

# SD + HD Video Upload Specs

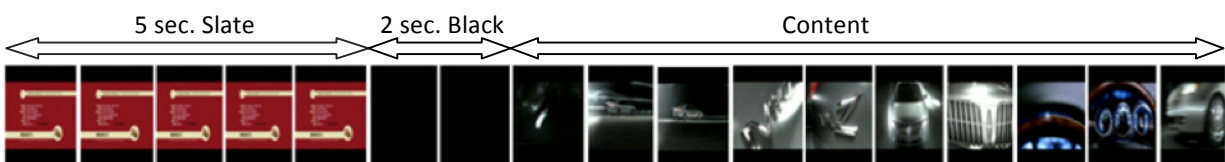
Extreme Reach provides multiple solutions for uploading video creative to your account. Whether you choose to upload ads via the Media Uploader Application or directly through the web-based platform, all files must meet the specifications in this document before they can be accepted. To help ensure that your video files are seen exactly as you intend them to be, please review the detailed specifications below.

**Before you review the information in this document**, please check and verify the layout of your final digitized files prior to uploading to the Extreme Reach platform. Common issues to look for include:

- **Incorrect 5.1 audio configuration**—specifically voiceover on Channel 3.
- **Video glitches** that sometimes occur when video files are rendered from the editing system or during capture of source material.
- **Extra frames** at the beginning or end of a spot (i.e. proper timing).
- **Inaccurate slate information** (ISCI, Audio configuration, etc.).

## Content Layout

All files are required to be laid out in the following way before they can be correctly ingested into the Extreme Reach platform:



- **5 Seconds of Slate** (150 Frames @29.97fps – 300 Frames @59.94fps)  
**Note:** For HD spots, the slate should include Audio Type (Stereo or Surround)
- **2 Seconds of Black** (60 Frames @29.97fps – 120 Frames @59.94fps)
- **Spot must start on** frame 210 if 29.97fps or 420 if 59.94fps. The creative content must run to the last frame of the spot with no black at the tail (unless the black is part of the content). There should be no extra frames of black after the creative.

**The specifications above must be exact** to ensure compliance with station and publisher requirements. A correctly formatted 30-second commercial will have a total duration of 37 seconds (including the slate and black) and be equal to 1109 frames at 29.97 fps. This means that the start of video would be at the 7-second mark and have no black after the content.

## File Naming

The filename should be the ISCI or Ad-ID code with no spaces, dashes or other characters; for example, "ZYWX9876.mpg".

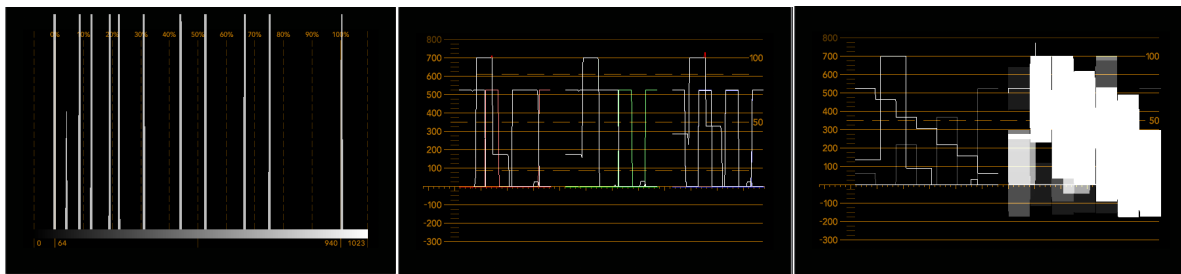
**Additionally for HD**, the filename should also include an "H" at the end to identify it as an HD spot; for example, "ZYWX9876H.mpg".

**Note:** It is very important to note that an HD spot should be marked as HD within the site metadata when uploading to Extreme Reach.

## Suggested Video Standards

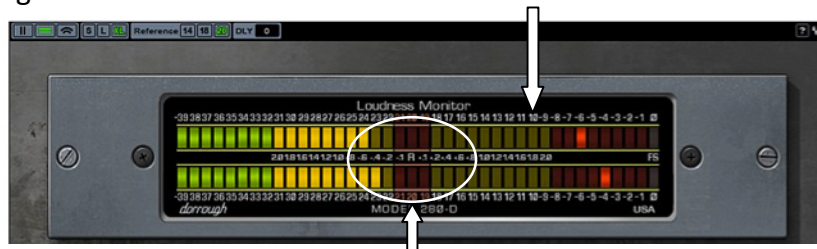
**Video Levels** (when measured as a derived composite signal):

- Black level = 7.5 IRE for NTSC in the US
- Blanking level = 0 IRE
- White levels = 100 IRE, 714 mV
- Maximum signal level = 120 IRE
- Minimum signal level = -20 IRE



## Audio Levels

- Most Broadcast Engineers in North America calibrate their audio gear to nominal reference level of 0 dB on a VU meter aligned to +4dBu or -20dBFS.
- Peak signal levels must not exceed the nominal level by more than +10dB.
- Broadcast audio should have a good signal to noise ratio, where the speech (or music) is a minimum of 16dB above the noise of the recording.
- **Peak Audio:** May temporarily peak to, but not exceed +3dB
  - If measuring Digitally, Average Audio Peaks will not exceed -18 dBFS
  - High Peaks must not exceed -10 dBFS



- **Average Audio:** Range between -4dB and +3dB @ +4dB Ref
  - If measuring digitally between -27 to -18 dBFS average

## Standard Definition File Specifications

	<b>MPEG</b>	<b>Final Cut Pro</b>	<b>Avid</b>
<b>Stream Type:</b>	MPEG-2 Program Stream	*Captioning is not maintained on ProRes Files.  -Apple ProRes 422 (HQ) NTSC 48kHz -ProRes 422 (LT) Can be used if bandwidth is limited.	*Captioning is not maintained on Avid Files.  When sending Avid SD, import files into your session as RGB (0-255) and export as Meridien 2:1 NTSC 601. (Avid users only)
<b>Video Bit Rate:</b>	18 Mbps - Constant	Default	Default
<b>Frame Rate:</b>	29.97	29.97	29.97
<b>GOP:</b>	Closed Long GOP (IBBP)	Default	Default
<b>Aspect Ratio:</b>	4:3	NTSC - CCIR 601 / DV	4:3
<b>Pixel Aspect Ratio:</b>	9:10	9:10	9:10
<b>Width / Height:</b>	720x512 *720x480 can be used for files if Closed Captioning is not required.	720x486 *Captioning is not maintained on ProRes Files.	720x486 *Captioning is not maintained on Avid Files.
<b>Chroma:</b>	4:2:2 (HP@HL)	4:2:2	4:2:2
<b>Interlacing:</b>	Upper/Top field first	Bottom/Lower field first	Bottom/Lower field first
<b>Audio Type:</b>	MPEG Layer 2	Default	Linear PCM
<b>Audio Sample Rate:</b>	48kHz	48kHz	48kHz
<b>Audio Bit Rate:</b>	384kbps	Default	Default

### Notes:

- If sending files with CC, masters must be in MPEG format.
- The first trigger for Closed Captioned files MUST be married to the first frame of video.
- If an SD spot is Closed Captioned, it MUST be notated in the metadata.
- If you are having issues maintaining the proper color space when using Avid, please see our Tips for Avid Users one sheet.

## High Definition File Specifications

	MPEG	Final Cut Pro	Avid
<b>Stream Type:</b>	MPEG-2 Transport Stream	*Captioning is not maintained on ProRes Files.  -Apple ProRes 422 HQ 1920x1080 60i 48 kHz -Apple ProRes 422 HQ 1280x720 60p 48 kHz -ProRes 422 (LT) Can be used if bandwidth is limited.	*Captioning is not maintained on Avid Files.  When sending Avid HD, import files into your session as RGB (0-255) and export as DNxHD 709.  (Avid users only)
<b>Video Bit Rate:</b>	45 Mbps - Constant	Default	Default
<b>Frame Rate:</b>	29.97 (1080i) / 59.94 (720p)	29.97 (1080i) / 59.94 (720p)	29.97 (1080i) / 59.94 (720p)
<b>GOP:</b>	Long GOP (IBBP)	Default	Default
<b>Aspect Ratio:</b>	16:9	HDTV 1080i (16:9) or HDTV 720p (16:9)	16:9
<b>Pixel Aspect Ratio:</b>	1.0	Square	Square
<b>Width / Height:</b>	1920x1080 (1080i) or 1280x720 (720p)	1920x1080 (1080i) or 1280x720 (720p)	1920x1080 (1080i) or 1280x720 (720p)
<b>Chroma:</b>	4:2:2 (HP@HL)	4:2:2	4:2:2
<b>Interlacing:</b>	1080i (Upper/Top field first) or 720p (Progressive)	1080i (Upper/Top field first) or 720p (Progressive) *Captioning is not maintained on ProRes Files.	1080i (Upper/Top field first) or 720p (Progressive) *Captioning is not maintained on Avid Files.
<b>Audio Type:</b>	PCM or MPG	PCM Audio/ Big or Little Endien	PCM Audio/ Big or Little Endien
<b>Audio Sample Rate:</b>	48kHz	48kHz	48kHz
<b>Audio Bit</b>	16, 20, 24 (LPCM only)	16	16, 20

### Notes:

- If sending files with CC, masters must be in MPEG Transport Stream format.
- The first trigger for Closed Captioned files MUST be married to the first frame of video.
- If an HD spot is Closed Captioned, it MUST be notated in the metadata, and VANC 608 and 708 data must be present.
- If you are having issues maintaining the proper color space when using Avid, please see our Tips for Avid Users one sheet.

## HD Audio Specifications

	<b>MPEG</b>	<b>LPCM</b>
<b>Encoding:</b>	MPEG-1 Layer 2	SMPTE 302M
<b>Channels:</b>	2 – Stereo	2 – 2 Channels per stream, <b>OR</b> 8 – 1 Channel per stream, <b>OR</b> 2 Channels/Stream
<b>Average Level:</b>	-27 to -18 dBFS	-27 to -18 dBFS
<b>Peak Audio:</b>	May temporarily peak to, but not exceed, -10 dBFS	

	<b>Stereo Only (MPEG or LPCM)</b>	<b>Surround Sound 5.1 (LPCM)</b>
<b>Channel 1:</b>	Stereo Left	Left Front
<b>Channel 2:</b>	Stereo Right	Right Front
<b>Channel 3:</b>		Center
<b>Channel 4:</b>		Low Frequency Effects
<b>Channel 5:</b>		Left Surround
<b>Channel 6:</b>		Right Surround
<b>Channel 7:</b>		Stereo Left
<b>Channel 8:</b>		Stereo Right

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