



WIRELESSGRAM

No.: 202303

Date: 01 November 2023

TECHNICAL SPECIFICATIONS OF ADVERTISING MATERIALS FOR BROADCASTING ON TVB PLATFORMS

1 Introduction

Technical specifications stated in this document are basic mandatory requirements for all Advertising Materials to be submitted to TVB for broadcasting on TVB platforms including digital terrestrial and OTT platforms.

2 General Requirements

All advertising materials must comply with the technical specifications specified in this document to ensure that the technical qualities are acceptable for broadcast on TVB platforms. Non-compliant materials will not be accepted.

TVB will conduct audio and visual checking to ensure that the advertising materials submitted comply with our technical specifications.

Advertisers/advertising agents who wish to supply advertising material in file-based format for commercial telecast, please fill in and submit the attached application form.

Upon receiving the form and have the submitted material tested, TVB will approve the application and notify the advertiser /advertising agent.

For any query, please do not hesitate to contact our Sales Executives or Miss Carol Lee – Programme Traffic Department (Tel. No. 2335 7439)

3. Commercial Materials Delivery Ways

3.1 Media of Submitting Commercial Material - File Base

Following is the technical specification for file base commercial materials.

No.	Parameters	Standard Definition	High Definition
1.	Video resolution	720 x 576	1920 x 1080
2.	Video frame/sec	25	25
3.	Video Interlacing	Yes, top field first	Yes, top field first
4.	Aspect Ratio	*16 : 9	16 : 9
5.	File format	IMX-50 MPEG-2 ML 422 GOP I-Frame only at 50 Mbps in MXF op-1a	XDCAM-50 MPEG-2 HL 422 GOP at 50 Mbps in MXF op-1a
6.	Audio Codec & Compression	PCM uncompressed under Constant Bit Rate**	PCM uncompressed under Constant Bit Rate**
7.	Audio Bit Depth	24-bit	24-bit
8.	Audio Sample Frequency	48 KHz	48 KHz
9.	Audio Channel Interleaved	No	No
10.	Time code	Start at 00:00:00:00	Start at 00:00:00:00

* Materials shall be delivered in 16:9 aspect ratio format. If the original materials are in 4:3 format, it must be converted to 16:9 by adding pillar-bars on both sides in order to fit a 16:9 screen.

** Bit rate calculate as $48000 * 24 * 2 / 1000000 = 2.304$ Mb/s.

3.2 Recording Format - File Based

One file contains only one commercial. Any bloc of commercial content shall be in conformity with the following standards:

----- Start of File -----

First video frame of the commercial.

----- End of File -----

Last video frame of the commercial.

e.g. for a 30 sec commercial, the frame-count / time-code of the first frame to be 00:00:00:00, the last frame to be 00:00:29:24.

3.3 Audio Standards

In order to comply with the “Generic Code of Practice on Television Technical Standards” (Communications Authority, 6 October 2023), all broadcasting materials delivered to TVB for transmission must meet the technical requirements as specified in this document. All received materials will be conducted an audio and visual check before transmission, non-compliance materials will be rejected.

3.3.1 General Audio Requirements

Audio signals must be suitable for reproduction in a domestic environment. Therefore, dynamic range and variations in loudness must be controlled in such that audiences do not need to adjust volume during a commercial or between commercials.

The audio shall be free from spurious signals such as noise, hum and cross-talk, sibilance, distortion wow and flutter.

The audio shall not show dynamic and frequency response artefacts as a result of the action of noise reduction or low bit rate coding systems. Audio compression should be used as little as possible as the effects of compression used for broadcast distribution and transmission can exacerbate impairments.

3.3.2 Audio Alignment Level

- Reference Level = **-18 dBFS**
- Frequency = **1KHz**, both the left and right channel, in phase (by EBU Tech 3343)

3.3.3 Sound format

Commercial sound must be recorded in stereo format. Monophonic material must be provided in dual mono format.

3.3.4 Audio Track Allocation

File Based

Audio Type	Track 1	Track 2	Track 3	Track 4
Mono	Monophonic	Same as Track 1	Same as Track 1	Same as Track 1
Stereo	Left	Right	Same as Track 1	Same as Track 2
Mono Bilingual	Primary Language	Same as Track 1	Secondary Language	Same as Track 3
Stereo Bilingual	Left of Primary Language	Right of Primary Language	Left of Secondary Language	Right of Secondary Language

3.3.5 Loudness Control

The delivered commercial is requested to comply with the programme type of Advertisement or Promotional Material stated in the Generic Code of Practice on Television Technical Standards: Communications Authority, 6 October 2023, that loudness of this commercial should comply with the specified limits stated in the table below at all time.

<u>Description</u>	<u>Standard</u>	<u>Specifications</u>
Programme Loudness	EBU R128	< -23.0 LUFS \pm 1 LU
Maximum true peak	EBU R128	< -1 dBTP
Maximum short-term loudness	EBU R128	< -18.0 LUFS

3.3.6 Sound to vision synchronization

Sound before picture	Sound after picture
\leq 40 milliseconds	\leq 60 milliseconds

3.4 Delivery of File-Based Material

- (i) Client must pass the File-Base Test before being able to receive the FTP URL provided by TVB.
- (ii) TVB will provide FTP URL to clients for upload their broadcasting materials. Clients are advised to upload the materials as soon as possible. TVB will not be liable for any delays due to FTP upload problems.

4 Content Cue Sheet

Accompanying each finished TV commercial material's submission, a Spot File Delivery List must be provided by email . The Spot File Delivery List is a collection of metadata which describes the content being stored in file format.

No.	Column name	Format	Example
1.	Date.	DD/MM/YY.	01/09/23
2.	Key No.	(TVB internal use.)	
3.	Product Name	Alpha numeric, (not case sensitive).	ABC Restaurant
4.	Title	Alpha numeric, (not case sensitive).	X'mas promotion.
5.	Duration	hh:mm:ss:ff	00:00:30:00
6.	Language	Alpha numeric, (not case sensitive).	Cantonese
7.	Video Definition	Alpha numeric, (not case sensitive).	HD
8.	Audio Type	Alpha numeric, (not case sensitive). (Refer 3.3.4)	ST
9.	Aspect ratio	Alpha numeric, (not case sensitive).	16:9
10.	Program Loudness	Numeric (Refer to 3.3.5)	-23 LUFS

For content in file format, Clients are required to submit following Metadata in MS Excel file format. Refer Table 1 for the Spots file delivery list .

5 Use of Special Visual or Audio Effects and respective restriction

5.1 The content, presentation and placement of all advertising matters must comply with the Codes of Practice relating to Advertising Standards and Programme Standards and all other relevant statutory requirements or applicable guidelines. Please refer to, in particular, Condition 5 on "Material Standards" and Condition 6 on "Acceptability of Material" of the General Terms and Conditions in prevailing station's Rate Card.

Special effects, such as deliberate use of simulated technical or operational breakdown (e.g. snowy effects on screen, blatant sound effect, etc) which may cause confusion or irritation to TV viewers, should not be imported into commercial unless prior written approval has been obtained from TVB.

TVB, however, may accept advertising material with special visual effects on condition that a legible display or device is incorporated, such as a visible framework, logo of product/service, pattern and decorative design.

The objective of incorporating one of these devices is to ensure that ordinary viewers shall not be disturbed and misled with the advertisement as technical or operational fault.

5.2 Unless prior written approval has been obtained from TVB under clause 5.1 or above, no advertisement materials shall be accepted, in respect of:

Visual Effect	(i) opening and/or closing blackout (ii) video and/or colour unlock (iii) video dropout (iv) colour bar (v) noisy picture (vi) imitation of a searching frame, such as rewinding and/or fast forwarding in motion
Audio Effect	(vii) mute (viii) abrupt cut-off and/or audio dropout (ix) beep tone imitating station's newscast opening soundtrack

6 Safe Areas

To ensure key-up elements such as essential graphic and disclaimer in a 16:9 aspect ratio materials can be shown and protected on a side-cropped 4:3 version (e.g. a STB output to a 4:3 TV screen), the key-up elements are advised to be inside the safe area as list in the following table (e.g. Figures 1 and 2).

Safe area	Action Safe	Graphics Safe
Safe Area for 16:9 Image on a 16:9 display: shoot and Protect 4:3	67.5% of Active Width	60% of Active Width
	90% of Height	80% of Height
16:9 to be Side Crop (SC) to display 4:3 screen	67.5% of Active Width	60% of Active Width
	90% of Height	80% of Height

7 Digital Still Image

Parameter	HD
Dimension	1920 x 1080
Color	24 -32 bit RGB
Image File	TIF, TGA, JPG.

Figure 1 4:3 Full Image – Action and Graphic Safe Area

圖表 1 4：3全幅面動作與圖像安全區

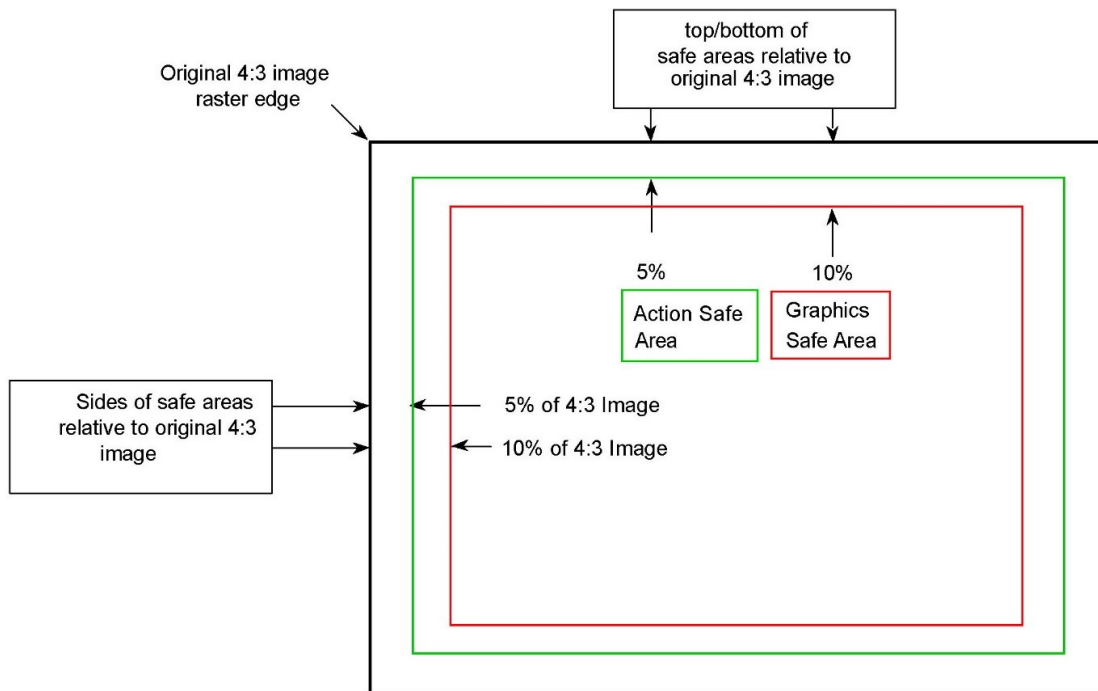


Figure 2 16:9 Full Image –Action and Graphic Safe Area by adding pillar-bars on 4:3 image

圖表 2 予 4：3 畫面影像加黑邊轉換成 16：9 全幅面動作與圖像安全區

