

# Television ad delivery format specifications.

The following are the audio and video technical specifications for spots submitted to **Comcast Technology Solutions**.

All spots must be submitted at the below ready-to-air lengths:

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- **15 sec/450 frames**
  - **30 sec/900 frames**
  - **60 sec/1800 frames**
  - **90 sec/2700 frames**
  - **120 sec/3596 frames**
  - **5 min/8992 frames**

VIDEO	HD Recommended Format – MPEG
Stream Type	MPEG-2 Transport Stream
Video Bitrate	20 - 100 Mbps (CBR or VBR)
Frame Rate	29.97 (1080i) or 59.94 (720p)
GOP Structure	Closed GOP
Closed Captioning	EIA-608 and EIA-708
Chroma	4:2:0 or 4:2:2
Interlacing	Upper Field First (1080i) or Progressive (720p)
Aspect Ratio	16:9
Width/Height	1920x1080 (1080i) or 1280x720 (720p)
Audio Type	MPEG-1 Layer 2
Typical Transfer	2-40 minutes
Typical Export	<1 minute
Notes	MP@HL or HP@HL

AUDIO	HD
Encoding Type	MPEG-1 Layer 2 or LPCM
Number of Channels	2 (Stereo, 6, 8, or 10)
PIDs/Channel per PID	1/2, 3/2, 4/2, 5/2, 1/6, 1/8, or 1/10
Bit Depth	16
Bit Rate	384 Kbps or 1,536 Kbps
Sampling Rate	48 KHz
Instantaneous Peak Audio Max	-8 dBFS
Average Peak Audio Max	-10 dBFS
Average Levels	-20 dBFS or -2 dBTP

# Notes for digital ad creation.

- For all banner display ads, client must supply a **destination URL** for click-through.
- Banner artwork files must be **.png, .gif, or .jpg format** and must be at least **72 dpi** at final display size.
- Animated banner ad creatives are acceptable for **300x250 units**. They must be **.gif or HTML5**. A maximum of 3 images is permitted with a maximum of 2 loops. Animation must be soundless. (Flash animation is no longer supported by major web browsers and will not be accepted.) **If you require creative assistance in building these ads, please let us know.**
- Note that display size, quality and resolution vary and may be dependent on individual PC or mobile devices settings.
- Best design practice is to **keep the design clean and simple** with images that are readable at small sizes.
- **Keep text to a minimum** and avoid using small or elaborate fonts (such as script fonts).
- If the background of the ad is not a color, please frame the banner with at least a 1-pixel rule.
- Download templates for expanded pencil pushdown ads here: [TEMPLATES](#)
- For more tips on optimal display ad design, refer to [Adweek](#)
- Please submit all artwork to your account manager.
- Please refer to Public Media advertising guidelines by clicking the below links:
  - [PBS](#)
  - [NPR](#)

