

## NZ HD & SD Delivery Specifications

### Broadcast Guidelines

#### HD File Specification

##### Quicktime Apple ProRes 422LT or 422HQ 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

##### 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

##### 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

##### 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

#### 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 than 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 (OP59)

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.

**New Zealand Stations do not require 12 frames of silence  
 head and tail. Does not need 'OP48 Compliant' showing on  
 the clapper.**

## Adstream Material Deadlines

Monday to Thursday 8pm AEST (10pm NZT)  
Friday 5pm AEST (7pm NZT)  
p: +64 9 973 4489  
e: helpstv@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.601-5 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

## SD Audio Level Requirements

ITU-R 1770 (OP59)  
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.  
New Zealand Stations do not require 12 frames of silence head and tail. Does not require 'OP48 Compliant' showing on the clapper

**Adstream Material Deadlines**

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 p: +64 9 973 4489  
 e: help@adstream.com

## Clapper Board and Pre & Post Roll Information

	Duration	Example timecode
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/ 1 <sup>st</sup> Frame Indicator*	1 frame	- 00:00:09:24
TVC	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
- Agency
- Duration
- Aspect Ratio
- Date of Production

**Additional Information:**

Clapper Board: Must be 8 seconds of still image of ID Board and countdown combined. Must be completely silent with no audio pip followed by 2 frames of black.

The TVC must start at exactly 10 seconds plus 3secs of black at the end of commercial.

**Key Number Protocol**

A key number should include no more than 12 alphanumeric characters. Dashes, slashes and hyphens are treated as spaces and are ignored. All key numbers must follow the advertiser/duration/unique reference format

e.g. ABC 030 0001 and ABC 015 0002.

This ensures that the advertiser and duration are easily identifiable and that no two dubs from a single advertiser will ever have the same last four digits. The 'R' suffix (e.g. ABC 030 0001R) must only be used to denote a technical amendment. Any change to the actual contents of the commercial requires a new key number.

**Local Clearance:**

Material must be cleared through Commercial Approval Bureau (CAB) before broadcast. A CAB approval number must be obtained. For further information on Digital Delivery Formats For Commercials, please refer to Commercial Production Standards: [http://www.commercialapprovals.co.nz/documents/Commercial\\_Production\\_Standards.pdf](http://www.commercialapprovals.co.nz/documents/Commercial_Production_Standards.pdf)

*\*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.*