SLOVENSKI STANDARD

SIST HD 549 S1:1999

prva izdaja

julij 1999

Conference systems - Electrical and audio requirements (IEC 60914:1988)

ICS 33.160.60

Referenčna številka
SIST HD 549 S1:1999(en)

CENELEC
Rue Bréderode 2, Bte 5 - 1000 BRUXELLES
Tél.: [+32.2]519 68 71 - Télex: 26257 Cenlec b
Fax: [+32 2]519 68 19 - Télétex: 206 2210097 CENCEL

HD 549 S1

December 1989

ENGLISH VERSION

UDC: 621.396:534.86:061.3

KEY WORDS: Electroacoustic; conference room; booth for interpretation; requirement; electrical characteristic; interchangeability

CONFERENCE SYSTEMS - ELECTRICAL AND AUDIO REQUIREMENTS

Systèmes de conférence - Exigences électriques et audio

Konferenz-Anlagen - Elektrische und akustische Anforderungen

BODY OF THE HD

The Harmonization Document consists of:

- IEC 914 (1988) ed 1; IEC/TC 84, not appended

This Harmonization Document was approved by CENELEC on 1989-11-01 (confirmed by 62 BT).

The English and French versions of this Harmonization Document are provided by the text of the IEC publication and the German version is the official translation of the IEC text.

According to the CENELEC Internal Regulations the CENELEC member National Committees are bound:

to announce the existence of this Harmonization Document at national level by or before 1990-03-01

to publish their new harmonized national standard by or before 1990-09-01

to withdraw all conflicting national standards by or before 1990-09-01.

Harmonized national standards are listed on the HD information sheet, which is available from the CENELEC National Committees or from the CENELEC Central Secretariat.

The CENELEC National Committees are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxemburg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
60914

Première édition
First edition
1988-06

Systèmes de conférence – Exigences électriques et audio

Conference systems – Electrical and audio requirements

International Electrotechnical Commission 3, rue de Varembé Geneva, Switzerland
Telefax: +41 22 919 0300 e-mail: inmail@iec.ch IEC web site http: //www.iec.ch

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE X

Pour prix, voir catalogue en vigueur
For price, see current catalogue

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONFERENCE SYSTEMS ELECTRICAL AND AUDIO REQUIREMENTS

FOREWORD

1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.

2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.

3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

PREFACE

This standard has been prepared by IEC Technical Committee No. 84: Equipment and Systems in the Field of Audio, Video and Audiovisual Engineering.

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

Six Months' Rule	Report on Voting
29B(CO)118 84(CO)18	84(CO)11 84(CO)28+28A+28B

Full information on the voting for the approval of this standard can be found in the Voting Reports indicated in the above table.

CONFERENCE SYSTEMS
ELECTRICAL AND AUDIO REQUIREMENTS

1. Scope

This standard applies to conference systems and to the parts of which they are composed or which are used as auxiliaries to such systems (headphones, microphones, amplification equipment).

It describes the different types of conference systems with both wired and wireless systems, and specifies the basic electrical requirements of audio equipment for conference systems.

2. Object

The purpose of this standard is to prescribe the minimum requirements for conference systems in order to ensure interchangeability and optimum performance under conditions of normal operation.

This standard should facilitate the determination of quality of conference systems, the comparison of different systems and the determination of their proper application by listing the characteristics which are useful for their specification.

In this standard, the word "quality" is intended to denote mainly electro-acoustical quality such as intelligibility and freedom from interference, and not the quality from the point of view of safety, durability, resistance to environmental conditions, etc.

Quality should be judged from the point of view of the user (interpreter, delegate, etc.), who is concerned with the characteristics of the system as a whole and not, as a rule, with design details or components.

The use of this standard, both by manufacturers and users, will facilitate comparison between manufacturers' specifications and users' requirements for a particular system.

Note. — It is recognized that some operators may have to continue to operate existing systems within a limited period of transition; however it is desirable that some existing conference systems be replaced by systems conforming to this standard.

3. Reference documents

Reference should be made to the following publications:

— IEC Publication No. 27: Letter symbols to be used in electrical technology.

50(801) (1984): International Electrotechnical Vocabulary. Chapter 801: Acoustics and electro-acoustics.

65 (1985): Safety requirements for mains operated electronic and related apparatus for household and similar general use.

68: Basic environmental testing procedures.

94: Magnetic tape sound recording and reproducing systems.

268: Sound system equipment.

268-3 (1969): Part 3: Sound system amplifiers.

268-4 (1972): Part 4: Microphones.

268-7 (1984): Part 7: Headphones and headsets.

268-11 (1987): Part 11: Application of connectors for the interconnection of sound system components.

268-12 (1987): Part 12: Application of connectors for broadcast and similar use.

268-15 (1987): Part 15: Preferred matching values for the interconnection of sound system components.

417 (1973): Graphical symbols for use on equipment. Index, survey and compilation of the single sheets.

574: Audiovisual, video and television equipment and systems.

574-3 (1983): Part 3: Connectors for the interconnection of equipment in audio-visual systems.

574-4 (1982): Part 4: Preferred matching values for the interconnection of equipment in a system.

— C.I.S.P.R. Publications

No. 11 (1975): Limits and methods of measurement of radio interference characteristics of industrial, scientific and medical (ISM) radio-frequency equipment (excluding surgical diathermy apparatus).

14 (1985): Limits and methods of measurement of radio interference characteristics of household electrical appliances, portable tools and similar electrical apparatus.

— ISO Standards

ISO 2603-1983: Booths for simultaneous interpretation — General characteristics and equipment.

ISO 4043-1981: Booths for simultaneous interpretation — Mobile booths — General characteristics and equipment.

SECTION ONE — GENERAL TERMS

4. Persons

4.1 *Delegate*

A person participating in a conference having the facilities of a conference system to speak and listen.

4.2 *Interpreter*

A person who interprets a spoken language into one or more other languages via the interpretation system.

4.3 *Operator*

A person operating the control equipment and the audiovisual equipment, changing tapes on tape recorders and monitoring quality of sound to the interpreters and delegates.

4.4 *Technician*

A person who can perform the functions of an operator and is in addition trained in the diagnosis and repair of equipment faults.

4.5 *Audience*

Persons not actively participating in the conference, having only the facility for listening.

5. Earphones

5.1 *Earphone* (IEV 801-07-18)

Electroacoustic transducer by which acoustic oscillations are obtained from electric signals and intended to be closely coupled acoustically to the ear.

5.2 *Headphone* (IEV 801-07-20)

Assembly of one or two earphones on a headband.

5.3 *Headset* (IEV 801-07-21)

Assembly of a microphone and one or two earphones on a headband.

5.4 *Insert earphone* (IEV 801-07-22)

Small earphone that fits either in the outer ear or is attached directly to a connecting element, for example earmould inserted into the ear canal.

5.5 *Supra-aural earphone* (IEV 801-07-23)

Earphone applied externally to the outer ear.

5.6 *Circumaural earphone* (IEV 801-07-24)

Earphone having a cavity large enough to cover the region of the head including the ear.

5.7 *Ear shell*

Circumaural type of earphone hanging on the ear.

5.8 *Stethoscopic headphone*

Headphone by which the earphone is remotely coupled to the ears by means of a tube.

6. Microphones

6.1 *Microphone* (IEV 801-06-01)

Electroacoustical transducer by which electrical signals are obtained from acoustical oscillations.

6.2 *Omnidirectional microphone* (IEV 801-06-05)

Microphone, the response of which is substantially independent of the direction of sound incidence.

6.3 *Directional microphone* (IEV 801-06-06)

Microphone, the response of which is dependent on the direction of sound incidence.

6.4 *Unidirectional microphone* (IEV 801-06-07)

Directional microphone, the response of which has a prominent maximum for one direction of the sound wave.

7. Channels

7.1 *Floor channel*

The floor channel is the audio channel through which the speech of the speaker (delegate, chairman or lecturer) is distributed.

The floor channel shall be designated by "O" or "OR" (original) on all channel selectors of CSIS (Conference Simultaneous Interpretation System) and Language Distribution System (LDS) equipment.

A language channel may also serve to distribute the floor language whenever that language coincides with the one assigned to that channel.

7.2 *Language channel*

A language channel is an audio channel through which an assigned language is distributed.

Language channels shall be designated by the numbers "1, 2, 3..." on all channel selectors of the CIS and LDS equipment.

7.3 *Call channel*

The call channel is the audio channel through which messages are transmitted from the interpreter to the chairman or lecturer or operator, or from the operator to the chairman or lecturer.

8. Systems

8.1 *Automatic system*

In an automatic system the microphones are operated by the delegates, and in a CSIS preferably supervised by the operator.

8.2 *Manual system*

In a manual system the microphones are operated and controlled by the operator.

9. Conference room configurations

9.1 *Round table configuration*

The delegates are positioned around a table or a set of tables. All delegates are able to take part in the conference.

9.2 *Seminar configuration*

A lecturer can deliver his speech from a lectern or a table at the front of the room. There may also be a table for a chairman or a panel. The delegates are positioned facing the front of the room.

The lecturer and, if present, the chairman or the panel as well as the delegates are able to take part continuously in the discussion.

9.3 *Lecture configuration*

A lecturer can deliver his speech from a lectern or a table at the front of the room. There may also be a table for a chairman or a panel. The audience is positioned facing the front of the room.

The lecturer and, if present, the chairman or the panel are able to take part continuously in the discussion; the audience has a limited possibility for questions and discussion.

9.4 *Press conference configuration*

One or more speakers can deliver their speech from a table at the front of the room. The participants are positioned facing the front of the room.

The speakers deliver their speeches to the participants, who have limited possibility for questions and discussion.

9.5 *Parliament configuration*

A lecturer can deliver his speech from a lectern at the front of the room. The delegates are positioned facing the front of the room.

The lecturer can present his speech to the delegates, who have limited possibility for questions and discussion.

10. Typical conference systems

— Conference microphone system (CMS) and conference discussion system (CDS) (Subclauses 10.2.1 and 10.2.2).

— Conference interpretation system (CIS) (Sub-clause 10.3).

— Language distribution system (LDS) (Sub-clause 10.4).

— Conference voting system (CVS) (Sub-clause 10.5).

10.1 *General*

Three different types of installations can be recognized:

a) Permanent installations:
in permanent installations the furniture and cabling are fixed and the system components integrated.

b) Semi-permanent installations:
in semi-permanent installations the furniture is portable or fixed, the cabling is fixed and the system components are either integrated into the furniture or placed on tables.

c) Portable installations:
in portable systems all system components, including cables, are pluggable and removable.

10.2 *Microphone systems*

10.2.1 *Conference Microphone System (CMS)*

A CMS is a single channel sound system with centralized control which allows all delegates to participate in the conference. The number of microphones in such a system is usually small in relation to the number of delegates. The microphones normally used are of all types.

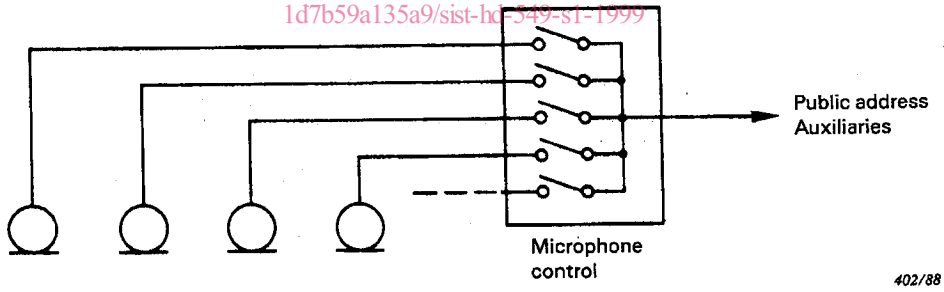

FIG. 1. — Conference Microphone System (CMS).

10.2.2 *Conference Discussion System (CDS)*

A CDS is a single channel sound system with either decentralized *AUTOMATIC* or centralized *MANUAL* functions for microphone control for the delegates and for the chairman.

In such a system all participants involved in the discussions have ready access to a microphone from their seats. Usually the sound reinforcement is decentralized, consisting of low level loudspeakers situated no further than 1 m from any delegate.

Centralized sound reinforcement, (a public address system) may also be used and should be provided for observers.