

## HD File Specification

### Apple Quicktime ProRes 422HQ

Container: MOV  
Video:  
 Codec: Apple Quicktime ProRes 422 HQ  
 Chroma Subsample: 4:2:2  
 Interlacing: Top Field First / Progressive  
 Frame Size: 1920x1080  
 Frame Rate: 25 FPS  
 Aspect Ratio: 16:9

Audio:  
 Codec: PCM (Little Endian)  
 Sample Rate: 48kHz  
 Sample Size: 24bit  
 Channels: Stereo  
 Loudness Standard: EBU R128  
 Integrated: -23 LUFS ± 0.5 LU  
 Maximum Short Term: -20 LUFS  
 Maximum Momentary: -15 LUFS  
 Maximum True Peak Level: -1dBTP

### Apple Quicktime ProRes 4444

Container: MOV  
Video:  
 Codec: Apple Quicktime ProRes 4444  
 Chroma Subsample: 4:4:4  
 Interlacing: Top Field First / Progressive  
 Frame Size: 1920x1080  
 Frame Rate: 25 FPS  
 Aspect Ratio: 16:9

Audio:  
 Codec: PCM (Little Endian)  
 Sample Rate: 48kHz  
 Sample Size: 24bit  
 Channels: Stereo  
 Loudness Standard: EBU R128  
 Integrated: -23 LUFS ± 0.5 LU  
 Maximum Short Term: -20 LUFS  
 Maximum Momentary: -15 LUFS  
 Maximum True Peak Level: -1dBTP

### Avid DNxHD 185x/DNxHD HQX MXF

Container: MOV/MXF  
Video:  
 Codec: Avid DNxHD/DNxHD HQX OP1a  
 Chroma Subsample: 4:2:2  
 Interlacing: Top Field First / Progressive  
 Frame Size: 1920x1080  
 Frame Rate: 25 FPS  
 Aspect Ratio: 16:9

Audio:  
 Codec: PCM (Little Endian)  
 Sample Rate: 48kHz  
 Sample Size: 24bit  
 Channels: Stereo  
 Loudness Standard: EBU R128  
 Integrated: -23 LUFS ± 0.5 LU  
 Maximum Short Term: -20 LUFS  
 Maximum Momentary: -15 LUFS  
 Maximum True Peak Level: -1dBTP

### MXF Wrapped XDCAM HD

Container: MXF  
Video:  
 Codec: XDCAM 422  
 Profile: MPEG-2 4:2:2@HL  
 Bitrate: 50Mb/s CBR  
 Chroma Subsample: 4:2:2  
 Interlacing: Top Field First / Progressive  
 Frame Size: 1920x1080  
 Frame Rate: 25 FPS  
 Aspect Ratio: 16:9

Audio:  
 Codec: PCM (Big/Little Endian)  
 Sample Rate: 48kHz  
 Sample Size: 24bit  
 Channels: Stereo  
 Loudness Standard: EBU R128  
 Integrated: -23 LUFS ± 0.5 LU  
 Maximum Short Term: -20 LUFS  
 Maximum Momentary: -15 LUFS  
 Maximum True Peak Level: -1dBTP

For Aleph Media, please export 1080p50 material (50fps - Progressive)

## SD File Specification

### Apple Quicktime ProRes 422HQ 625/50

Container: MOV  
Video:  
 Codec: Apple Quicktime ProRes 422 HQ  
 Chroma Subsample: 4:2:2  
 Interlacing: Top Field First / Progressive  
 Frame Size: 1024x576 / 720x576  
 Frame Rate: 25 FPS  
 Aspect Ratio: 16:9

Audio:  
 Codec: PCM (Little Endian)  
 Sample Rate: 48kHz  
 Sample Size: 24bit  
 Channels: Stereo  
 Loudness Standard: EBU R128  
 Integrated: -23 LUFS ± 0.5 LU  
 Maximum Short Term: -20 LUFS  
 Maximum Momentary: -15 LUFS  
 Maximum True Peak Level: -1dBTP

### Uncompressed 625/50

Container: MOV  
Video:  
 Codec: Quicktime Uncompressed 8bit  
 Chroma Subsample: 4:2:2  
 Interlacing: Top Field First / Progressive  
 Frame Size: 1024x576 / 720x576  
 Frame Rate: 25 FPS  
 Aspect Ratio: 16:9

Audio:  
 Codec: PCM (Little Endian)  
 Sample Rate: 48kHz  
 Sample Size: 24bit  
 Channels: Stereo  
 Loudness Standard: EBU R128  
 Integrated: -23 LUFS ± 0.5 LU  
 Maximum Short Term: -20 LUFS  
 Maximum Momentary: -15 LUFS  
 Maximum True Peak Level: -1dBTP

Action/Safe marks: Safe Action: 90% / Title Safe: 80%

TVC duration must be cut to a whole second and not have additional frames.

Content will be converted to 16x9 Letterbox, for 4x3 broadcasters.

National Audiovisual Council of Romania (EBU-R128) <http://www.cna.ro/RECOMANDARE-privind-nivelul-t-riei.html>

AVID Codecs [http://avid.force.com/pkb/articles/en\\_US/download/Avid-QuickTime-Codecs-LE](http://avid.force.com/pkb/articles/en_US/download/Avid-QuickTime-Codecs-LE)

## HD File Specification

### Apple Quicktime ProRes 422HQ

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Codec: Apple Quicktime ProRes 422 HQ  
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Frame Size: 1920x1080  
Frame Rate: 25 FPS  
Aspect Ratio: 16:9

Audio:  
Codec: PCM (Little Endian)  
Sample Rate: 48kHz  
Sample Size: 24bit  
Channels: Stereo  
Loudness Standard: EBU R128  
Integrated: -23 LUFS ± 0.5 LU  
Maximum Short Term: -20 LUFS  
Maximum Momentary: N/A  
Maximum True Peak Level: -12 dBTP

### Apple Quicktime ProRes 4444

Container: MOV  
Video:  
Codec: Apple Quicktime ProRes 4444  
Chroma Subsample: 4:4:4  
Interlacing: Top Field First / Progressive  
Frame Size: 1920x1080  
Frame Rate: 25 FPS  
Aspect Ratio: 16:9

Audio:  
Codec: PCM (Little Endian)  
Sample Rate: 48kHz  
Sample Size: 24bit  
Channels: Stereo  
Loudness Standard: EBU R128  
Integrated: -23 LUFS ± 0.5 LU  
Maximum Short Term: -20 LUFS  
Maximum Momentary: N/A  
Maximum True Peak Level: -12 dBTP

### Avid DNxHD 185x/DNxHD HQX MXF

Container: MOV/MXF  
Video:  
Codec: Avid DNxHD/DNxHD HQX OP1a  
Chroma Subsample: 4:2:2  
Interlacing: Top Field First / Progressive  
Frame Size: 1920x1080  
Frame Rate: 25 FPS  
Aspect Ratio: 16:9

Audio:  
Codec: PCM (Little Endian)  
Sample Rate: 48kHz  
Sample Size: 24bit  
Channels: Stereo  
Loudness Standard: EBU R128  
Integrated: -23 LUFS ± 0.5 LU  
Maximum Short Term: -20 LUFS  
Maximum Momentary: N/A  
Maximum True Peak Level: -12 dBTP

### MXF Wrapped XDCAM HD

Container: MXF  
Video:  
Codec: XDCAM 422  
Profile: MPEG-2 4:2:2@HL  
Bitrate: 50Mb/s CBR  
Chroma Subsample: 4:2:2  
Interlacing: Top Field First / Progressive  
Frame Size: 1920x1080  
Frame Rate: 25 FPS  
Aspect Ratio: 16:9

Audio:  
Codec: PCM (Big/Little Endian)  
Sample Rate: 48kHz  
Sample Size: 24bit  
Channels: Stereo  
Loudness Standard: EBU R128  
Integrated: -23 LUFS ± 0.5 LU  
Maximum Short Term: -20 LUFS  
Maximum Momentary: N/A  
Maximum True Peak Level: -12 dBTP

Action/Safe marks: Safe Action: 90% / Title Safe: 80%

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Content will be converted to 16x9 Letterbox, for 4x3 broadcasters.

AVID Codecs [http://avid.force.com/pkb/articles/en\\_US/download/Avid-QuickTime-Codecs-LE](http://avid.force.com/pkb/articles/en_US/download/Avid-QuickTime-Codecs-LE)

## HD File Specification

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Codec: Apple Quicktime ProRes 422 HQ  
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Interlacing: Top Field First / Progressive  
Frame Size: 1920x1080  
Frame Rate: 25 FPS  
Aspect Ratio: 16:9

Audio:  
Codec: PCM (Little Endian)  
Sample Rate: 48kHz  
Sample Size: 24bit  
Channels: Stereo  
Loudness Standard: EBU R128  
Integrated: -23 LUFS ± 0.5 LU  
Maximum Short Term: N/A  
Maximum Momentary: -15 LUFS  
Maximum True Peak Level: -3 dBTP

### Apple Quicktime ProRes 4444

Container: MOV  
Video:  
Codec: Apple Quicktime ProRes 4444  
Chroma Subsample: 4:4:4  
Interlacing: Top Field First / Progressive  
Frame Size: 1920x1080  
Frame Rate: 25 FPS  
Aspect Ratio: 16:9

Audio:  
Codec: PCM (Little Endian)  
Sample Rate: 48kHz  
Sample Size: 24bit  
Channels: Stereo  
Loudness Standard: EBU R128  
Integrated: -23 LUFS ± 0.5 LU  
Maximum Short Term: N/A  
Maximum Momentary: -15 LUFS  
Maximum True Peak Level: -3 dBTP

### Avid DNxHD 185x/DNxHD HQX MXF

Container: MOV/MXF  
Video:  
Codec: Avid DNxHD/DNxHD HQX OP1a  
Chroma Subsample: 4:2:2  
Interlacing: Top Field First / Progressive  
Frame Size: 1920x1080  
Frame Rate: 25 FPS  
Aspect Ratio: 16:9

Audio:  
Codec: PCM (Little Endian)  
Sample Rate: 48kHz  
Sample Size: 24bit  
Channels: Stereo  
Loudness Standard: EBU R128  
Integrated: -23 LUFS ± 0.5 LU  
Maximum Short Term: N/A  
Maximum Momentary: -15 LUFS  
Maximum True Peak Level: -3 dBTP

### MXF Wrapped XDCAM HD

Container: MXF  
Video:  
Codec: XDCAM 422  
Profile: MPEG-2 4:2:2@HL  
Bitrate: 50Mb/s CBR  
Chroma Subsample: 4:2:2  
Interlacing: Top Field First / Progressive  
Frame Size: 1920x1080  
Frame Rate: 25 FPS  
Aspect Ratio: 16:9

Audio:  
Codec: PCM (Big/Little Endian)  
Sample Rate: 48kHz  
Sample Size: 24bit  
Channels: Stereo  
Loudness Standard: EBU R128  
Integrated: -23 LUFS ± 0.5 LU  
Maximum Short Term: N/A  
Maximum Momentary: -15 LUFS  
Maximum True Peak Level: -3 dBTP

**Please note that for BMG Group-BTV Broadcasters and Ring, the file must meet 4x3 title/action safety.**

**Action/Safe marks:** Safe Action: 90% / Title Safe: 80%

**TVC duration must be cut to a whole second and not have additional frames.**

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Audio:  
Codec: PCM (Little Endian)  
Sample Rate: 48kHz  
Sample Size: 24bit  
Channels: Stereo  
Loudness Standard: EBU R128  
Integrated: -23 LUFS ± 0.5 LU  
Maximum Short Term: -18 LUFS  
Maximum Momentary: N/A  
Maximum True Peak Level: -1 dBTP

### Apple Quicktime ProRes 4444

Container: MOV  
Video:  
Codec: Apple Quicktime ProRes 4444  
Chroma Subsample: 4:4:4  
Interlacing: Top Field First / Progressive  
Frame Size: 1920x1080  
Frame Rate: 25 FPS  
Aspect Ratio: 16:9

Audio:  
Codec: PCM (Little Endian)  
Sample Rate: 48kHz  
Sample Size: 24bit  
Channels: Stereo  
Loudness Standard: EBU R128  
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### Avid DNxHD 185x/DNxHD HQX MXF

Container: MOV/MXF  
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Codec: Avid DNxHD/DNxHD HQX OP1a  
Chroma Subsample: 4:2:2  
Interlacing: Top Field First / Progressive  
Frame Size: 1920x1080  
Frame Rate: 25 FPS  
Aspect Ratio: 16:9

Audio:  
Codec: PCM (Little Endian)  
Sample Rate: 48kHz  
Sample Size: 24bit  
Channels: Stereo  
Loudness Standard: EBU R128  
Integrated: -23 LUFS ± 0.5 LU  
Maximum Short Term: -18 LUFS  
Maximum Momentary: N/A  
Maximum True Peak Level: -1 dBTP

### MXF Wrapped XDCAM HD

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Bitrate: 50Mb/s CBR  
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Channels: Stereo  
Loudness Standard: EBU R128  
Integrated: -23 LUFS ± 0.5 LU  
Maximum Short Term: -18 LUFS  
Maximum Momentary: N/A  
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