

Next Generation Ultra High Resolution D-ILA (LCOS) Projectors

Rod Sterling

To achieve eye limiting resolution, higher than 4K (8Mpixel) pixel density is needed in a single projector. While it is possible to create eye limiting, >20/20 resolution for a full field of view display with 4K projectors, the number of projectors required is still quite large. Newer, higher resolution projectors are needed to help simplify the system and meet the pixel density requirements. JVC has introduced e-shift 8K projectors for some time now for planetarium and flight simulation applications. Now, JVC has shown a native 8K, 32MPixels, three chip projectors, both for broadcast in conjunction with NHK, and for flight simulation at the latest iitsec 2016 trade show. This paper will compare the difference between e-shift 8K and native 8K. It will introduce the 1.3" native 8K (7680x4320) D-ILA device and signal processing for this high bandwidth projector. Discussions on 120 Hz operation and High Dynamic Range for simulation use. BluEscent Laser phosphor light source and various drive options offered for long life, black insertion and RGB laser illumination will be covered.

BIO

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Rod Sterling is Chief Engineer, of JVC Technology Center, JVCKENWOOD USA Corporation, in Long Beach, California. He received his MS in Electrical Engineering, Applied Physics from the University of California, San Diego. He currently supports the efforts in ultra-high resolution displays, Reference Series and Visualization Series projectors and their applications, with focus on Simulation, High Dynamic Range, Visualization, Home Theatre, and Stereoscopic displays. He has over 33 years of experience in the display area and over 25 years in Simulation and Electronic/Digital Cinema. He is the author of over 28 journal articles, 12 patents and 2 screen credits. He is an active member of SID, IEEE, SPIE and SMPTE.