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AU HD & SD Delivery Specifications
Broadcast Guidelines

HD File Specifications

Quicktime Apple ProRes 422(LT or HQ) 1080i/50

Video:
Codec: ProRes 422 (LT or HQ)
Container: MOV
Profile: LT or HQ
Chroma Subsample: 4:2:2
Interlacing: 1080i Upper/Top Field
Frame Size: 1920x1080
Frame Rate: 25 FPS
Aspect Ratio: 16:9

Audio:
Codec: Integer (Little Endian) PCM
Sample Rate: 48kHz
Sample Size: 16bit
Channels: Stereo

Quicktime DVCPro100 1080i/50

Video:
Codec: DVCPro100
Container: MOV
Bitrate: 115Mb/s CBR
Chroma Subsample: 4:2:2
Interlacing: 1080i Upper/Top Field
Frame Size: 1440x1080
Frame Rate: 25 FPS
Aspect Ratio: 16x9

Audio:
Codec: PCM
Sample Rate: 48kHz
Sample Size: 16bit
Channels: Stereo

Quicktime AVID DNxHD 1080i/50

Video:
Codec: DNxHD120 8-BIT
Container: MOV
Interlacing: 1080i Upper/Top Field
Frame Size: 1920x1080
Frame Rate: 25 FPS
Aspect Ratio: 16:9

Audio:
Codec: Integer (Little Endian) PCM
Sample Rate: 48kHz
Sample Size: 16bit
Channels: Stereo

MXF XDCAMHD 1080i/50

Video:
Codec: XDCAM 422
Container: MXF
Profile: MPEG-2 422P@HL
Bitrate: 50Mb/s CBR
Chroma Subsample: 4:2:2
Interlacing: 1080i Upper/Top Field
GOP Structure: Long GOP
Frame Size: 1920x1080
Frame Rate: 25 FPS
Aspect Ratio: 16:9

Audio:
Codec: Integer (Big/Little Endian) PCM
Sample Rate: 48kHz
Sample Size: 16bit
Channels: Stereo

HD Video Level Requirements

TV Format: HDTV
Aspect Ratio: 16:9
Title Safe: 16:9

All Video Signals Should Comply With ITU-R BT.709-5 and Video Signals Should Not Exceed The Specified Limits

Video Levels Should Not Exceed 700mV, or Fall Below 0mV

Gamut Out Of Legal Safe
Following EBU recommendation Rec.103-2000 will allow a small tolerance, assuming no more that 1% of the active picture is in error.
- **Luminance (Y) -1% and 103% (ie between -7mV and 721mV)**
- **RGB video levels -5% and 105% (ie between -35mV and 735mV)**

HD Audio Level Requirements

ITU-R 1770-3 (OP48/59)

All commercial soundtracks must be measured using ITU-R BS 1770-3 loudness meter to ensure compliance to the following delivery specification :
- Reference Level: 1kHz @ -20dBFS
- Integrated Loudness Program: -24 LKFS
- Target Level Tolerance: +/-1 LU
- Maximum True Peak: -2dB

Refer to Free TV OP59 for correct loudness measurement and management techniques.
On the digital scale, audio must not exceed -2dB as measured on a True Peak Meter.

A TVC must contain 12 frames of complete silence, ie no voiceover, active dialogue, music, effects or atmos, at the beginning and end of a commercial.
Example of a 30 Second TVC:
● Audio starts - 00:00:10:13
● Audio ends - 00:00:39:13

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Adstream Material Deadlines
Monday to Thursday   8pm AEST (10pm NZT)
Friday   5pm AEST (7pm NZT)
p: 1300 423 787
e: helptv@adstream.com

SD File Specifications

Quicktime H.264 625/50

Video:
Codec: AVC
Container: MOV
Profile: Main@L3
Interlacing: Upper/Top Field
Frame Size: 720x576 or 1024x576 (PAL)
Frame Rate: 25 FPS
Aspect Ratio: 16:9

Audio:
Codec: Integer (Little Endian) PCM
Sample Rate: 48kHz
Sample Size: 16bit
Channels: Stereo

Quicktime ProRes 422LT or 422HQ 625/50

Video:
Codec: Apple ProRes 422
Container: MOV
Profile: LT or HQ
Interlacing: Upper/Top Field
Frame Size: 720x576 or 1024x576 (PAL)
Frame Rate: 25 FPS
Aspect Ratio: 16:9

Audio:
Codec: Integer (Little Endian) PCM
Sample Rate: 48kHz
Sample Size: 16bit
Channels: Stereo

MPEG-2 Program Stream 625/50

Video:
Codec: MPEG-2 Program Stream
Container: MPEG-2 Program Stream
Profile: 4:2:2 Profile @MainLevel (422P@ML)
Bitrate: 50Mb/s CBR
Chroma Subsample: 4:2:2
Interlacing: Upper/Top Field
GOP Structure: I Frame Only
Frame Size: 720x576 (608 Inc VBI) or 1024x576 (PAL)
Frame Rate: 25 FPS
Aspect Ratio: 16:9

Audio:
Codec: MPEG1 Layer-2
Sample Rate: 48kHz
Sample Size: 16 bit
Channels: Stereo

SD Video Level Requirements

TV Format: PAL
Aspect Ratio: 16:9 FHA
Title Safe: 16:9

All Video Signals Should Comply With ITU-R BT.601 And Video Signals Should Not Exceed The Specified Limits

Video Levels Should Not Exceed 700mV, Or Fall Below 0mV

Gamut Out Of Legal Safe
Following EBU recommendation Rec.103-2000 will allow a small tolerance, assuming no more that 1% of the active picture is in error.

- Luminance (Y) -1% and 103% (ie between -7mV and 721mV)
- RGB video levels -5% and 105% (ie between -35mV and 735mV)

SD Audio Level Requirements

ITU-R 1770 (OP48/59)
All commercial soundtracks must be measured using ITU-R BS 1770-3 loudness meter to ensure compliance to the following delivery specification:

- Reference Level: 1kHz @ -20dBFS
- Integrated Loudness Program: -24 LKFS
- Target Level Tolerance: +/-1 LU
- Maximum True Peak: -2dBTP

Refer to Free TV OP59 for correct loudness measurement and management techniques.

On the digital scale, audio must not exceed -2dB as measured on a True Peak Meter.

A TVC must contain 12 frames of complete silence, ie no voiceover, active dialogue, music, effects or atmos, at the beginning and end of a commercial.

Example of a 30 Second TVC:
- Audio starts   - 00:00:10:13
- Audio ends   - 00:00:39:13

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Clapper Board and Pre & Post Roll Information

	Duration	Example timecodes
Clapper Board & Countdown Combined	8"	00:00:00:00 - 00:00:07:24
Black	1"24 frames	00:00:08:00 - 00:00:09:24
Black w/ 1st Frame Indicator *	1 frame	- 00:00:09:24
TVC (First And Last 12 Frames Must Be Mute)	30	00:00:10:00 - 00:00:39:24
Black	3"	00:00:40:00 - 00:00:42:24

Clapper Board Information:
A valid Clapper Board is **MANDATORY**
The following details below must be included on the clapper board:

•   Key Number
•   Client
•   Product
•   Title
•   Duration
•   Aspect Ratio
•   Date of Production
•   OP48 Compliant

Additional Information:
Clapper Board must be 8 seconds of still image of ID Board and countdown combined. Must be completely silent with no audio pop followed by 2 seconds of black.
TVC must start at exactly 10 seconds plus 3secs of black at the end of the commercial.

Local Clearance:
A key number should include no more than 13 alphanumeric characters.
Dashes, slashes and hyphens are treated as spaces and are ignored.
It must be cleared through Commercials Advice (CAD) before broadcast.
A CAD approval number must be obtained.

For further information on Digital Delivery Formats For Commercials, please refer to Operational Practice OP-29:
http://goo.gl/6rvgLq

Black w/ 1st Frame Indicator:
A small white square must be placed in the top right hand corner of the active picture in the black frame immediately before your first active frame of vision