R 128 s1

LOUDNESS PARAMETERS FOR SHORT-FORM CONTENT (ADVERTS, PROMOS ETC.)

SUPPLEMENT 1 TO EBU R 128

Geneva
August 2020
This page and others in the document are intentionally left blank to maintain pagination for two-sided printing.
Loudness Parameters for Short-form Content  
(advertisements, promos etc.)

<table>
<thead>
<tr>
<th>EBU Committee</th>
<th>First Issued</th>
<th>Revised</th>
<th>Re-issued</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC</td>
<td>2014</td>
<td>2015, 2020</td>
<td></td>
</tr>
</tbody>
</table>

**Keywords:** Audio levels, loudness, normalisation, EBU R 128.

After the introduction of recommendation R 128 [1], the EBU has studied the practical adoption and its consequences. Especially for short-form content such as advertisements (commercials) and promos (as well as interstitials etc.) there is a need to give guidance using the parameter **Maximum Short-term Loudness** in addition to the basic parameters **Programme Loudness** and **Maximum True Peak Level**.

In compliance with R 128, the EBU recommends the measurement of the average loudness of a short-form programme (‘Programme Loudness’) for the normalisation of such audio signals. The measure ‘Maximum Short-term Loudness’ should be used to further characterise and control the audio signal and so avoid overly dynamic short-form programmes, which would lead to audience complaints. The ‘Maximum True Peak Level’ of an audio signal should be used to check compliance with the upper technical limit of the signal chain.

The measure ‘Loudness Range’ is not useful for Short-form Content. It is based on a statistical analysis of the Short-term (3 s) Loudness values. Too few of these data points can be generated for commercials, promos, etc. for a meaningful statistical analysis. Therefore, a maximum and/or minimum value for Loudness Range shall not be specified for programmes of this length/genre.

**The EBU recommends (see Summary):**

a) that the measures **Programme Loudness**, **Maximum Short-term Loudness** and **Maximum True Peak Level** shall be used to characterise the audio signal of Short-form Content;

b) that the **Programme Loudness Level** shall be normalised to a **Target Level** of −23.0 LUFS. For the implementation of Loudness Levelling workflows (for example, in Quality Control environments) a tolerance of ±0.2 LU is allowed, to take account of measurement errors;

c) that in special cases the Programme Loudness Level may be normalised to a Target Level lower than −23.0 LUFS on purpose. This exception shall be clearly indicated to ensure that such a lower Programme Loudness Level is not compensated;

d) that the **Short-term Loudness Level** (measured in compliance with EBU Tech 3341 [2]) should not exceed −18.0 LUFS (+5.0 LU on the relative scale). For the implementation of Loudness Levelling workflows (for example, in Quality Control environments) a tolerance of +0.2 LU is allowed, to take account of measurement errors;

e) that the measurements shall be made with a loudness meter compliant with ITU-R BS.1770 [3] and EBU Tech 3341;

f) that the audio signal shall generally be measured in its entirety, without emphasis on specific foreground elements such as speech, music or sound effects;

g) and that the **True Peak Level** of the programme shall not exceed −1 dBTP (dB True Peak)
for linear audio, measured with a meter compliant with ITU-R BS.1770 and EBU Tech 3341. The measurement tolerance is ±0.3 dB (for signals with a bandwidth limited to 20 kHz). EBU Tech 3344 [4] should be consulted for Maximum Permitted True Peak Levels for different distribution systems.

Summary – Loudness Parameters for Short-form Content (adverts; promos, etc.):

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programme Loudness</td>
<td>-23.0 LUFS</td>
</tr>
<tr>
<td>Maximum Short-term Loudness</td>
<td>-18.0 LUFS (+5.0 LU on the relative scale)</td>
</tr>
<tr>
<td>Maximum True Peak Level</td>
<td>-1 dBTP</td>
</tr>
<tr>
<td>Loudness Range</td>
<td>(not applicable)</td>
</tr>
</tbody>
</table>

Definitions:

Programme: An individual, self-contained audio-visual or audio-only item to be presented in Radio, Television or other electronic media.

An advertisement (commercial), trailer, promotional item (‘promo’), interstitial or similar item (see “Short-form Content”) is also considered to be a programme in this context;

Short-form Content: A programme of short duration (typically shorter than 30 seconds but up to approximately 2 minutes). In addition to advertisements (commercials) and promotional items, interstitials, stingers, bumpers and similar very short items also belong to this category;

Programme Loudness: The integrated loudness over the duration of a programme - Programme Loudness Level is the value (in LUFS) of Programme Loudness;

Maximum True Peak Level: The maximum value of the audio signal waveform of a programme in the continuous time domain.

References

[1] EBU R 128 ‘Loudness normalisation and permitted maximum level of audio signals’

[2] EBU Tech 3341 ‘Loudness Metering: ‘EBU Mode’ metering to supplement loudness normalisation in accordance with EBU R 128’
