



Society of Motion Picture and Television Engineers

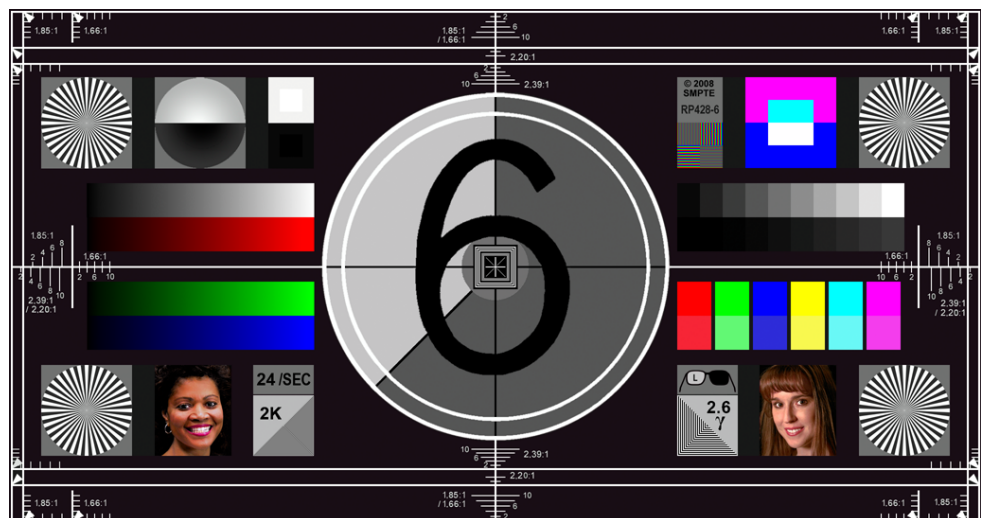
D-Cinema Digital Leader & Digital Projection Verifier

New!

Two new products for the D-Cinema industry, both derived from SMPTE RP 428-6:2009

DPROVE is an acronym for **D**igital **P**ROjection **V**erifier, a set of D-Cinema Packages (DCPs) primarily intended for use in theaters as a check of digital projector performance, alignment, and picture-sound synchronization.

The **Digital Leader** is primarily intended for use by post production facilities and allows the addition of leaders and/or footers to D-Cinema Distribution Master (DCDM) reels, prior to encoding and encryption, for use in quality check.



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General Description:

The SMPTE D-Cinema Digital Leader and Digital Projection Verifier are both derived from SMPTE RP428-6:2009. Both contain 8-second leader sequences; the Digital Leader package also includes a 4-second “foot leader” that may be used if required. Both products include sequences for aspect ratios of 1.85:1, 1.896:1 (maximum projection extent), and 2.39:1 at both 2k and 4k resolutions. The sequences are provided at 24, 25, 30, 48, 50, and 60 fps, and in flat (2D) and stereo (3D) versions where applicable. Each product includes all versions currently defined in SMPTE Standards.

The RP428-6 sequences include traditional countdown numerals in front of a “clock arm” that rotates with the position incremented on each frame. The background image contains a large number of elements to aid in verifying projection performance and alignment. These elements include center and crop markers, focus stars, gradients for detecting contouring, gamma check, black and white references, precision color patches (saturated and desaturated), human faces for flesh tones, and left-right indicators for stereo (3D) imagery.

Audio “pops” are included to assist in verifying picture-sound synchronization.

The sequences are not intended to permit or replace a full alignment or calibration procedure for projectors, but provide content for focus and framing adjustment, and a confidence check for many aspects of projector performance.

Both products are licensed for a 3-year renewable term.

“DPROVE” DCPs

DPROVE is an acronym for **D**igital **PRO**jection **VE**rifier, a set of D-Cinema Packages (DCPs) primarily intended for use in theaters as a check of digital projector performance, alignment, and picture-sound synchronization. (Projectionists may choose to loop or repeat playback of the chosen DPROVE sequence to facilitate checking of multiple performance aspects.)

All currently standardized variants are included in the product delivery; it must be noted that not all variants will be playable on all server/projector combinations.

The DCPs are encrypted and keys will be issued to license all servers at a single location. Pricing is dependent on the number of servers, and users must purchase additional keys if screens are added.

Initial product distribution will be in “JPEG Interop” DCP format; new versions in SMPTE ST 429-2:2009 DCP format will be released in 2010. The new versions will be provided to DPROVE licensees on payment of a media fee, and licensees may retain both versions.

D-Cinema Digital Leader

The **Digital Leader** product is primarily intended for post production facilities, to permit the addition of leaders and/or “foot leaders” to DCDM reels intended for conversion to encrypted DCPs. The product delivery includes numbered sets of TIFF and WAV files for each of the standardized variants.

The material is delivered on hard drive, and licensed to a single location. The license requires that this content be treated and protected as other unencrypted copyright material. The license does not limit the number of uses of the leader provided that each use becomes part of the content of an encrypted DCP. Use of the SMPTE material to produce a stand-alone DCP, or to produce any unencrypted DCP is prohibited.

The Digital Leader product distribution also includes the DPROVE encrypted DCPs and keys for all projectors for the licensed location.