

---

**Metoda zvočnega predvajanja za normalizirano raven glasnosti**

Audio reproduction method for normalized loudness level (TA 20)

Audio-Wiedergabeverfahren für normalisierten Lautstärkepegel

Méthode de reproduction audio pour niveau d'isophonie normalisé

**Ta slovenski standard je istoveten z: EN 62760:2016/prA1:2019**

---

**ICS:**

17.140.01	Akustična merjenja in blaženje hrupa na splošno	Acoustic measurements and noise abatement in general
33.160.30	Avdio sistemi	Audio systems

**SIST EN 62760:2016/oprA1:2019**                      **en,fr,de**

**iTeh STANDARD PREVIEW**  
(standards.iteh.ai)

Full standard:  
<https://standards.iteh.ai/catalog/standards/sist/d1e5ed83b-14df-4ee4-a946-fea2ef73b1c1/sist-en-62760-2016-oprA1-2019>



# 100/3184/CDV

## COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER:

**IEC 62760/AMD1 ED1**

DATE OF CIRCULATION:

**2019-01-18**

CLOSING DATE FOR VOTING:

**2019-04-12**

SUPERSEDES DOCUMENTS:

**100/3139/CD,100/3183/CC**

IEC TA 20 : ANALOGUE AND DIGITAL AUDIO	
SECRETARIAT: Japan	SECRETARY: Mr Gen Ichimura
OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: <input type="checkbox"/> Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.
FUNCTIONS CONCERNED: <input type="checkbox"/> EMC <input type="checkbox"/> ENVIRONMENT <input type="checkbox"/> QUALITY ASSURANCE <input type="checkbox"/> SAFETY	
<input checked="" type="checkbox"/> SUBMITTED FOR CENELEC PARALLEL VOTING	<input type="checkbox"/> NOT SUBMITTED FOR CENELEC PARALLEL VOTING
<p><b>Attention IEC-CENELEC parallel voting</b></p> <p>The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting.</p> <p>The CENELEC members are invited to vote through the CENELEC online voting system.</p>	

This document is still under study and subject to change. It should not be used for reference purposes.

Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

TITLE:

**Audio reproduction method for normalized loudness level (TA 20)**

PROPOSED STABILITY DATE: 2021

NOTE FROM TC/SC OFFICERS:

**Copyright © 2018 International Electrotechnical Commission, IEC.** All rights reserved. It is permitted to download this electronic file, to make a copy and to print out the content for the sole purpose of preparing National Committee positions. You may not copy or "mirror" the file or printed version of the document, or any part of it, for any other purpose without permission in writing from IEC.

## FOREWORD

This amendment has been prepared by technical area 11: Quality for audio, video and multimedia systems.

The text of this amendment is based on the following documents:

FDIS	Report on voting
XX/XX/FDIS	XX/XX/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

The National Committees are requested to note that for this publication the stability date is ....

THIS TEXT IS INCLUDED FOR THE INFORMATION OF THE NATIONAL COMMITTEES AND WILL BE DELETED AT THE PUBLICATION STAGE.

## INTRODUCTION to Amendment 1

The revision of IEC 62670 ed.1.0 (2008) has become necessary to revise Annex C as informative information for the use of loudness metadata.

## 2 Normative references

*Replace the reference "ITU-R BS.1770-3: 08/2012, Algorithms to measure audio programme loudness and true-peak audio level" by "ITU-R BS.1770-4: 10/2015, Algorithms to measure audio programme loudness and true-peak audio level"*

## Annex C

*Replace the entire existing Annex C by the following new Annex C:*

## Annex C (informative)

### Loudness metadata

Loudness metadata provides information on the loudness of audio content. Information on loudness is specified by Recommendation ITU-R BS.2076, Audio Definition Model, which defines loudness metadata that can be included in a Broadcast Wave 64-bit File (BW64) as defined by Recommendation ITU-R BS.2088 Long-form file format for the international exchange of audio programme materials with metadata. For Broadcast Wave Format (BWF) files specified by EBU-Tech 3285 defines the carriage of loudness metadata defined in EBU Tech 3364 Audio Definition Model which is a mirror copy of the ITU-R BS.2076. Therefore, the loudness metadata parameters defined below can be carried in both BWF and BW64 files.

Metadata is defined as follows.

integratedLoudness	The integrated loudness value of the programme using the measurement method described by loudnessMethod in LKFS.
loudnessRange	The loudness range of the programme in LU.
maxTruePeak	The maximum true peak level of the programme in dBTP.
maxMomentary	The maximum momentary loudness value of the programme in LKFS.
maxShortTerm	The maximum short-term loudness value of the programme in LKFS.
dialogLoudness	The average loudness of the dialog in the programme in LKFS.
loudnessMethod	The method or algorithm used to calculate the loudness indicated above. Typically, this will be "BS1770".
loudnessRecType	The regional recommended practice that was followed in the loudness measurement/correction of the programme. For example, ATSC A/85, EBU R128.
loudnessCorrectionType	The correction type that was used to correct the programme, either an offline file-based correction method, or a real-time method.

NOTE LKFS is the loudness defined in ITU-R BS.1770, whereas the EBU uses LUFS, and both may be used as defined in ITU-R BS.2076.

### Bibliography

*Replace the existing entire bibliographical references with the following:*

### Bibliography

ARIB TR-B32	<i>Operational Guidelines for Loudness of Digital Television Programs</i>
ATSC A/85	<i>ATSC Recommended Practice: Techniques for Establishing and Maintaining Audio Loudness For Digital Television</i>
EBU R128	<i>Loudness Normalisation and Permitted Maximum Level of Audio</i>

100/3184/CDV

– 4 – Amendment1 to IEC 62760 ed.1.0/CDV © IEC:2018

*Signals*

ITU-R BS.2076

*Audio Definition Model*

ITU-R BS.2088

*Long-form file format for the international exchange of audio programme materials with metadata*

---

**ITEH STANDARD PREVIEW**  
(standards.iteh.ai)  
Full standard:  
<https://standards.iteh.ai/catalog/standards/sist/4e5ed83b-14df-4ee4-a946-fea2ef73b1c1/sist-en-62760-2016-oprA1-2019>