



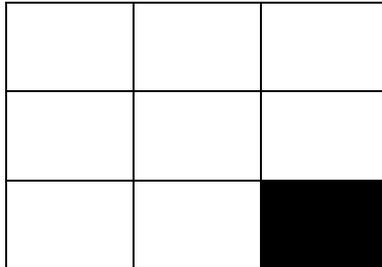
**Full Technical Specifications – File Based Delivery**  
**Revised August, 2014**

ZoomerMedia’s formats of choice for delivery of programs are MXF OP1a SD (720x512) MXF OP1a HD (1920x1080), Quicktime SD (720x480) and Quicktime HD (1920x1080). Our preferred method of delivery is Hard Disk or USB Drive. We also accept delivery through third party services like Aberdeen and Extreme Reach. ZoomerMedia does not currently accept direct FTP transfers.

| <b><i>Acceptable Container Formats</i></b>   |  |
|--|--|
| <b>MXF OP1a</b>  | <b>Quicktime</b>   |
| <b>SD 720x512 @29.97i</b><br>Field 1 dominance (Upper Field)<br>-MPEG2 422 @ 25Mbps for SD<br>-IMX(D10) @ 30Mbps for SD  | <b>SD 720x480 @29.97i</b><br>Field 1 dominance (Upper Field)<br>-DV NTSC @ 25Mbps for SD<br>-IMX @ 30 Mbps for SD  |
| <b>HD 1920x1080 @ 29.97i HD</b><br>-XDCAM HD 422 @ 50 Mbps for HD  | <b>HD 1920x1080 @29.97i</b><br>-XDCAM HD 422 @ 50 Mbps for HD<br>-ProRes 422 @126Mbps for HD   |
| Audio Uncompressed PCM 24 bit @ 48 kHz contained within 1 audio track.   | Audio Uncompressed PCM 24 bit @ 48 kHz contained within 1 audio track.   |
| <b>The Closed captions (CC) data shall be provided CEA-608/ CEA-708 caption data. The data must be carried within a SMPTE compliant ANC packet within a VBI/ANC Generic Container. This process complies with the AMWA AS-03 and AS-11 file formats.</b> | <b>Quicktime SD ONLY:</b> The Closed captions (CC) data shall be provided as CEA-608/ CEA-708 captions carried in VAUX data. The caption data must be decodable on Omneon Spectrum playout server through a Evertz 8084 closed captioning decoder.<br><b>Quicktime HD:</b> A separate closed captioning sidecar file must be provided. |
| <b>Closed caption side car files with matching timecode reference in .SCC or .CAP format.</b>  | <b>Closed caption side car files with matching timecode reference in .SCC or .CAP format.</b>  |
|  |  |
| <b>10 sec Bars and Tone</b>  | <b>10 sec Bars and Tone</b>  |
| <b>5 Sec Slate</b>   | <b>5 Sec Slate</b>   |
| <b>5 Sec Black</b>   | <b>5 Sec Black</b>   |
| <b>Program</b>   | <b>Program</b>   |
| <b>5 Sec Black at Tail</b>   | <b>5 Sec Black</b>   |

- Files should be named in the following manner:  
 (Series Title)-(Episode Title and Number)-(AirDate if known).(MXF or MOV)
- In between program segments, there should be 00:00:10:00 black and silence. No commercial slate is required.
- USB labels should include the series and episode title/number, Paid Programs (e.g. Mosaic) should also include airdates where possible. Canadian Paid Programs (e.g. Mosaic) should include Production year, CANREC # and Episode number.

4. ZoomerMedia places a channel bug in the lower right corner of the screen. This is illustrated in the diagram below. Producers must avoid using the lower right screen area for any graphics within the Program which could be potentially covered by the Station ID bug. This includes but is not limited to lower third graphics containing guest names, contact information, promotional information in the form of pop-ups or crawls and/or screen credits.



## Video Specifications

1. Reference colour bars shall be a true indication of the program's chroma, video, pedestal and phase.

### A. Aspect Ratio

1. SD submissions shot in 16:9 widescreen must be delivered ready for air. ZoomerMedia will not accept Anamorphic SD content. 16:9 HD submissions will be center cut or letterboxed to fit in the 4:3 frame. Details need to be clearly noted on program slate.

### B. Closed Captioning

1. SD: The Closed captions (CC) data shall be provided as CEA-608/ CEA-708 captions carried in VAUX data. The caption data must be decodable on an Omneon Spectrum play out server through a Evertz 8084 closed captioning decoder. Quick time based 608 captions will not be accepted.
2. HD: in addition to embedded CEA-708 captions, a valid .SCC captioning file must be provided.

### C. Video Performance

Video content must be free of all digital artifacts and errors when decoded and encoded for the NTSC system. Any detectable errors introduced by the transcoding process will be flagged during quality control testing and will not be accepted.

### D. Externally Sourced material

Mixed material from websites or consumer devices must still comply to broadcast standards and any impairment introduced by these devices will be evaluated by our quality control process carefully. The audio and video levels and technical requirements must still be met. Any corrections or processing must be present before submitting content.

## Audio Specifications

### A. Levels

ZoomerMedia's standard for digital audio level is -20 dBfs (full scale). The equivalent analog level is 0 VU, 1000 Hz in the NTSC analog standard. The analog peak value is +16dB.

### B. Loudness

Audio levels should reside within and conform to ATSC A/85 standards. Although loudness is best measured by the ear and is quite subjective, we expect our programs be delivered with a good mix and a minimum of extreme highs/lows. More information on loudness can be found at [http://www.atsc.org/cms/standards/A\\_85-2013.pdf](http://www.atsc.org/cms/standards/A_85-2013.pdf)

### C. Distortion

1. Distortion shall not be greater than 1.0% at operating level. Audible distortion such as clipping or sibilance will not be accepted.

### D. Audio Codecs and Compression:

1. Audio must be uncompressed PCM with a 16 or 24 bit depth. Compressed audio codecs such as AC3, MP3 and AAC will introduce delays and may jeopardize acceptance.
2. ZoomerMedia transmission does not support 5.1 audio and track layout should follow the track assignment as listed below.

Channel 1-Left stereo

Channel 2-Right stereo

Channel 3-Described video mono if applicable

Channel 4-Described video mono if applicable

3. Split track/ unmixed audio will not be accepted.