CREATING BROADCAST MPEG FILES WITH NON-LEIGHTRONIX SOURCES

The UltraNEXUS/NEXUS supports MPEG-1 and MPEG-2 video encoding standards. LEIGHTRONIX recommends the following guidelines for broadcast MPEG video files created with any third party hardware or software to ensure optimal playback on either of the internal UltraNEXUS/NEXUS MPEG players:

- Acceptable stream types:
  - MPEG-1 System Stream or MPEG-2 Program Stream (consisting of a single elementary video stream with an optional single elementary audio stream)
    
    NOTE: Transport stream is not possible.
  - Elementary video stream
- Three video resolutions (pixels) are allowed. Other resolutions are not supported.
  - 352 x 240 (Horizontal x Vertical)
  - 352 x 480
  - 720 x 480
- Picture rate must be 29.97 pictures per second.
- A maximum bit rate of 10 Mb/s is allowed. Higher rates are not supported.
- National TV Standards Committee (NTSC) with 4:3 aspect ratio required.
- 4:2:0 sampling format required. (Main profile at Main or Low level, ≤ 10 Mb/s)
- IBBP group of pictures (GOP) structure recommended for best quality (30 frame maximum GOP size).
- Encode header information in stream every few seconds to aid in error recovery.
- Audio, if present, must be encoded into the MPEG file using Audio layer II.
- Audio may be encoded at a 32, 44.1, or 48KHz sampling frequency. LEIGHTRONIX recommends an audio sampling rate of 44.1 KHz for optimal performance.
- MPEG filenames may contain up to 27 characters (no spaces) in addition to the required ".mpg" extension.