DMD, LCD and LCoS and how they work. Other topics deal with performance, an excellent "chapter" on color and color perception, projection screens and measurement and testing projectors. Along the way, you get a guided tour through each subject replete with narration and lots of graphics. The course is targeted at the middle 60% of lighting and video professionals who need to know about digital projectors and their components, including lighting designers, programmers, lighting and video engineers, installers, rental houses, marketing, sales and service technicians. With the ever-increasing influence of video in all sorts of productions, it's becoming more important for every craft in the industry to learn the difference between LCD, DLP and LCOS/DILA projectors, different screen types, light levels and how they affect projection, single-panel versus three-panel projectors, etc. The DVD goes pretty deep into some of the topics, but it's done without an overdose of math and equations. Not all of the material is for everybody who might view the DVD, but there is something from everyone from the different light sources available, how they work, their advantages and disadvantages, to the different types of projection technology in use today. Even the more technical information is well-illustrated and explained well enough so that even audio professionals can easily grasp the principles. (Sorry, I couldn't resist.) The narrator, Michael Pate, is amply qualified for the job of teaching the course. Having completed his master's degree in optical sciences from the Optical Science Center at the University of Arizona and his executive MBA from the University of California, Irvine, he is now president of Optical Short Course International and has been consulting and teaching video for nine years. His background includes 19 years in the optical engineering field, including new product development of optical instruments, R&D, optical system design, optical manufacturing, optical component and system testing, optical alignment, thin films and radiometric design and analysis. Basically, anyone who will come into contact with projectors would benefit from the course, and for many lighting professionals who are grappling with the newly-emerging field of digital lighting, this DVD is a great find. At \$749, you might want to get a couple of friends or coworkers to split the cost with you. Then you can grab some popcorn, kick back in your home theatre and prepare to energize your brain. It sure beats reading a manual.