Commercial Broadcast Specifications for 2014

Commercial Delivery:

Maori Television uses Ebus for its delivery of television commercials. In order for us to broadcast your commercial successfully on our channel you will need to contact Ebus directly to arrange delivery. Ebus will ensure your commercials get delivered to us with the right specifications for broadcast. Please note that they charge a small fee for this service. You can visit their website here at the following link: [http://www.ebus.tv](http://www.ebus.tv)

Video Specifications:

- IMX30 Standard Definition
- File: IMX30 QuickTime MOV or OP1a MXF wrapped
- File Extension: .mpg
- File Chroma Encoding: 4:2:2
- Encoding Bitrate: 30Mbit/sec
- Encoding GOP: I frame only
- Encoding Type: Interlaced TFF
- Video Standard: PAL
- Levels: Standard Video Levels BT.601 (16-235. Not RGB 0-255)
- Aspect Ratio: 16/9 FHA in NZ/Aus, International per broadcaster reqs
- Frame Size: 720(H) x 576(V) pixels
- Frame Rate: 25.00 fps
- Picture Scan Type: Interlaced TFF or Progressive
- Duration: As specified at upload time mm:ss:ff (Note 1)

Audio Specifications:

- Encoding: WAV – contained within same mov/mxf wrapper
- Audio Channels Encoded: Single Stereo Pair
- Audio Sample Rate: 48kHz
- Maximum Permitted Level: -9.0dB below full scale peak reading (Note 2)
Audio Loudness:

- Loudness value -24 LKFS
- Loudness tolerance ± 1 LKFS
- The loudness range (LRA) should ideally not exceed 15LU
- Maximum analogue true peak level -9 dBFS (until digital switchover is complete)
- Maximum digital true peak level -2 dBFS
- All loudness measurements should be made using a meter complying with ITU-R BS.1770-3

Additional Notes:

- Files must be exact duration; first frame to last frame only. No bars, black, leader, clock or audio tone
- Max audio peaks are measured as ‘digital instantaneous peaks’, not ‘PPM’ peaks
- IMX mxf files accepted with 2 or 4 audio channels (e.g. Avid generated), but only the first 2 channels will be used
- IMX files include VBI. Non-QT players show the correct 720x608 file size, but active picture is still 720x576
- Australia & New Zealand require audio loudness to BS 1770 from 1st January 2013

Thank you and we look forward to receiving your commercial shortly!

- **Maori Television**