



# Technical Specifications

## 2021-2022

### Commercial material

Technical Operations  
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Here is a summary of the file format that should be delivered. See detailed standards below.

<b>Video</b>	XDCAM HD422 50Mbps encapsulated MXF OP1a or QuickTime
	1920x1080
	Constant 29.97 frames/sec interlaced, upper field first
	Safe title zone: 90% height and width of the full HD picture
<b>Audio</b>	PCM, 48kHz, 24-bit, -2dBTP Max
	An audio mix ranging from 2 tracks (stereo) up to 6 tracks (5.1)
	Track allocation: 1:L 2:R 3:C 4:LFE 5:Ls 6:Rs 7:Lt/Lo 8:Rt/Ro or stereo mix on tracks 1-2 and 7-8.
	Integrated commercial loudness: -24LKFS +/-2LU (measured using UIT-R BS. 1770-3 algorithm)
<b>Lip Sync</b>	1 field maximum tolerable sound and picture misalignment
<b>Time Code</b>	Drop frame mode, continuous (from start to end - not visible on screen) Start at 10;00;00;00 No lead-in/lead-out, advertising only
<b>Closed Captioning (CC)</b>	<b>All commercials must be closed-captioned (.scc files or embedded into video file) (required by the CRTC).</b> Commercials without voice over and containing only music still require closed captioning: meaning a musical note ♪ or the word « music » must appear in the closed captioning throughout the <b>entirety of the commercial.</b>
	The length of the CC file must be the same as the length of the video file. The same must be true for the time code.
	The CC file needs to be structured for 29.97fps, Type: drop frame.

### 1. HD FILE FORMAT

#### 1.1 FILE

Each file must conform to the specifications below:

- **No lead-in/lead-out, advertising only;**
- Frame rate must be **29.97** fps, **interlaced**;
- The timecode corresponding to the first frame of the program must be 10:00:00;00.
- All advertising material must be **closed captioned** for the hearing impaired.

Tele-Quebec accepts the following file formats, but the preferred format is XDCAM HD422 50 Mbps encapsulated MXF OP1a:

- XDCAM HD422 50 Mbps encapsulated MXF OP1a or Quick Time;
- DNxHD 145 or 220 Mbps encapsulated MXF OP1a or QuickTime;
- ProRes 422 (Standard or HQ) encapsulated QuickTime;

Audio format: PCM, 24 bit / 48 kHz sampling.

#### 1.2 CLOSED CAPTIONING (CC)

All advertising material must be closed captioned for the hearing impaired. It can be delivered in two different formats depending on the agreement negotiated:

- **Closed captioning video format:**  
The code must be inserted in the digital video signal in the form of data packets according to the SMPTE 334M standard. Captions must be EIA 608 type encapsulated in EIA 708 data, in accordance with the EIA 708 standard.
- **Closed captioning file format:**  
The code must be delivered in an individual file for each program. The type of file format accepted is **Scenarist (.SCC)**.

Timecode must be drop-frame, with a semicolon (;).

I.e.: **10:00:00;00**

Commercials without voice over and containing only music still require closed captioning: meaning a musical note ♪ or the word « music » must appear in the closed captioning throughout the **entirety of the commercial**.

## 2. VIDEO

### 2.1 SIGNAL PARAMETERS

- Image format is 1920 x 1080;
- Sampling structure must be 4:2:2;
- Frame rate must be **29.97 fps, interlaced**;
- Upper field first;
- The production must be shot on a digital HD camera.

### 2.2 VIDEO LEVELS

Video levels must conform to the following values:

- White maximum: 700 mV;
- Black minimum: 0 mV;
- Cb-Cr Chrominance:  $\pm 350$  mV.

### 2.3 USE OF SD IMAGES

#### 2.3.1 SD 4:3 IMAGES

When use of SD 4:3 images is required, either of two display modes can be used: pillarbox or top-bottom crop. When reframing in pillarbox format, be sure to remove the entire closed-captioning signal from lines 21 and 284 of the SD frames before conversion.

When converting from SD to HD:

- No deterioration (geometrical distortion) of the original horizontal and/or vertical image proportions will be accepted.
- Take care to preserve the main elements of the original 4:3 image (e.g., action, graphics).

**Pillarbox**



The black areas (pillars) are shown within the 16:9 picture.

**Top-bottom crop**



The dotted areas show the parts of the original 4:3 image not shown on a 16:9 screen.

#### 2.3.2 SD 16:9 IMAGES

When use of SD 16:9 images is required, aspect ratio conversion must be such that the original SD 16:9 image is enlarged to fill the 16:9 HD frame. No deterioration (geometrical distortion) of the original horizontal and/or vertical image proportions will be accepted.

### 2.4 TIMECODE

The timecode must be drop-frame and constant from beginning to end.

The timecode corresponding to the first frame of the program must be 10:00:00;00.

### 2.5 SAFE ACTION AND TEXT AREAS

All action must be framed within a central zone of height 93% x width 93% of the full frame.

All text must be framed within a central zone of height 90% x width 90% of the full frame.

## 3. AUDIO

### 3.1 MAIN PROGRAM TRACK

The main program soundtrack must be distinct 5.1 multichannel. If this is not possible, an agreement must be reached ahead of time with Tele-Quebec to produce a soundtrack in Dolby Surround or stereo.

There must be a Dolby Surround or stereo version of the main program on tracks 7 and 8.

Audio tracks must be assigned as follows:

Track 1: left channel (or, failing this, stereo Lt/Lo)		Stereo music, ambient sound, SFX
Track 2: right channel (or, failing this, stereo Rt/Ro)		
Track 3: centre channel		Dialogue and voice
Track 4: LFE channel		
Track 5: rear left channel		Stereo music, ambient sound, SFX
Track 6: rear right channel		
Track 7: stereo channel Lt/Lo		5.1 stereo downmix
Track 8: stereo channel Rt/Ro		

If the program is in Dolby Surround or stereo, it must be on tracks 1 and 2, 7 and 8; tracks 3 to 6 must be free. Note that in all cases tracks 1 and 7 represent the left channel and tracks 2 and 8 represent the right channel.

### 3.2 REFERENCE LEVEL

Our reference level is **-20 dBFS**, which corresponds to a reference level of **+4 dBu**.

### 3.3 AUDIO LEVEL AND METADATA

The integrated loudness over the duration of the program, meanwhile, must be **-24 LKFS +/-2 Lu** (measured using the ITU-R BS.1770-3 algorithm).

The maximum true-peak level is -3 dB.

Dialogue intelligibility must be maintained throughout the program.

The entire audio program must have an acceptable dynamic range. Compression that is excessively high and reduces sound quality, as well as a program with too great a dynamic range, may affect listening comfort and will not be accepted.

\*Tracks 7 and 8, as well as the video description tracks 11 and 12 must correspond to the same standards mentioned above.

## 4. DELIVERY

The file delivery method shall be by upload. You can use these paid delivery services or our FTP site:

- LaMajeure
  - Extream Reach
- or
- FTPsite: [transit.telequebec.tv/public/Pubs/](https://transit.telequebec.tv/public/Pubs/)  
Username : [inviteftp](#)  
Password : [wjufr\(h37](#)

**IMPORTANT:** when the material is uploaded, you must inform us via email at the following address:  
[routage@telequebec.tv](mailto:routage@telequebec.tv)

## 5. RIGHT OF REFUSAL

**Any departure from these specifications must have been authorized by prior agreement with Tele-Quebec.**

Tele-Quebec reserves the right to reject any program that does not comply with the technical specifications described in this document.

Consult our website at [www.telequebec.tv](http://www.telequebec.tv) to make sure you have the latest version of this standard.