

INTERNATIONAL STANDARD



**Audio, video and multimedia systems – General channel assignment
of multichannel audio**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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GENERAL CHANNEL ASSIGNMENT OF MULTICHANNEL AUDIO****FOREWORD**

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International Standard IEC 62574 has been prepared by technical area 20 of IEC technical committee 100: Audio, video and multimedia systems and equipment.

This second edition cancels and replaces the first edition published in 2011. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) model of channel assignment spaces is changed;
- b) definition of channel maps and labels is changed;
- c) metadata is newly specified;
- d) channel maps and labels from the first edition are included in Annex A.

The text of this International Standard is based on the following documents:

CDV	Report on voting
100/3198/CDV	100/3246/RVC

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

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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- withdrawn,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

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INTRODUCTION

There are many multichannel audio formats and there will be new formats. These formats have a specific channel assignment, such as a channel mapping and channel labels, but the basic channel assignments are not so different from each other. These can be unified to one common channel assignment as the general channel assignment. This general channel assignment provides audio devices and digital audio interfaces with the usage of unified channel assignments for any multichannel audio formats. This second edition provides consistency with various standards. The channel names have changed in this second edition; the differences are shown in Annex B. Since there are standards that refer to the first edition of this document (see Clause A.1), IEC 62574:2011 (the first edition) is cited at length in Annex A. The first edition (IEC 62574:2011) and the second edition (this document) can be distinguished by the numbering of the channels.

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AUDIO, VIDEO AND MULTIMEDIA SYSTEMS –

GENERAL CHANNEL ASSIGNMENT OF MULTICHANNEL AUDIO

1 Scope

This document specifies the general channel assignment and the metadata for multichannel audio formats. ~~The general channel assignment as a~~ This document, with its channel mapping and labelling content, provides the unified usage of channel assignments for source devices, digital audio interfaces and sink devices. ~~This standard~~ The general channel assignment excludes the specification of the exact position of each loudspeaker. The metadata has the exact position of each loudspeaker; however, since the position of the loudspeaker is different in various surround sound formats, the position information of the metadata is not standardized. It is aimed at consumer applications, ~~but~~; it is not targeted at theatrical environments. Up to ~~32~~ 65 labels for loudspeaker positions and 15 labels for loudspeakers on the display are specified, which can be used for all current multichannel audio formats. The channel assignment concept is room centric and listener centric. This general channel assignment specifies the position of the loudspeaker as seen from the listener.

2 Normative reference

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

overhead layer

loudspeaker-layer located vertically above the high layer, nominally near or on the ceiling (overhead), labelled beginning with the letter designation "Oh"

3.2

high layer

loudspeaker-layer located vertically below the overhead layer and above the middle layer, nominally located above the screen, or near the ceiling, labelled beginning with the letter designation "H"

3.3

middle layer

loudspeaker-layer located nominally in the vertical plane at height of the listeners ears, or alternatively at the centre of the screen, whose labels do not carry a letter designation

3.4

bottom layer

loudspeaker-layer located nominally below the screen, or near the floor, labelled beginning with the letter designation "Bt"

3.5
front left
FL

loudspeaker position located at the front left in the middle layer

Note 1 to entry: This note applies to the French language only.

3.6
front right
FR

loudspeaker position located at the front right in the middle layer

Note 1 to entry: This note applies to the French language only.

3.7
front centre
FC

loudspeaker position located at frontal centre in the middle layer, or alternatively corresponding to the centre of the screen, as viewed from the seating area

Note 1 to entry: This note applies to the French language only.

3.8
low-frequency effects
LFE

sound effects in the low-frequency band, generally below 120 Hz; the LFE channel is not used as a subwoofer channel to compensate for the low-frequency band of each loudspeaker

Note 1 to entry: When mono LFE is used, it is conveyed in the LFE channel and the LFE loudspeaker's position at the bottom layer is not defined.

Note 2 to entry: This note applies to the French language only.

3.9
left surround

LS
loudspeaker position located at the left side slightly behind the listener in the middle layer

Note 1 to entry: This note applies to the French language only.

3.10
right surround
RS

loudspeaker position located at the right side slightly behind the listener in the middle layer

Note 1 to entry: This note applies to the French language only.

3.11
front left centre
FLc

loudspeaker position located at the front left of centre in the middle layer

Note 1 to entry: This note applies to the French language only.

3.12
front right centre
FRc

loudspeaker position located at the front right of centre in the middle layer

Note 1 to entry: This note applies to the French language only.

3.13
back centre
BC

loudspeaker position located at centre back in the middle layer

Note 1 to entry: This note applies to the French language only.

3.14
low-frequency effects 1
LFE1

LFE loudspeaker position located at the bottom layer and normally far left front

Note 1 to entry: This note applies to the French language only.

3.15
side left
SiL

loudspeaker position located on the left side in the middle layer

Note 1 to entry: This note applies to the French language only.

3.16
side right
SiR

loudspeaker position located on the right side in the middle layer

Note 1 to entry: This note applies to the French language only.

3.17
high front left
HFL

loudspeaker position located at the front left in the high layer

Note 1 to entry: This note applies to the French language only.

3.18
high front right
HFR

loudspeaker position located at the front right in the high layer

Note 1 to entry: This note applies to the French language only.

3.19
high front centre
HFC

loudspeaker position located at front centre in the high layer

Note 1 to entry: This note applies to the French language only.

3.20
overhead centre
OhC

loudspeaker position located at the centre in the overhead layer directly above the seating area

Note 1 to entry: This note applies to the French language only.

3.21
high left surround
HLS

loudspeaker position located at the left slightly behind the listener in the high layer

Note 1 to entry: This note applies to the French language only.

3.22
high right surround
HRS

loudspeaker position located at the right slightly behind the listener in the high layer

Note 1 to entry: This note applies to the French language only.

3.23
high side left
HSiL

loudspeaker position located on the left side in the high layer

Note 1 to entry: This note applies to the French language only.

3.24
high side right
HSiR

loudspeaker position located on the right side in the high layer

Note 1 to entry: This note applies to the French language only.

3.25
high back centre
HBC

loudspeaker position located at centre back in the high layer

Note 1 to entry: This note applies to the French language only.

3.26
bottom front centre
BtFC

loudspeaker position located at centre front in the bottom layer

Note 1 to entry: This note applies to the French language only.

3.27
bottom front left middle
BtFLmid

loudspeaker position located at the front left in the bottom layer

Note 1 to entry: This note applies to the French language only.

3.28
bottom front right middle
BtFRmid

loudspeaker position located at the front right in the bottom layer

Note 1 to entry: This note applies to the French language only.

3.29
front left wide
FLw

loudspeaker position located at the front far left in the middle layer

Note 1 to entry: This note applies to the French language only.

3.30
front right wide
FRw

loudspeaker position located at the far front right in the middle layer

Note 1 to entry: This note applies to the French language only.

3.31**back left****BL**

loudspeaker position located at the back left in the middle layer

Note 1 to entry: This note applies to the French language only.

3.32**back right****BR**

loudspeaker position located at the back right in the middle layer

Note 1 to entry: This note applies to the French language only.

3.33**left back surround****LBS**

loudspeaker position located halfway between LS and BL in the middle layer

Note 1 to entry: This note applies to the French language only.

3.34**right back surround****RBS**

loudspeaker position located halfway between RS and BR in the middle layer

Note 1 to entry: This note applies to the French language only.

3.35**high back left****HBL**

loudspeaker position located at the back left in the high layer

Note 1 to entry: This note applies to the French language only.

3.36**high back right****HBR**

loudspeaker position located at the back right in the high layer

Note 1 to entry: This note applies to the French language only.

3.37**high front left wide****HFLw**

loudspeaker position located at the front far left in the high layer

Note 1 to entry: This note applies to the French language only.

3.38**high front Right wide****HFRw**

loudspeaker position located at the far front right in the high layer

Note 1 to entry: This note applies to the French language only.

3.39**overhead front left****OhFL**

loudspeaker position located at the front left in the overhead layer

Note 1 to entry: This note applies to the French language only.

3.40
overhead front right
OhFR

loudspeaker position located at the front right in the overhead layer

Note 1 to entry: This note applies to the French language only.

3.41
overhead side left
OhSiL

loudspeaker position located on the left side in the overhead layer

Note 1 to entry: This note applies to the French language only.

3.42
overhead side right
OhSiR

loudspeaker position located on the right side in the overhead layer

Note 1 to entry: This note applies to the French language only.

3.43
overhead back left
OhBL

loudspeaker position located at the back left in the overhead layer

Note 1 to entry: This note applies to the French language only.

3.44
overhead back right
OhBR

loudspeaker position located at the back right in the overhead layer

Note 1 to entry: This note applies to the French language only.

3.45
high front left middle
HFLmid

loudspeaker position located at the front left middle in the high layer

Note 1 to entry: This note applies to the French language only.

3.46
high front right middle
HFRmid

loudspeaker position located at the front right middle in the high layer

Note 1 to entry: This note applies to the French language only.

3.47
high back left middle
HBLmid

loudspeaker position located at the back left middle in the high layer

Note 1 to entry: This note applies to the French language only.

3.48
high back right middle
HBRmid

loudspeaker position located at the back right middle in the high layer

Note 1 to entry: This note applies to the French language only.