

**SLOVENSKI STANDARD  
oSIST prEN IEC 63087:2025  
01-julij-2025**

---

**Pomožni slušni aparati in sistemi za aktivno življenje s pomočjo**

Assistive listening devices and systems for active assisted living

Dispositifs et systèmes d'aide à l'audition pour l'assistance à l'autonomie à domicile

Ta slovenski standard je istoveten z: <https://standards.oisth.si>)

---

**ICS:**

<a href="https://eh.ai">https://eh.ai</a>	11.180.15	Prispevki za gluhe osebe in osebe z okvaro sluha	Aids for deaf and hearing impaired people	<a href="https://osist-pren-iec-63087-2025">https://osist-pren-iec-63087-2025</a>
	33.160.30	Avdio sistemi	Audio systems	

**oSIST prEN IEC 63087:2025**

**en,fr,de**





# 100/4305/CDV

## COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER:	
<b>IEC 63087 ED1</b>	
DATE OF CIRCULATION:	CLOSING DATE FOR VOTING:
<b>2025-05-02</b>	<b>2025-07-25</b>
SUPERSEDES DOCUMENTS:	
<b>100/4158/CD, 100/4211/CC</b>	

IEC TA 20 : ANALOGUE AND DIGITAL AUDIO	
SECRETARIAT:	SECRETARY:
Japan	Mr Nobukazu Suzuki
OF INTEREST TO THE FOLLOWING COMMITTEES:	HORIZONTAL FUNCTION(S):
TC 29	
ASPECTS CONCERNED:	
<input checked="" type="checkbox"/> SUBMITTED FOR CENELEC PARALLEL VOTING	
<input type="checkbox"/> NOT SUBMITTED FOR CENELEC PARALLEL VOTING	
<b>Attention IEC-CENELEC parallel voting</b> 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.  The CENELEC members are invited to vote through the CENELEC online voting system.	

<https://standards.iteh.ai/catalog/standards/sist/29a97c76-b912-4e55-a6fa-f65d0aafba05/osist-pr-en-iec-63087-2025>

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.

Recipients of this document are invited to submit, with their comments, notification of any relevant "In Some Countries" clauses to be included should this proposal proceed. Recipients are reminded that the CDV stage is the final stage for submitting ISC clauses. (SEE [AC/22/2007 OR NEW GUIDANCE DOC](#)).

TITLE:
<b>Assistive listening devices and systems for active assisted living</b>

PROPOSED STABILITY DATE: 2028
-------------------------------

NOTE FROM TC/SC OFFICERS:
**

## CONTENTS

1		
2	1 Scope .....	9
3	2 Normative references .....	9
4	3 Terms, definitions, and acronyms .....	9
5	4 Objectives of an ALS as required by the end user .....	15
6	4.1 End user expectations and requirements for equipment, audio quality, latency, signal level and system interconnection .....	15
7	4.2 Types of system, signal sources and end user requirements for AV Interconnection .....	15
8	4.3 Audio Provision – End user requirements for quality, latency, signal level and level control.....	18
9	4.3.1 Audio delay and latency.....	18
10	4.3.2 Signal Level and consistency.....	18
11	4.3.3 General .....	18
12	4.4 Awareness, Education and Handling of Complaints – End user requirements .....	18
13	5 System Design .....	18
14	5.1 Overview .....	18
15	5.2 Purpose and use of the system .....	20
16	5.3 Site Survey.....	20
17	5.4 Coverage .....	20
18	5.5 Access limitations and Privacy .....	20
19	5.6 Sound Quality & Intelligibility.....	21
20	5.6.1 High Quality (A).....	21
21	5.6.2 Good Quality (B).....	21
22	5.6.3 Fair Quality (C).....	21
23	5.6.4 Signal level and bandwidth .....	22
24	5.6.5 Signal delay and latency.....	23
25	5.6.6 Speech intelligibility.....	23
26	5.7 System Design .....	23
27	6 Signal Sources – AV Interconnection.....	24
28	6.1 General .....	24
29	6.2 Local AV sources .....	24
30	6.2.1 Use and Siting of Microphone Sources .....	24
31	6.2.2 ALS – Use of ambience microphone(s) and confidence signal .....	25
32	6.3 Integration of ALS with Sound Reinforcement Public Address Systems .....	25
33	6.4 Interconnection of ALS with a Voice Alarm or Emergency Communication Systems .....	26
34	7 ALS transmitters .....	26
35	8 ALS receivers and neckloops .....	27
36	8.1 Introduction .....	27
37	8.2 Requirements for receivers and neckloops used with ALS .....	27
38	8.3 Required Information .....	28
39	8.3.1 Receivers – Audio information .....	28
40	8.3.2 Receivers – User, control, and display information .....	28
41	8.3.3 Neckloops – Audio information .....	28
42	8.3.4 ALS Listening Devices .....	29
43	9 Venue or facility provision and user requirements .....	29
44	9.1 General .....	29

49	9.2	Staff awareness & training.....	30
50	9.3	Signage.....	30
51	9.4	Monitoring and Maintenance.....	31
52	10	Awareness, Education and Handling of Complaints .....	32
53	11	System Compliance, Testing and Certification .....	33
54	11.1	Overview .....	33
55	11.2	General .....	33
56	11.3	Room and equipment layout .....	34
57	11.4	Subjective Assessment .....	34
58	11.5	Objective Assessment .....	35
59	11.5.1	System Noise .....	35
60	11.5.2	Magnetic Noise.....	35
61	11.5.3	Coverage.....	36
62	11.5.4	Frequency response .....	36
63	11.5.5	Latency .....	36
64	11.5.6	Objective Speech Intelligibility (STI) .....	37
65	11.6	Access limitations and privacy .....	37
66	11.7	Signage.....	37
67	Annex A	Assistive Listening Systems - Technology overview (Informative) .....	38
68	A.1	Hearing Loops .....	38
69	A.2	Infra-red .....	38
70	A.3	FM wireless systems .....	39
71	A.4	Audio over Wi-Fi.....	40
72	A.5	Auracast.....	40
73	Annex B	ALS Formats for different venues and applications (Normative) .....	43
74	B.1	Large Area Systems: Types 1A – 1E .....	43
75	B.1.1	Large Area System - Type 1A – with sound system operator .....	43
76	B.1.2	Large Area System - Type 1B/1C – without sound system .....	43
77	B.1.3	Large Area System - Type 1D – with simple sound system .....	43
78	B.1.4	Large Area System - Type 1E – with simple sound system .....	44
79	B.2	Large Area System - Type 2 – classroom & soundfield systems .....	44
80	B.3	Large Area System: Type 3 – Stadiums and Arenas .....	44
81	B.4	Large Area System: Type 4 – Meeting rooms without a sound system.....	45
82	B.5	Large Area System: Type 5 – Infotainment venues.....	45
83	B.6	Large Area System: Type 6 – Concourses and malls.....	46
84	B.7	Large Area System: Type 7 – Museum exhibits .....	46
85	B.8	Large Area System: Type 8 – Tour Guide systems .....	46
86	B.9	Small Area System: Type 9 – Transportation – On-board Communication and Information .....	46
88	B.10	Small Area System: Type 10 – Transportation – On-board Infotainment .....	46
89	B.11	Small Area System: Type 11 – Transportation – On-board Communication.....	46
90	B.12	Small Area System: Type 12 – Help points, intercoms & safety refuges .....	46
91	B.13	Small Area System: Type 13 – Service Points & Information Desks .....	47
92	B.14	Portable & temporary small area systems .....	47
93	B.15	Temporary Area coverage systems - .....	48
94	B.16	Domestic systems .....	48
95	B.17	Personal Systems - Type 14 – Communication .....	48
96	Annex C	Personal Listeners (Informative) .....	49

97	C.1 Personal Systems - Communication .....	49
98	C.1.1 General .....	49
99	C.1.2 Types of personal listener, hearables and remote wireless	
100	microphones .....	49
101	C.2 Streaming Audio.....	51
102	Annex D ALS Design Checklists (Informative).....	52
103	Annex E Assessment Report (Normative) .....	55
104	E.1 Room / space & Equipment Layout.....	55
105	E.2 Acoustic Noise - Ambient level .....	56
106	E.3 ALS Coverage .....	56
107	E.4 Frequency Response.....	56
108	E.5 Signal to Noise Ratio - SNR .....	57
109	E.6 Subjective test.....	57
110	E.7 Latency / Delay .....	58
111	E.8 Speech intelligibility (STI).....	58
112	E.9 Access Limitations / Privacy .....	59
113	E.10 Accessibility & Signage .....	59
114	Annex F - Example ALS Certificate of Compliance (Informative) .....	61
115	Annex G (Informative) ALS information that can usefully be provided on venue's or	
116	facility's website .....	62
117	Annex H Latency and Measurement of ALS delay (normative) .....	63
118	H.1 Introduction .....	63
119	H.1.1 Difference between audible speech signals (ALS and airborne sound).....	63
120	H.1.2 Hearing one's own voice through an ALS.....	63
121	H.1.3 Influence of delay on lip-reading .....	64
122	H.2 Delay of different transmission channels .....	65
123	H.2.1 General .....	65
124	H.2.2 Total delay of an ALS .....	65
125	H.2.3 Total delay of a loudspeaker system.....	65
126	H.3 Measurement of delay for live speech via loudspeakers .....	66
127	H.3.1 Measurement methods .....	66
128	H.3.2 Inputting the test signal .....	66
129	H.3.3 Time calibration of the measurement system .....	66
130	H.3.4 Measuring the delay of the ALS .....	66
131	H.3.5 Measuring the propagation time of airborne sound via loudspeakers .....	66
132	H.3.6 Determining the propagation time of direct sound from the talker.....	67
133	H.4 Measurement of the difference between image and ALS .....	67
134	H.4.1 Measurement methods .....	67
135	H.4.2 Calibration.....	67
136	H.4.3 Playing or generating the test signal.....	67
137	H.4.4 Measurement of the time difference between image and ALS .....	67
138	H.4.5 Measurement of the difference between Image and airborne sound.....	68
139	Annex I Signage for Assistive Listening Systems (normative).....	69
140	I.1 Introduction .....	69
141	I.2 Symbols and signage for Assistive Listening Systems .....	69
142	I.2.1 Hearing Loop based system .....	69
143	I.2.2 Infrared based system .....	69
144	I.2.3 FM radio-based system .....	70

145	I.2.4	Auracast based system.....	70
146	I.2.5	Joint Hearing Loop and Auracast systems .....	70
147	I.2.6	Unspecified ALS .....	71
148	12	Bibliography .....	72
149			

# iTeh Standards

## (<https://standards.iteh.ai>)

### Document Preview

[oSIST prEN IEC 63087:2025](#)

<https://standards.iteh.ai/catalog/standards/sist/29a97c76-b912-4c55-a6fa-f65d0aafba05/osist-pren-iec-63087-2025>