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TITLE: CONTINUING SUPPORT OF THE ASA STANDARDS PROGRAM

PRINCIPAL INVESTIGATOR: Avril Brenig, Ph.D.

CONTRACTING ORGANIZATION: Acoustical Society of America
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S3/368

MINUTES

ACCREDITED STANDARDS COMMITTEE ON BIOACOUSTICS, S3

**U.S. TAG FOR ISO/TC 43, ACOUSTICS,
IEC/TC 29 ELECTROACOUSTICS,
AND
ISO/TC 108/SC4 HUMAN EXPOSURE TO
MECHANICAL
VIBRATION AND SHOCK**

20 May 1993

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ACOUSTICAL SOCIETY OF AMERICA

OFFICE OF THE
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S3/368

MINUTES

ACCREDITED STANDARDS COMMITTEE ON BIOACOUSTICS, S3

U.S. TAG FOR ISO/TC 43, ACOUSTICS, IEC/TC 29 ELECTROACOUSTICS

and

ISO/TC 108/SC4 HUMAN EXPOSURE TO MECHANICAL VIBRATION AND SHOCK

Ottawa, Canada

20 May 1993

The meeting was called to order by Ms. J.D. Royster, Chair S3, at 1:35 PM in Salon L'Orangerie, the Chateau Laurier, Ottawa, Canada.

ORGANIZATIONAL MEMBERS PRESENT

Burkard, R.F.
Brenig, A.
Frank, T.

Mayer, M.S.
Nixon, C.
Nedzelitsky, V.

Royster, J.D.
Toothman, E.H.

ASHA
ASA Standards Manager
Vice Chair; ASA alternate
representative S3
AT & T
U.S. Air Force
National Institute of Standards and
Technology (NIST) (alternate for
E.D. Burnett)
Chair S3; ASA representative, S3
Fastener Industry Noise Control
Research Program (FINCRP)

INDIVIDUAL EXPERTS PRESENT

Eldred, K.M.	Chair ASACOS
Guernsey, R.M.	R.M. Guernsey and Associates
Johnson, D.L.	Chair S3/WG62; Chair S12
McKinley, R.	Vice Chair S1; Chair S3/WG71
von Gierke, H.E.	U.S. TAG Chair, ISO/TC 43 and ISO/TC 43/SC1
Young, R.W.	Consultant

OTHERS PRESENT

Arrington, J.R.	U.S. Primary Standards Lab.
Battenberg, P.	Quest Technologies
Blick, J.M.	La Belle Industries
Daigle, G.	Chair S12/WG27
Nyborg, W.L.	U.S. TAG, IEC/TC 87 Ultrasonics
Queen, D.	Audio Engineering Society
Ramussen, G.	Electronica
Royster, L.H.	C.C. State University
Schomer, P.D.	Vice Chair S12; Vice Chair, U.S. TAG for ISO/TC 43 and ISO/TC 43/SC1
Seiler, J.P.	Chair S1/WG21
Wong, G.S.K.	Chair S1

1. Approval of the Minutes of the New Orleans, Louisiana meeting, held on 3 November 1992 (S3/355).

Upon motion made and seconded, it was

VOTED to approve the Minutes of the S3 meeting (S3/355) held on 3 November 1992, as circulated.

2. Organization

- a) A list of current working groups is attached (see ATTACHMENT A).
- b) New working groups - None to date.
- c) Personnel changes - None to date.
- d) Work in progress - for a summary, see ATTACHMENT B.

3. Standards approved by ANSI in 1992/1993 and published (or being published) by ASA

The following standards were approved by ANSI and are published (or being published) by ASA:

- ANSI S3.42-1992 Testing Hearing Aids with a Broad-Band Noise Signal
- ANSI S3.43-1992 Standard Reference Zero for the Calibration of Pure-Tone Bone-Conduction Audiometers

Standards published by ASA can be ordered from the following address:

Professional Book Distributors (PBD)
ASA Standards Distribution Center
1650 Bluegrass Lakes Parkway
Alpharetta, Georgia 30239

Telephone: (404) 442-8633
Telefax: (404) 442-9742

NOTE: 20% discount on list price is available to ASA individual and sustaining members for all standards published by ASA.

4. Organizational matters and reports on working groups, including reports on letter ballots and international matters

a) S3/Advisory - Advisory Planning Committee to S3 - T. Frank, Chair

Mr. Frank prepared a detailed report at the last meeting (see ATTACHMENT C).
(The list of current S3 standards is appended -ATTACHMENT D.)

b) S3/WG35 Audiometers - R.L. Grason, Chair

It was noted that there may be report on activities following the IEC/TC 29 working group meeting on audiometry, which Mr. Grason plans to attend.

The document IEC 645, Part 2, Equipment for speech audiometry Document IEC/TC 29(Central Office)157 was voted upon. Votes were 16 positive, 2 negative (U.S. and U.K.). Draft was revised but did not incorporate U.S. technical documents. The Draft has been submitted to the Secretariat for publication.

4. Organizational matters and reports on working groups, including reports on letter ballots and international matters (continued)

b) S3/WG35 Audiometers - R.L. Grason, Chair (continued)

The document IEC 645, Part 3, Specification of reference audiometric test signals of short duration, Document IEC/TC 29(Secretariat)192 has been circulated for comments. It is proposed that the revised document be recirculated to the National Committees for further comment. (The international Working Group expected to meet in April/May 1991.)

A draft is being prepared for IEC 645, Part 4, Equipment for extended high frequency audiometry.

The document ISO/DIS 8253-2, Audiometric test methods was circulated under six months' rule for vote. The U.S. voted positively but submitted comments.

Mr. Schomer said at the last meeting that the differences between the scopes of S3/WG35 and S3/WG78 were confusing. This would be looked into.

Ms. Royster also reminded Mr. Grason at the last meeting that ANSI S3.6-1989 will come up for 5 -year revision or reaffirmation soon. She said that it would be desirable, in the next revision, to include calibration values for insert earphones in the body of the standard (rather than the appendix) as well as to include corresponding values for bone vibrators. Mr. Grason agreed to begin work on the revision.

c) S3/WG36 Speech Intelligibility - L. Marshall, Chair

o Subgroup 2, J. Kreul

At the last meeting, Ms. Royster said that the preparation of a complete draft for ballot should be available before the next meeting (May 1993).

d) S3/WG37 Coupler Calibration of Earphones - B. Kruger, Chair

The revision of ANSI S3.7-1973 Method for Coupler Calibration of Earphones was sent to S3 ballot (LB/S3.7/352) on 8 September 1992. The ballot was closed on 20 October 1992, with results as given in last Minutes (S3/355). (The proposed standard was also sent to S1 for information and comment.)

Ms. Royster said that the working group was trying to resolve the negative comments received on this ballot.

4. Organizational matters and reports on working groups, including reports on letter ballots and international matters (continued)

- e) S3/WG39 (S2) - Human Exposure to Mechanical Vibration and Shock - H.E. von Gierke, Chair (Counterpart to ISO/TC 108/SC4)

The last meeting of ISO/TC 108/SC4 took place with ISO/TC 108 in London, U.K. from 29 March to 1 April 1993.

- f) S3/WG43 Method for Calibration of Bone Conduction Vibrator - T. Frank, Chair

ANSI S3.43-1992 Standard Reference Zero for the Calibration of Pure-Tone Bone-Conduction Audiometers was approved by ANSI on 8 May 1992 and published by ASA (see Section 3).

New chair, Mr. Frank, presented a report at the meeting (see ATTACHMENT E).

The recommendations to reaffirm ANSI S3.13-1987 American National Standard Coupler for Measurement of Bone Vibrators and to withdraw ANSI S3.26-1981 (R 1990) American National Standard Reference Equivalent Threshold Force Levels for Audiometric Bone Vibrators were sent to S3 ballot in due course. (See item 6(b), page 11 of these Minutes).

- g) S3/WG48 Hearing Aids - D.A. Preves, Chair

ANSI Standard S3.42-1992 Testing Hearing Aids with a Broad-Band Noise Signal was approved by ANSI on 2 June 1992 and published by ASA (see Section 3).

Ms. Royster read Mr. Preves' report at the meeting:

1. First draft of proposed revision of ANSI S3.22-1987 prepared and discussed in Phoenix.
2. Round-robin on induction coil measurements completed. New protocol to be inserted in ANSI S3.22-1987 revision.
3. Comments coordinated on IEC documents: proposed revision to 118-1 (hearing aids with induction pickup coil input) and for IEC TC 29 (Secr.) 255 Dimensions of electrical connectors for hearing aids.
4. Recommendations for an improved battery simulator are under consideration.

The working group last met on 14 April 1993 in Phoenix.

4. Organizational matters and reports on working groups, including reports on letter ballots and international matters (continued)

h) S3/WG56 Criteria for Background Noise for Audiometric Testing - T. Frank, Chair

ANSI S3.1-1991 the revision of ANSI S3.1-1977 (R 1986) Maximum Permissible Ambient Noise Levels for Audiometric Test Rooms was published by ASA.

Mr. Frank reported at the last meeting as follows:

ANSI S3.1-1991, Maximum Permissible Ambient Noise Levels for Audiometric Test Rooms.

The chair continues to monitor the literature and ISO standards, as well as conducting research, that would impact on the information presented in ANSI S3.1-1991. This information will be made available to WG members prior to a review of S3.1 for revision/reaffirmation in 1994/95.

The chair and two WG members (J. Durrant and J. Lovrinic) recently published an article in the American Journal of Audiology describing ANSI S3.1-1991. This was done to alert audiologists and ASHA members about the new standard.

i) S3/WG58 Hearing Conservation Criteria - D.L. Johnson and W. Melnick, Co-chairs

ISO 1999:1990 Acoustics-Determination of occupational noise exposure and estimation of noise-induced hearing impairment was published by ISO. The next step is to prepare the national version of this international standard.

The completed standard has now been submitted to S3 for ballot. No major differences currently exist between the proposed national version and the international standard, ISO 1999-1990. The ballot, LB/S3.44/357, draft dated October 1992, was submitted to S3 on 25 January 1993 and closed on 8 March 1993. The results are given in ATTACHMENT F.

At the meeting, Mr. Johnson said he saw no problem in resolving the negative votes and comments received on this ballot.

j) S3/WG59 Measurement of Speech Levels - H. Levitt, Chair

At the meeting, Ms. Royster reported that she had finally received a document for balloting from Mr. Levitt. It was hoped to prepare the document for S3 ballot shortly.

4. Organizational matters and reports on working groups, including reports on letter ballots and international matters (continued)

k) S3/WG60 Measurement of Acoustic Impedance and Admittance of the Ear - D. Lilly, Chair

This working group is preparing a revision of ANSI S3.39-1987.

At the meeting, Mr. Frank said that he had communicated with Mr. Lilly and that he (Mr. Lilly) expected to prepare a revision of this standard for ballot as quickly as possible.

l) S3/WG62 Impulse Noise with Respect to Hearing Hazard - D. Johnson, Chair

The draft ANSI Standard S3.28-1986 for the Evaluation of the Potential Effect on Human Hearing of Sounds with Peak A-Weighted Sound Pressure Levels Above 120 Decibels and Peak C-Weighted Sound Pressure Levels Below 140 Decibels was approved by S3 and published for trial, comment, and criticism for a period of three years (according to ANSI procedures).

Mr. Johnson has said that once the national counterpart to ISO 1999:1990 Acoustics - Determination of occupational noise exposure and estimation of noise-induced hearing impairment were to be approved by S3, then he would propose withdrawal of this document, Draft ANSI S3.28-1986 (with no action this would occur naturally).

m) S3/WG67 Manikins - M.D. Burkhard, Chair

This working group currently exists solely for response to international documents.

n) S3/WG/1 Artificial Mouths - R. McKinley, Chair

A first draft is expected in about three and one half years (i.e. by November 1995).

Mr. McKinley said his working group meet on Tuesday, 18 May 1993, had discussed some issues and was trying to get more information for a draft.

o) S2/WG72 Measurement of Auditory Evoked Potentials - R.A. Ruth, Chair

Mr. Ruth has (again) reported no change from his last report, as follows:

We have collected normative perceptual threshold data for two supra-aural earphones (TDH-39 and TDH-49) and one insert earphone (ER-3A).

4. Organizational matters and reports on working groups, including reports on letter ballots and international matters (continued)

o) S2/WG72 Measurement of Auditory Evoked Potentials - R.A. Ruth, Chair (continued)

We are currently in the process of summarizing this data for use in the standard. Once this task is finished, we hope to produce a semi-final draft of the standard for comment and criticism.

At the meeting, Mr. Burkard said the working group was trying to get together in person or via correspondence.

p) S3/WG73 Bioacoustical Terminology - W.J. Galloway, Chair

At the last meeting, Ms. Royster said that Mr. Guignard was stepping down as chair of this working group and that Mr. Galloway would take his place. Mr. Galloway said he would incorporate the S3 terminology into the S1 and S12 terminology (draft) standard he is currently preparing for ballot.

(Mr. Galloway asked those interested in sending him terminology to put this on a 3 1/2" disk in Wordperfect 5.1. This way, it could be included in the draft.)

At the meeting, it was reported that the first draft of the proposed terminology document, the revision of ANSI S1.1-1960, was circulated to S1 for ballot, and to S2, S3 and S12 for information and comment. The document was sent to S3 as S3/365, on 26 March 1993. The ballot was closed on 7 May 1993 with results as given in ATTACHMENT G.

q) S3/WG75 Auditory Masking - S. Buus, Chair

At the last meeting, Ms. Royster said that there should be a draft proposed by the time of the Denver meeting (Fall 1993).

r) S3/WG76 Computerized Audiometry - J. Franks, Chair

Ms. Royster said she would check into the status of this working group.

s) S3/WG77 High Frequency Audiometry - J. Fletcher, Chair

Mr. Fletcher reported prior to the meeting as follows:

Consideration is being given 1. to formulate a standard without calibration data, and 2. to perform the study necessary to provide calibration data.

The working group next plans to meet in Denver in October 1993.

4. Organizational matters and reports on working groups, including reports on letter ballots and international matters (continued)

t) S3/WG78 Thresholds - W. Yost, Chair

The scope of this working group is to provide a liaison with ISO, IEC and other national working groups for standards dealing with auditory thresholds and procedures to measure these threshold. No meetings are planned.

u) S3/WG79 Calculation of the Articulation Index (Revision of ANSI S3.5-1969 (R 1986)) - C.V. Pavlovic, Chair

Mr. Pavlovic reported prior to the meeting that the first draft revision of ANSI S3.5-1969 should be available for ballot by the time of May 1993 the meeting.

NOTE: ASA Standards Secretariat has received a document for S3 ballot (July 1993).

v) S3/WG80 Probe Tube Measurements of Hearing Aid Performance - W. Cole, Chair

Ms. Royster said she had received a report from Mr. Cole, (see ATTACHMENT H).

w) S3/WG81 Assistive Listening Devices - R. Kasten, Chair; M Wynne, Vice Chair

At the last meeting, Ms. Royster said that S3/WG81 expected to meet at ASHA in San Antonio (mid-November 1992).

x) S3/WG82 Basic Vestibular Function Test Battery - C. Wall III, Chair

Ms. Royster said she would check into progress on this working group.

S3 LIAISON WORKING GROUPS

a) S3/TAG Liaison to IEC/TC 87 Ultrasonics - W. Nyborg, Chair

Mr. Nyborg reported prior to the meeting (see ATTACHMENT I).

5. International Matters

a) International Electrotechnical Commission (IEC)

(i) IEC/TC 29 Electroacoustics - V. Nedzelnitsky, Technical Advisor

A list of documents submitted to the U.S. for vote and/or comment is given in ATTACHMENT J.

Mr. Nedzelnitsky's report is also attached ATTACHMENT K. The next meeting of IEC/TC 29 will be held from 24-29 May 1993, in Oslo, Norway.

(ii) Liaison with IEC/TC 87 Ultrasonics - P.D. Edmonds, U.S. Technical Advisor

Please see ATTACHMENT I for Mr. Nyborg's report.

b) International Organization for Standardization (ISO)

(i) ISO/TC 43 Acoustics and ISO/TC 43/SC1 Noise - H.E. von Gierke, TAG Chair

A report has been prepared (see ATTACHMENT L). Mr. Schomer's report is given in ATTACHMENT M. The next meeting will be held from 31 May to 4 June 1993, in Oslo, Norway.

At the last meeting, Mr. Schomer detailed the numerous international documents being reviewed and noted his plan to establish regional coordinators for the major areas (counterpart to the national groups). This was considered a good idea for each of the S Committees to consider.

Mr. von Gierke noted that there be a very good delegation (14 people) going to Oslo for the meetings. Mr. Schomer spoke of the numerous documents being processed by ISO/TC 43 and ISO/TC 43/SC1, with the U.S. Member Body receiving some sixty (60) documents per year from these groups, mostly from TC 43/SC1.

(ii) ISO/TC 108/SC4 Human Exposure to Mechanical Vibration and Shock - H.E. von Gierke, TAG Chair

A report on the overall activities of ISO/TC 108 (including ISO/TC 108/SC4) is given in ATTACHMENT N.

The last meeting of ISO/TC 108/SC4 was held from 29 March to 1 April 1993, in London, U.K.

5. International Matters (continued)b) International Organization for Standardization (ISO) (continued)(ii) ISO/TC 108/SC4 Human Exposure to Mechanical Vibration and Shock -
H.E. von Gierke, TAG Chair (continued)

Mr. von Gierke reported on a most successful TC 108/SC4 meeting, with seven (7) U.S. delegates in attendance and seven (7) documents reaching the DIS stage of development. On the other hand, he noted that the counterpart national working group, S3/WG39, had had a meeting with almost no participation, due primarily to the fact that most activity was occurring at the international level.

Mr. von Gierke said that a way should be found to convert the ISO standards to national standards, and that this idea would be explored with ANSI. He noted that there were several options to be explored with ANSI in the matter of adopting international standards for national usage. (See also, New Business, Item 10 (a) page 14 of these Minutes.)

6. Review of Standards more than five years in existence

Section 4.4 of the ANSI Procedures for the Development and Coordination of American National Standards requires that each complete American National Standard (including its supplements and addenda) be reviewed at least every five years to determine whether it should be reaffirmed, revised or withdrawn.

Provision is made for extensions of time, except that no extension is granted beyond ten years from the date of approval by ANSI.

- a) It should be noted, with respect to ANSI S3.19-1974 (R 1979), that ASACOS decided at its meeting held on 21 May 1990, to continue this standard under S3 jurisdiction, with its S3 designation, until such time as it is revised. Once revised, it will assume an S12 designation, under the jurisdiction of Accredited Standards Committee S12, Noise.

- b) Recommendations were made previously to reaffirm the following S2 standards:

- (i) ANSI S3.13-1987
American National Standard Mechanical Coupler for Measurement of Bone Vibrators
Recommending Group: T. Frank, Chair S3/WG43

6. Review of Standards more than five years in existence (continued)

b) Recommendations were made previously to reaffirm the following S2 standards (continued)

(ii) ANSI S3.18-1979

American National Standard Guide for the Evaluation of Human Exposure to Whole-Body Vibration

Recommending Group: H.E. von Gierke, Chair S3/WG39 (S2)

These were sent to S3 ballot (LB/S3/359) on 29 January 1993. The ballot was closed on 12 March 1993, with results as given in ATTACHMENT O. Following this ballot (and inclusion of ANSI S3.26-1981 (R 1990), a ballot to withdraw this standard (ANSI S3.26-1981) American National Standard Reference Equivalent Threshold Force Levels for Audiometric Bone Vibrators, was circulated to S3 (LB/S3/366) on 24 March 1993. The ballot was closed on 5 May 1993, with results as given in ATTACHMENT P.

Accordingly, the recommendations to reaffirm these standards ANSI S3.13-1987 and S3.18-1979, and to withdraw ANSI S3.26-1981 were submitted to ANSI on 22 April 1993.

7. New International Standards Available From ANSI

- ISO 8253-2 Acoustics - Audiometric Test Methods - Part 2 - Sound Field Audiometry with pure tone and narrow-band test signals
- IEC 118-2 Amendment 1 - 1993 Hearing Aids - Part 2 - Hearing Aids with automatic gain control circuits

8. Procedural Ballots

a) Following discussion at the last meeting, it was recommended that the following four (4) standards be recommended for reaffirmation:

- ANSI S3.21-1978 (R 1986) Method for manual pure-tone threshold audiometry
- ANSI S3.34-1986 Guide for the measurement and evaluation of human exposure to vibration transmitted to the hand

8. Procedural Ballots (continued)

- ANSI S3.37-1987 Preferred earhook nozzle thread for postauricular hearing aids
- ANSI S3.4-1980 (R 1986) Procedure for the computation of loudness of noise

Accordingly, a letter ballot (LB/S3/342) was circulated to S3 on 18 February 1992. The ballot was closed on 1 April 1992 with results as given in the last Minutes (S3/344). With the results of the ballot unanimously affirmative, the respective recommendations for reaffirmation were formally forwarded to ANSI.

The reaffirmations were sent to ANSI's Public Comment on 10 July 1992 and to ANSI for formal approval following the close of the public comment period, on 2 September 1992. ANSI officially reaffirmed the above standards on 26 October 1992.

- b) According to ANSI's procedures, under which the Accredited Standards Committees operate, the Officers of the Standards Committees are to be confirmed (at the beginning of their terms), as well as Individual Experts (the latter to be confirmed annually) by the respective Standards Committees.

The Officers and Individual Experts are proposed by the ASA Committee on Standards (ASACOS), as the Secretariat for the Standards Committees, in connection with the Chairs of the respective Standards Committees.

A Letter Ballot was circulated to S3 on the proposed appointments for 1993/1994, (LB/S3/356) on 18 December 1992. The ballot was closed on 29 January 1993 with results as given in ATTACHMENT Q. The nominations were approved unanimously and the respective appointments will therefore take effect following the May 1993 meeting of ASA.

9. Other Business

- a) Project Initiation Notification System (PINS) forms requested by ANSI

The Standards Secretariat has provided ANSI, with a current list of S3 projects for use under ANSI's Project Initiation Notification System (PINS). These are expected to be tabulated in a computerized system eventually by ANSI.

- b) The following standard was officially withdrawn by ANSI on 16 October 1993, since it was replaced by ANSI S12.23-1989 Method for the Designation of Sound Power Emitted by Machinery and Equipment.

ANSI S3.17-1975 (R 1980) Method for rating the Sound Power Spectra of small Stationary Noise Sources

10. New Business

(a) Ms. Royster said that EDITORIAL COMMITTEES would be formed in S3 to convert the ISO standards into ANSI standards. Mr. Eldred said that the list of ISO and IEC standards would be looked at by each of the S Committee Chairs and Vice Chairs, to see which would be suitable candidate standards for conversion.

(b) Mr. Seiler brought up a subject related to his working group (S1/WG21 on Electromagnetic Susceptibility of Acoustical Instruments). He wanted to know whether AUDIOMETERS should be covered under the standard his working group was developing. Mr. Seiler referred to a portion of a letter sent to him by Mr. D. Stevens of Lucas Industrial Instruments on 13 April 1993 (see ATTACHMENT R).

It was decided that Ms. Royster will ask the chairs of the working group on Audiometers and on Auditory Evoked Potentials, respectively, to address this matter with Mr. Seiler's working group (S1/WG21) at an appropriate time and to report back to S3.

(c) Mr. Nedzelnistky said that some more direct and formal liaison should be developed with OIML (Organization de Metrologies Legale) since Mr. Sam Chappell of NIST had established coordinating positions in OIML (which is a treaty organization) and was interested in developing standards and making the IEC and ISO standards the basis for OIML work. This would place legal obligations on treaty members, and will be explored.

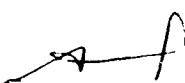
(d) Ms. Royster noted that a new work item was proposed for S3 ballot on the subject of SOUND FIELD AUDIOMETRY. (see ATTACHMENT S). This will be prepared for S3 ballot in due course.

11. Future Meetings

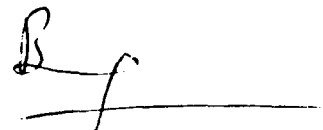
The next meeting of S3 will be held on Thursday, 7 October 1993, in Denver, Colorado, commencing at 3:00 PM.

12. Adjournment

The meeting was adjourned at 2.45 P.M.



Avril Brenig
Standards Manager





ACOUSTICAL SOCIETY OF AMERICA

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ATTACHMENT A-1
S3/368

ACCREDITED STANDARDS COMMITTEE ON BIOACOUSTICS - S3

SECRETARIAT: Acoustical Society of America

SCOPE: Standards, specifications, methods of measurement and test, and terminology in the fields of mechanical shock and physiological acoustics, including aspects of general acoustics, shock, and vibration which pertain to biological safety, tolerance and comfort.

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<u>WORKING GROUP</u>	<u>TITLE AND SCOPE</u>	<u>CHAIR</u>
(a) S3/Advisory	<u>S3 Advisory Planning Committee</u> - Be cognizant of standards needs within the scope of the Committee, and organize those needs in accordance with priority, and other relevant factors, into a coherent three year plan for Committee activity. This three year plan for the preparation of standards should include those which need updating, having regard to the international work items and standards, and the need for timely review (reaffirmations, revisions, withdrawals, etc.) of all national standards, and the priority of new standards needs. The plan of action should be developed with attention to (i) the overall Committee scope, (ii) its technological needs, (iii) the relation of national to international standardization, (iv) the rate of development of new standards, and (v) the timeliness of the preparation of revisions of standards.	<u>T. Frank</u>

<u>WORKING GROUP</u>	<u>TITLE AND SCOPE</u>	<u>CHAIR</u>
(b) S3/WG35	<u>Audiometers (counterpart to IEC/TC 29/WG10, ISO/TC 43/WG1 and ISO/TC 43/WG3)</u> - To review IEC and ISO documents concerning audiometers.	<u>R.L. Grason</u>
(c) S3/WG36	<u>Speech Intelligibility</u> - Preparation of recommended methods for the measurement of the intelligibility of speech as affected by spectral, amplitude and temporal distortions of the speech signals, and by noises that arise from or in the acoustical, electrical (if any) and ear receptor paths used for transmitting speech from the talker to the listener.	<u>L. Marshall</u>
S3/WG36 (SG-2)	<u>Subgroup 2 - Speech Audiometry</u> - Standardization of speech and audiometry procedures; speech discrimination tests for clinical and diagnostic use.	<u>J. Kruel</u>
(d) S3/WG37	<u>Coupler Calibration of Earphones (counterpart to IEC/TC 29/WG3)</u> - Coordinate ANSI projects with IEC working groups. Prepare revisions to existing earphone calibration standards, prepare new standards for circumaural earphones, study and prepare standards for simulation of the human ear for measurement purposes.	<u>B. Kruger</u>
(e) S3/WG39 (S2)	<u>Human Exposure to Mechanical Vibration and Shock (counterpart to ISO/TC 108/SC4)</u> - Standardization in the field of shock, vibration and related biodynamic environments with regard to health, safety, performance and comfort criteria and guidelines regarding the effects of occupational and non-occupational exposures on the human population (environments of primary interest are: vibration, rotational oscillations, shock and impact transmitted to the whole-body or parts thereof). Preparation of standard terminology and characterization of the biodynamic properties of humans with and without support and restraint devices by means of biodynamic models or analogues is also included as a basis for the description of the physical, behavioral and physiological effects of the mechanical environments under consideration.	<u>H.E. von Gierke</u>
(f) S3/WG43	<u>Method for Calibration of Bone Conduction Vibrator</u> - (a) U.S. standards on audiometric bone vibration calibration; (b) review of related international standards.	<u>T. Frank</u>
(g) S3/WG48	<u>Hearing Aids</u> - (a) all aspects of hearing aid measurement except couplers; (b) review of related international documents.	<u>D.A. Preves</u>

<u>WORKING GROUP</u>	<u>TITLE AND SCOPE</u>	<u>CHAIR</u>
(h) S3/WG56	<u>Criteria for Background Noise for Audiometric Testing</u> - To establish maximum tolerable background noise levels during audiometric tests (revision of S3.1-1977 Criteria for Permissible Ambient Noise During Audiometer Testing).	<u>T. Frank</u>
(i) S3/WG58	<u>Hearing Conservation Criteria (counterpart to ISO/TC 43/SC1/WG19 (ISO 1999))</u> - To determine hearing conservation criteria.	<u>D.L. Johnson/ W. Melnick Co-chairs</u>
(j) S3/WG59	<u>Measurement of Speech Levels</u> - To develop a standard method for measurement of speech and speech-to-noise ratios in technical reports and equipment specifications. The standard should provide the best measurement of speech levels and indicate the number of samples, weighting (overall vs. A-level) and total length of speech sample. In addition, approximations may be suggested to determine speech for simple sound level meter observations. The standard would not consider microphone type, placement or other specification for the physical measurement of speech, but would concentrate on assessment after the speech is in recorded form.	<u>H. Levitt</u>
(k) S3/WG60	<u>Measurement of Acoustic Impedance and Admittance of the Ear</u> - The measurement of acoustic immittance (acoustic impedance or acoustic admittance) within the human external auditory canal. The measurements are to ensure that acoustic-immittance measurements will be substantially the same for a given individual when these measurements are obtained with any instruments that meet the specifications and tolerance outlined in a standard, and when comparable test conditions prevail.	<u>D. Lilly</u>
(l) S3/WG62	<u>Impulse Noise with Respect to Hearing Hazard</u> - To develop criteria for predicting the changes in hearing due to human exposure to impulsive noise.	<u>D. Johnson</u>

<u>WORKING GROUP</u>	<u>TITLE AND SCOPE</u>	<u>CHAIR</u>
(m) S3/WG67	<u>Manikins</u> - (counterpart to IEC/TC 29/WG13) - To prepare a standard describing a device that simulates a person for acoustic measurements. Monitor and coordinate with international standards.	<u>M. Burkhard</u>
(n) S3/WG71	<u>Artificial Mouths</u> - To develop a standard specification for sound sources used as artificial mouths to measure the performance of microphones positioned close to the talker.	<u>R.L. McKinley</u>
(o) S3/WG72	<u>Measurement of Auditory Evoked Potentials</u> - To draft a standard dealing with the instrumentation and methods of calibration associated with the measurements of auditory evoked potentials.	<u>R.A. Ruth</u>
(p) S3/WG73	<u>Bioacoustical Terminology</u> - To prepare a draft standard on bioacoustical terminology to supersede ANSI S3.20-1973.	<u>W.J. Galloway</u>
(q) S3/WG75	<u>Auditory Masking</u> - To define a psychological frequency scale and auditory filter characteristics. These definitions permit calculation of detection threshold for a signal in the presence of noise. The listeners are assumed to have normal hearing and the noise to be continuous in the time and frequency domains.	<u>S. Buus</u>
(r) S3/WG76	<u>Computerized Audiometry</u> - Standardization of computer applications to audiometry, including automated psychophysical procedures.	<u>J. Franks</u>
(s) S3/WG77	<u>High Frequency Audiometry</u> - Development of standards for high frequency audiometers in the frequency range of 8,000 to 20,000 Hz. Coordination with ISO working groups with similar scopes.	<u>J. Fletcher</u>
(t) S3/WG78	<u>Thresholds</u> - To provide a liaison with ISO, IEC and other national working groups for standards dealing with auditory thresholds and procedures to measure these thresholds.	<u>W. Yost</u>

<u>WORKING GROUP</u>	<u>TITLE AND SCOPE</u>	<u>CHAIR</u>
(u) S3/WG79	<u>Calculation of the Articulation Index</u> - To consider revision of the current standard on calculation of the articulation index: ANSI S3.5-1969 (R 1986).	<u>C.V. Pavlovic</u>
(v) S3/WG80	<u>Probe-tube Measurements of Hearing Aid Performance</u> - To develop standards for the determination of the real ear electroacoustic performance of hearing aids in situ.	<u>W. Cole</u>
(w) S3/WG81	<u>Assistive Listening Devices</u> - To provide definitions for various types of assistive listening devices. To determine which assistive listening devices can be measured acoustically and to provide standard procedures for such acoustical measurement.	<u>R. Kasten</u> <u>M. Wynne,</u> Vice Chair
(x) S3/WG82	<u>Basic Vestibular Function Test Battery</u> Standardization of a basic vestibular function test battery consisting of six separate tests: spontaneous nystagmus, gaze-evoked nystagmus, saccade test, pursuit testing, positional nystagmus and caloric testing.	<u>C. Wall III</u>

S3 LIAISON WORKING GROUPS

a) S3/L-1	<u>S3 TAG Liaison to IEC/TC 87 Ultrasonics</u> - To provide liaison on documents and activities emanating from IEC/TC 87 Ultrasonics.	<u>W.Nyborg</u>
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ATTACHMENT B-1
S3/368

STATUS REPORT

FIELD: STATUS: BIOACOUSTICS

COMMITTEE: S3

DESIGNATION/ EDITION	SUBJECT OR TITLE	STATUS	ACTIVITY	METHOD	COMMENTS OR EXPECTED DATE OF SUBMISSION TO ANSI
S3.1-1991	Maximum Permissible Ambient Noise Levels for Audiometric Test Rooms (A revision of S3.1-1977 (R 1986)) (S3/WG56)	UD			
S3.2-1989	Monosyllabic Word Intelligibility, Method for Measurement (S3/WG36) (Revision of ANSI S3.2-1960)	UD		S	
S3.3-1960 (R 1990)	Electroacoustical Characteristics of Hearing Aids, Methods for Measurement (S3/WG48)	RV		S	
S3.4-1980 (R 1992)	Procedure for the Computation of Loudness of Noise	RV		S	
S3.5-1969 (R 1986)	Articulation Index, Methods for the Calculation of the (S3/WG79)	RV	1	S	
STATUS NS - NEW STD IN PROCESS RF - REAFFIRMATION IN PROC. RV - REVISION IN PROCESS WD - WITHDRAWAL IN PROCESS ES - ENVIRONMENTAL SOUND SP - SUBMITTED PINS FORM ACTIVITY NR - NEEDS REVIEW AP - ANSI APPROVED OP - OUT OF PRINT NA - NOT YET AVAIL. UD - UP TO-DATE METHOD C-ACCREDITED CANVASS O-ACCREDITED ORGANIZATION S-ACCREDITED STDS COMMITTEE X-NOT INTENDED FOR ANSI					
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ATTACHMENT B-2
S3/368

STATUS REPORT

FIELD: STATUS: BIOACOUSTICS

COMMITTEE: S3

DESIGNATION/ EDITION	SUBJECT OR TITLE	STATUS	ACTIVITY	METHOD	COMMENTS OR EXPECTED DATE OF SUBMISSION TO ANSI																																										
S3.6-1989	Specification for Audiometers (revision ANSI S3.6-1969) (S3/WG35)	UD		S																																											
S3.7-1973 (R 1986)	Coupler Calibration of Earphones, Method for (S3/WG37)	RV;ES		S																																											
S3.8-1967 (R 1976)	Hearing Aid Performance, Method of Expressing (S3/WG48)	WD		S	Withdrawn; super- seded by S3.22-1982																																										
S3.9	DESIGNATION OPEN			S																																											
S3.10	Permissible Noise Exposure for Hearing Conservation (S3/WG58)	SP	2	S																																											
S3.12	Speech Level Measurement of Bone Vibrators (S3/WG36)	SP;UD		S																																											
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ATTACHMENT B-3
S3/368

STATUS REPORT

FIELD: STATUS: BIOACOUSTICS

COMMITTEE: S3

DESIGNATION/ EDITION	SUBJECT OR TITLE	STATUS	ACTIVITY	METHOD	COMMENTS OR EXPECTED DATE OF SUBMISSION TO ANSI																																										
S3.13-1987	Human Exposure to Whole-Body Vibration, Guide for the Evaluation (S3/WG39 (S2))	UD		S																																											
S3.19-1974 (R 1990)	Method for the Measurement of Real-Ear Protection of Hearing Protectors and Physical Attenuation of Earmuffs (see also under S12/WG10--partially revised by ANSI S12.6-1984)	RV	1	S	See also under S12																																										
S3.20-1973	Psychoacoustical Terminology (S3/WG73)	RV		S																																											
S3.21-1978 (R 1992)	Manual Pure-Tone Threshold Audiometry, Method for (S3/WG35)		UD;ES	S																																											
S3.22-1987	Specification of Hearing Aid Characteristics (revision of S3.22-1982) (S3/WG48)	UD		S																																											
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STATUS REPORT

STATUS REPORT

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DESIGNATION/ EDITION	SUBJECT OR TITLE	STATUS	COMMENTS OR EXPECTED DATE		OF SUBMISSION TO ANSI																																										
			ACTIVITY	METHOD																																											
S3.25-1989	Occluded Ear Simulator (revision of ANSI S3.25-1979) (S3/WG37)	UD		S																																											
S3.26-1981 (R 1990)	Reference Equivalent Threshold Force Levels for Audiometric Bone Vibrators	UD		S																																											
DRAFT ANSI S3.28-1986	Methods for the Evaluation of the Potential Effects on Human Hearing of Sounds with Peak A-Weighted Sound Pressure Levels Above 120 Decibels and Peak C-Weighted Sound Pressure Below 140 Decibels (S3/WG62)	UD	5	S	Published for trial, comment and criticism for a period of three years																																										
S3.29-1983 (R 1990)	Evaluation of Human Exposure to Vibration in Buildings (S3/WG39 (S2))	NA																																													
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ATTACHMENT B-5
S3/368

STATUS REPORT

FIELD: STATUS: BIOACOUSTICS

COMMITTEE: S3

DESIGNATION/ EDITION	SUBJECT OR TITLE	STATUS	ACTIVITY	METHOD	COMMENTS OR EXPECTED DATE OF SUBMISSION TO ANSI
S3.31	Determining the Threshold Level for Speech, Method for (S3/WG36/Subgroup 1)	NS;SP	2	S	
S3.32-1982 (R 1990)	Mechanical Vibration and Shock Affecting Man-Vocabulary - ISO 5805-1981 (S3/WG39(S2))	UD		S	
S3.34-1986 (R 1992)	Guide for the Measurement and Evaluation of Human Exposure to Vibration Transmitted to the Hand (S3/WG39(S2))	UD		S	
STATUS		ACTIVITY		METHOD	
NS - NEW STD IN PROCESS RF - REAFFIRMATION IN PROC. RV - REVISION IN PROCESS WD - WITHDRAWAL IN PROCESS ES - ENVIRONMENTAL SOUND SP - SUBMITTED PINS FORM		NR - NEEDS REVIEW AP - ANSI APPROVED OP - OUT OF PRINT NA - NOT YET AVAIL. UD - UP-TO-DATE		4-ANSI STANDARDS ACTION 5-OBJECTIONS BEING CONSIDERED 6-ANSI CONSIDERING APPROVAL	
		0-NONE 1-FORMATIVE STAGE 2-DRAFTING STANDARD 3-VOTING ON PROPOSAL		C-ACCREDITED CANVASS O-ACCREDITED ORGANIZATION S-ACCREDITED STDS. COMMITTEE X-NOT INTENDED FOR ANSI	

ATTACHMENT B-6
S3/368

STATUS REPORT

FIELD: STATUS: BIOACOUSTICS

COMMITTEE: S3

DESIGNATION/ EDITION	SUBJECT OR TITLE	STATUS	ACTIVITY	METHOD	COMMENTS OR EXPECTED DATE OF SUBMISSION TO ANSI
S3.35-1985 (R 1990)	Method for Measurement of Performance Characteristics of Hearing Aids Under Simulated in situ Working Conditions (S3/WG48)	UD		S	
S3.36-1985 (R 1990)	Specification for a Manikin for Simulated in situ Airborne Acoustic Measurements (S3/WG67)	UD		S	
S3.37-1987 (R 1992)	Preferred Earhook Nozzle Thread for Postauricular Hearing Aids (S3/WG48)	UD		S	
S3.39-1987	Specifications for Instruments to Measure Aural Acoustic Impedance and Admittance (Aural Acoustic Immittance) (S3/WG60)	UD		S	

STATUS	ACTIVITY	METHOD
NS - NEW STD IN PROCESS RF - REAFFIRMATION IN PROC. RV - REVISION IN PROCESS WD - WITHDRAWAL IN PROCESS ES - ENVIRONMENTAL SOUND SP - SUBMITTED PINS FORM	NR - NEEDS REVIEW AP - ANSI APPROVED OP - OUT OF PRINT NA - NOT YET AVAIL. UD - UP-TO-DATE	4-ANSI STANDARDS ACTION 5-OBJECTIONS BEING CONSIDERED 6-ANSI CONSIDERING APPROVAL C-ACCREDITED CANVASS O-ACCREDITED ORGANIZATION S-ACCREDITED STDS COMMITTEE X-NOT INTENDED FOR ANSI

ATTACHMENT B-7
S3/368

STATUS REPORT

FIELD: STATUS: BIOACOUSTICS
COMMITTEE: S3

DESIGNATION/ EDITION	SUBJECT OR TITLE	STATUS	ACTIVITY	METHOD	COMMENTS OR EXPECTED DATE OF SUBMISSION TO ANSI																																										
S3.40-1989	Measurement and Evaluation of Gloves Which are Used to Reduce Exposure to Vibration Transmitted to the Hand (S3/WG39(S2))	UD		S																																											
S3-W-39	The Effects of Shock and Vibration on Man (S3/WG39(S2))	WD		S																																											
Z24-X-2	Relations of Hearing Loss to Noise Exposure, The			S																																											
Z24.18-1956 (R 1971)	Ultrasonic Therapeutic Equipment, Specification for	WD		S																																											
S3.XX	Impulsive Noise with Respect to Human Response (S3/WG62)		2	S																																											
S3.XX	Hearing Loss from Impulse/Impact Noise (S3/WG62)	ES	1	S																																											
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ATTACHMENT B-8
S3/368

STATUS REPORT

FIELD: STATUS: BIOACOUSTICS

COMMITTEE: S3

DESIGNATION/ EDITION	SUBJECT OR TITLE	STATUS	ACTIVITY	METHOD	COMMENTS OR EXPECTED DATE OF SUBMISSION TO ANSI
S3.XX	Speech Audiometry (S3/WG36/Subgroup 2)			S	
S3.XX	Communication Equipment Evaluation (formerly S3/WG36 Subgroup 3)		1	S	
S3.XX	Effects of Head and Torso on Sound Fields as Related to Dosimetry and Hearing Aids (formerly S3/WG61)		0	S	Information document prepared for publication in JASA
S3.41-1990	Audible Emergency Evacuation Signal (counterpart to ISO 8201:1987) (S3/WG63)		UD;SP	S	
S3.XX-199X	Occupational Noise Exposure (counterpart to ISO 1999:1990) (S3/WG58)		NS	1	S
NS - NEW STD IN PROCESS RF - REAFFIRMATION IN PROC. RV - REVISION IN PROCESS WD - WITHDRAWAL IN PROCESS ES - ENVIRONMENTAL SOUND SP - SUBMITTED PINS FORM NR - NEEDS REVIEW AP - ANSI APPROVED OP - OUT OF PRINT NA - NOT YET AVAIL. UD - UP-TO-DATE 0-NONE 1-FORMATIVE STAGE 2-DRAFTING STANDARD 3-VOTING ON PROPOSAL ACTIVITY 4-ANSI STANDARDS ACTION 5-OBJECTIONS BEING CONSIDERED 6-ANSI CONSIDERING APPROVAL METHOD C-ACCREDITED CANVASS O-ACCREDITED ORGANIZATION S-ACCREDITED STDS. COMMITTEE X-NOT INTENDED FOR ANSI					

ATTACHMENT B-9
S3/368

STATUS REPORT

FIELD: STATUS: BIOACOUSTICS

COMMITTEE: S3

DESIGNATION/ EDITION	SUBJECT OR TITLE	STATUS	ACTIVITY	METHOD	COMMENTS OR EXPECTED DATE OF SUBMISSION TO ANSI																																										
S3.42-1992	Testing Hearing Aids with a Broad-Band Noise Signal (S3/WG48)	SP;UD		S																																											
S3.43-1992	Standard Reference Zero for the Calibration of Pure-Tone Bone-Conduction Audiometers (S3/WG43)	SP;UD		S																																											
S3.44-199x	Determination of Occupational Noise Exposure and Estimation of Noise - Induced Hearing Impairment, Methods for the (counterpart to ISO 1999:1990) (S3/WG58)	NS;SP	3	S																																											
S3.XX	Assistive Listening Devices (S3/WG81)	SP;NS	1																																												
S3.XX	Probe-Tube Measurements of Hearing Aid Performance (S3/WG80)	NS	1																																												
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ATTACHMENT B-10 S3/368

STATUS REPORT

FIELD: STATUS: BIOACOUSTICS

COMMITTEE: S3

DESIGNATION/ EDITION	SUBJECT OR TITLE	STATUS	ACTIVITY	METHOD	COMMENTS OR EXPECTED DATE OF SUBMISSION TO ANSI
S3.XX	Basic Vestibular Function Test Battery (S3/WG82)	NS	1		

STATUS	ACTIVITY	METHOD	
NS - NEW STD IN PROCESS RF - REAFFIRMATION IN PROC. RV - REVISION IN PROCESS WD - WITHDRAWAL IN PROCESS ES - ENVIRONMENTAL SOUND SP - SUBMITTED PINS FORM	NR - NEEDS REVIEW AP - ANSI APPROVED OP - OUT OF PRINT NA - NOT YET AVAIL. UD - UP-TO-DATE	4-ANSI STANDARDS ACTION 5-OBJECTIONS BEING CONSIDERED 6-ANSI CONSIDERING APPROVAL	C-ACCREDITED CANVASS O-ACCREDITED ORGANIZATION S-ACCREDITED STDS. COMMITTEE X-NOT INTENDED FOR ANSI

COMMITTEE CORRESPONDENCE

S3/368
ATTACHMENT C-1

Tom Frank, Ph.D.
5-A Moore Building
Department of Communication Disorders
Penn State University
University Park, PA 16802
(Phone: 814/863-2006 FAX: 814/865-3759)

April 27, 1993

Avril Brenig
Standards Manager
Acoustical Society of America
335 East 45th Street
New York, NY 10017-3483

Dear Dr. Brenig,

A three-year plan concerning S3 (Bioacoustics) activities was presented to the ASACOS at the ASA 1992 Fall meeting in New Orleans, LA. The three-year plan included: (1) development of a schedule for S3 standards that needed revision/reaffirmation, (2) conversion of international standards, (3) development of new standards, and (4) new committee procedures. The following is an up-date of the three-year plan.

1. Development of a schedule for S3 standards that needed revision/reaffirmation.

The S3 Vice-Chair (T. Frank) has developed a reference book containing a: (1) Summary of S3 standards, (2) Summary of each S3 standard (listing WG Number/Name, WG Chair (address, phone, Fax), ISO/IEC standards with similar content, and comments), (3) Summary of WGs (listing chair and S3 standards of the WG), and (4) Summary of each S3 WG (listing chair, scope, S3 standards of the WG, ISO/IEC WG counterpart, and comments).

Following each S3 meeting the information in the reference book is updated. Further, the reference book is updated as information is received from ASA as well as from periodic contacts with the S3 Chair (J. Royster). Overall, the reference book has been a tremendous help in reference to organizational activities and rapid access to S3 standards or WG activities.

Attachment A shows the most recent summary of S3 standards. For the standards that need revision/reaffirmation in 1991/1992: (1) S3.7, S3.13, and S3.20 are in the final stages of revision/reaffirmation, (2) S3.14 topic has been moved to S12, and (3) S3.5, S3.22, and S3.39 are still being revised. The WG chairs of S3.5, S3.22 and S3.39 are aware that the revision/reaffirmation deadline has passed and are trying to complete revisions as soon as possible. No S3 standard needs revision/reaffirmation in 1993.

2. Conversion of international standards

The intent of this part of the plan was to incorporate/convert international standards into existing S3 standards. To some extent this has worked (eg., S3.43). The Vice-chair will continue to monitor ISO/IEC standards and provide them to WG chairs as S3 standards need revision/reaffirmation.

The Chair and Vice-chair have developed a method to be sure that ISO work efforts are assigned and monitored by a US member who will report to the appropriate WG chair.

3. Development of new standards

Through informal contacts and a recent journal article (Rochlin, G.D. Status of sound field audiometry among audiologists in the United States. J. Am. Acad. Audiol., 4:59-68, 1993), there is a need for a standard specifying methods and procedures for calibrating a sound-field including reference equivalent sound pressure level thresholds in a sound field. Consequently, action should be taken to either establish a WG in this area or a sub-group within WG 35 audiometers. Advice will be sought during the ASA Spring 1993 meeting as to how to proceed.

The Vice-chair plans to survey WG chairs as to their opinion of the need for new standards. Further, the Vice-chair plans to write a very short article that will appear in various audiology association newsletters requesting information concerning the development of new standards and improvements on existing standards.

4. New committee procedures

A procedure for establishing a time frame for WGs to revise/reaffirm an existing standard or to develop a draft standard is still being considered.

The Vice-chair has developed a data base mail-merge system to be used to inform WG chairs of the due date and the need to revise/reaffirm standards in their area. An annual letter will be sent to WG chairs starting June 1, 1993. Hopefully, this will have the effect of alerting WG chairs to get their work done on time. Further, the Vice-chair will send out an individual letter to a WG chair approximately 18 months prior to the revision/reaffirmation data of their standard starting June 1, 1993.

Sincerely,



Tom Frank, Ph.D.
Vice-chair, S3

Julia D. Royster, Ph.D.
Chair, Accredited Standards Committee S3
4706 Connell Drive
Raleigh, NC 27612

ACCREDITED STANDARDS COMMITTEE ON BIOACOUSTICS - S3
SUMMARY OF STANDARDS AS OF 04/27/93

STANDARDS THAT NEED REVISION/REAFFIRMATION IN 1991/1992:

S3.5-1969 (R 1986) METHODS FOR THE CALCULATION OF THE ARTICULATION INDEX (S3/WG79, C. Pavlovic, Chair) [NOTE: Revision in progress]

S3.7-1973 (R 1986) METHOD FOR COUPLER CALIBRATION OF EARPHONES (S3/WG37, B. Kruger, Chair) [NOTE: Revision has been completed, balloting has been done, and currently resolving a negative vote]

S3.13-1987 [Revision of ANSI S3.13-1972] (ASA 74) MECHANICAL COUPLER FOR MEASUREMENT OF BONE VIBRATORS (S3/WG43, T. Frank, Chair) [NOTE: Balloting for reaffirmation has been completed, awaiting outcome]

S3.14-1977 (R 1986) (ASA 21) RATING NOISE WITH RESPECT TO SPEECH INTERFERENCE (S3/WG59) [NOTE: Moved to S12]

S3.20-1973 (R 1986) PSYCHOACOUSTICAL TERMINOLOGY (S3/WG73, W. Galloway, Chair) [NOTE: Information in S3.20 has been incorporated into S1.1 Acoustical Terminology, once S1.1 has been approved, recommend that S3.20 be withdrawn]

S3.22-1987 [Revision of ANSI S3.22-1982] (ASA 70) SPECIFICATIONS OF HEARING AID CHARACTERISTICS (S3/WG48, D. Preves, Chair) [NOTE: Revision in progress]

S3.39-1987 (ASA 71) SPECIFICATIONS FOR INSTRUMENTS TO MEASURE AURAL ACOUSTIC IMPEDANCE AND ADMITTANCE (AURAL ACOUSTIC IMMITTANCE) (S3/WG60, D. Lilly, Chair) [NOTE: Revision in progress]

STANDARDS THAT NEED REVISION/REAFFIRMATION IN 1993:

NONE

STANDARDS THAT NEED REVISION/REAFFIRMATION IN 1994:

S3.2-1989 [Revision of S3.2-1960 (R 1982)] (ASA 85) METHOD FOR MEASURING THE INTELLIGIBILITY OF SPEECH OVER COMMUNICATION SYSTEMS (S3/WG36, L. Marshall, Chair)

S3.6-1989 [Revision of S3.6-1969] (ASA 81) SPECIFICATION FOR AUDIOMETERS (S3/WG35, R. Grason, Chair)

S3.25-1989 [Revision of ANSI S3.25-1979] (ASA 80) OCCLUDED EAR SIMULATOR (S3/WG37, B. Kruger, Chair)

S3.40-1989 (ASA 79) GUIDE FOR THE MEASUREMENT AND EVALUATION OF GLOVES WHICH ARE USED TO REDUCE EXPOSURE TO VIBRATION TRANSMITTED TO THE HAND (S3/WG39, H. von Gierke, Chair)

STANDARDS THAT NEED REVISION/REAFFIRMATION IN 1995:

S3.3-1960 (R 1982, 1990) METHODS FOR MEASUREMENT OF ELECTROACOUSTIC CHARACTERISTICS OF HEARING AIDS (S3/WG48, D. Preves, Chair) [NOTE: Will be withdraw once S3.22 is revised]

S3.19-1974 (R 1990) (ASA 1) METHOD FOR THE MEASUREMENT OF REAL-EAR PROTECTION OF HEARING PROTECTORS AND PHYSICAL ATTENUATION OF EAR MUFFS
(No S3 WG Assigned) [Should be withdrawn once S12.?? is approved]

S3.26-1981 (R 1990) (ASA 41) REFERENCE EQUIVALENT THRESHOLD FORCE LEVELS FOR AUDIOMETRIC BONE VIBRATORS (S3/WG43, T. Frank, Chair) [NOTE: Balloting for withdrawal has been completed, awaiting outcome]

S3.29-1983 (R 1990) (ASA 48) GUIDE TO THE EXPOSURE OF VIBRATION IN BUILDINGS (S3/WG39, H. von Gierke, Chair)

S3.32-1982 (R 1990) (ASA 43) MECHANICAL VIBRATION AND SHOCK AFFECTING MAN-VOCABULARY (S3/WG39, H. von Gierke, Chair)

S3.35-1985 (R 1990) (ASA 59) METHODS OF MEASUREMENT OF PERFORMANCE CHARACTERISTICS OF HEARING AIDS UNDER SIMULATED IN-SITU WORKING CONDITIONS (S3/WG48, D. Preves, Chair)

S3.36-1985 (R 1990) (ASA 58) SPECIFICATION FOR A MANIKIN FOR SIMULATED IN-SITU AIRBORNE ACOUSTIC MEASUREMENTS (S3/WG67, M. Burkhard, Chair)

S3.41-1990 (ASA 96) AUDIBLE EMERGENCY EVACUATION SIGNAL (S3/WG63, M. Whitcomb, Chair)

STANDARDS THAT NEED REVISION/REAFFIRMATION IN 1996:

S3.1-1991 [Revision of ANSI S3.1-1977 (R 1986)] (ASA 99) MAXIMUM PERMISSIBLE AMBIENT NOISE LEVELS FOR AUDIOMETRIC TEST ROOMS (S3/WG56, T. Frank, Chair)

STANDARDS THAT NEED REVISION/REAFFIRMATION IN 1997:

S3.4-1980 (R 1986, 1992) (ASA 37) PROCEDURE FOR THE COMPUTATION OF LOUDNESS OF NOISE (S3/WG51, J. Goldstein, Chair)

S3.18-1979 (R 1986, 1992) (ASA 38) GUIDE FOR THE EVALUATION OF HUMAN EXPOSURE TO WHOLE-BODY VIBRATION (S3/WG39, H. von Gierke, Chair)

S3.21-1978 (R 1986, 1992) (ASA 19) METHOD OF MANUAL PURE-TONE AUDIOMETRY (S3/WG35, R. Grason, Chair)

S3.34-1986 (R 1992) (ASA 67) GUIDE FOR THE MEASUREMENT AND EVALUATION OF HUMAN EXPOSURE TO VIBRATION TRANSMITTED TO THE HAND (S3/WG39, H. von Gierke, Chair)

S3.37-1987 (R 1992) (ASA 69) PREFERRED EARHOOK NOZZLE THREAD FOR POSTAURICULAR HEARING AIDS (S3/WG48, D. Preves, Chair)

S3.42-1992 TESTING HEARING AIDS WITH A BROAD-BAND NOISE SIGNAL (S3/WG48, D. Preves, Chair)

S3.43-1992 STANDARD REFERENCE ZERO FOR THE CALIBRATION OF PURE-TONE BONE-CONDUCTION AUDIOMETERS (S3/WG43, T. Frank, Chair)

STANDARDS IN PROGRESS:

S3.44-199x DETERMINATION OF OCCUPATIONAL NOISE EXPOSURE AND ESTIMATION OF NOISE INDUCED HEARING IMPAIRMENT (S3/WG58, D.L. Johnson and Wm Melnick, Chair)

ISO WORK EFFORTS AND S3.0 ASSIGNMENTS

ISO TC43/SC 1 REFERENCE HEARING THRESHOLD LEVELS FOR ACOUSTIC TEST SIGNALS OF SHORT DURATION. [US Member/Documents L. Wilber, S3/WG72-Measurement of Auditory Evoked Potentials, R. Ruth, Chair]

ISO TC43/SC 1 REFERENCE THRESHOLD LEVELS FOR PURE TONES IN THE FREQUENCY RANGE 8 - 16 kHz. [US Member/Documents L. Wilber, J. Fletcher, S3/WG77-High Frequency Audiometry, J. Fletcher, Chair]

ISO TC43/SC 1 ACOUSTICS-AUDIOMETRIC TEST METHODS. PART 3: SPEECH AUDIOMETRY. [US Member/Documents L. Wilber, S3/WG35-Audiometers, R. Grason, Chair]

ISO TC43/SC 1 NOISE EMISSIONS FROM SOUND SOURCES PLACED AT THE EARS. PART 1: NOISE IMMISSIONS ESPECIALLY BY OPEN HEADPHONES AND PUSH-IN EARPHONES. PART 2: NOISE IMMISSIONS ESPECIALLY BY HALF-OPEN AND CLOSED HEADPHONES EXCEPT PUSH-IN EARPHONES. [US Member/Documents R. Campbell, S3/WG37-Coupler Calibration of Earphones, B. Kruger, Chair]

ISO TC43/SC 1 ACOUSTICS-EQUAL-LOUDNESS CONTOURS FOR OTOLOGICALLY NORMAL LISTENERS. PART 1: REFERENCE THRESHOLD OF HEARING UNDER FREE-FIELD AND DIFFUSE-FIELD LISTENING CONDITIONS. [US Member/Documents L. Wilber, S3/WG78-Thresholds, W. Yost, Chair]



ACOUSTICAL SOCIETY OF AMERICA

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S3/368 ATTACHMENT D-1

S3 STANDARDS ON BIOACOUSTICS

<u>ANSI S3.1-1991</u>	Maximum Permissible Ambient Noise Levels for Audiometric Test Rooms
<u>ANSI S3.2-1989</u>	Method for Measuring the Intelligibility of Speech over Communication Systems
<u>ANSI S3.3-1960 (R 1990)</u>	Methods for Measurement of Electroacoustical Characteristics of Hearing Aids
<u>ANSI S3.4-1980 (R 1986)</u>	Procedure for the Computation of Loudness of Noise
<u>ANSI S3.5-1969 (R 1986)</u>	Methods for the Calculation of the Articulation Index
<u>ANSI S3.6-1989</u>	Specification for Audiometers
<u>ANSI S3.7-1973 (R 1986)</u>	Method for Coupler Calibration of Earphones
<u>ANSI S3.13-1987</u>	Mechanical Coupler for Measurement of Bone Vibrators
<u>ANSI S3.14-1977 (R 1986)</u>	Rating Noise with Respect to Speech Interference
<u>ANSI S3.18-1979 (R 1986)</u>	Guide for the Evaluation of Human Exposure to Whole-Body Vibration
<u>ANSI S3.19-1974 (R 1990)</u>	Method for the Measurement of Real-Ear Protection of Hearing Protectors and Physical Attenuation of Earmuffs
<u>ANSI S3.20-1973 (R 1986)</u>	Psychoacoustical Terminology
<u>ANSI S3.21-1978 (R 1986)</u>	Method for Manual Pure-Tone Threshold Audiometry
<u>ANSI S3.22-1987</u>	Specification of Hearing Aid Characteristics
<u>ANSI S3.25-1989</u>	An Occluded Ear Simulator

S3 STANDARDS ON BIOACOUSTICS (continued)

<u>ANSI S3.26-1981 (R 1990)</u>	Reference Equivalent Threshold Force Levels for Audiometric Bone Vibrators
<u>DRAFT ANSI S3.28-1986</u>	Methods for the Evaluation of the Potential Effect on Human Hearing of Sounds with Peak A-Weighted Sound Pressure Levels Above 120 Decibels and Peak C-Weighted Sound Pressure Levels Below 140 Decibels
<u>ANSI S3.29-1983 (R 1990)</u>	Guide to the Evaluation of Human Exposure to Vibration in Buildings
<u>ANSI S3.32-1982 (R 1990)</u>	Mechanical Vibration and Shock Affecting Man--Vocabulary
<u>ANSI S3.34-1986</u>	Guide for the Measurement and Evaluation of Human Exposure to Vibration Transmitted to the Hand
<u>ANSI S3.35-1985 (R 1990)</u>	Method of Measurement of Performance Characteristics of Hearing Aids under Simulated <u>in situ</u> Working Conditions
<u>ANSI S3.36-1985 (R 1990)</u>	Specification for a Manikin for Simulated <u>in situ</u> Airborne Acoustic Measurements
<u>ANSI S3.37-1987</u>	Preferred Earhook Nozzle Thread for Postauricular Hearing Aids
<u>ANSI S3.39-1987</u>	Specifications for Instruments to Measure Aural Acoustic Impedance and Admittance (Aural Acoustic Immittance)
<u>ANSI S3.40-1989</u>	Guide for the Measurement and Evaluation of Gloves which are used to reduce Exposure to Vibration Transmitted to the Hand
<u>ANSI S3.41-1990</u>	Audible Emergency Evacuation Signal
<u>ANSI S3.42-1992</u>	Testing Hearing Aids with a Broad-Band Noise Signal
<u>ANSI S3.43-1992</u>	Standard Reference Zero for the Calibration of Pure-Tone Bone-Conduction Audiometers

S3 COMMITTEE CORRESPONDENCE

**Tom Frank, Ph.D.
5-A Moore Building
Penn State University
University Park, PA 16802
Phone: 814/863-2006; FAX: 814/863-3759**

Date: April 29, 1993
To: ✓ Avril Brenig, Standards Manager, ASA, 335 E. 45th St, New York, NY
100017-3483
From: T. Frank
Subject: S3/WG43 Summary Report for S3 Meeting in Ottawa

WG43 Method for Calibration of Bone Conduction Vibrators is responsible for the following standards.

ANSI S3.13-1987, Mechanical Coupler for Measurement of Bone Vibrators.

ANSI S3.26-1981 (R 1990), Reference Equivalent Threshold Force levels for Audiometric Bone Vibrators.

ANSI S3.43-1992, Standard Reference Zero for the Calibration of Pure-Tone Bone-Conduction Audiometers.

WG43 recommended that S3.13-1987 be reaffirmed and that S3.26 be withdrawn since it was superseded by S3.43. Consequently, S3.13-1987 was reaffirmed in 1993 by ballot vote and will be due for revision/reaffirmation in 1998.

The information provided in S3.43-1992 will be incorporated into the next revision of S3.6-1989 Specifications for Audiometers. As a result, reference hearing thresholds for both air and bone conduction will be contained in the same standard. T. Frank will assist R. Grason (Chair, WG35 Audiometers) during the revision of S3.6. Once the revision of S3.6-1989 has been accepted (projected for 1994), it will be recommended that S3.43 be withdrawn.

cc: J. Royster, Chair S3, WG43 Committee Members



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S3/368
ATTACHMENT F-1

15 April 1993

TO: J.D. Royster, Chair S3

Re: Letter Ballot LB/S3.44/357 sent to the Accredited
Standards Committee S3 on 25 January 1993, and
closed on 8 March 1993

SUBJECT: Approval of proposed draft standard, ANSI S3.44-199X Determination
of Occupational Noise Exposure and Estimation of Noise Induced
Hearing Impairment, draft dated October 1992

Enclosed please find tally of the above letter ballot, showing results
as follows:

CLASSIFICATION OF MEMBERS

AFFIRMATIVE VOTES	10	P - PRODUCER	4
NEGATIVE VOTES	2	C - CONSUMER	7
ABSTENTIONS	2	G - GOVERNMENT	3
NOT RETURNED	8	GI - GENERAL INTEREST	7
	-----		-----
TOTAL	22	TOTAL	22

- 2 -

Letter Ballot S3.44/357

Continuation of results of letter ballot 3.44/357:

AFFIRMATIVE VOTES:

Atack, R.M.	U.S. Army Medical Corps.
Bovi, A.M.	Industrial Safety Equipment Association, Inc.
Burkard, R.F.	American Speech-Language-Hearing Association
Garinther, G.	U.S. Army Human Engineering Laboratory
Mayer, M.S.	AT&T
Alternate	
Naunton, R.F.	American Otological Society, Inc.
Nixon, C.	U.S. Dept. of the Air Force
Page, J.	U.S. Dept. of the Navy,
	BUREAU OF MEDICINE AND SURGERY
Royster, J.D.	Acoustical Society of America
Zagzebski, J.	American Institute of Ultrasound in Medicine

NEGATIVE VOTES:

Bohl, C.D.	American Industrial Hygiene Association
Toothman, E.H.	Fastener Industry Noise Control Research Program (FINCRP)

ABSTENTIONS:

Brown, M.	Power Tool Institute, Inc.
Hopmeier, W.F.S.	National Hearing Aid Society

NOT RETURNED:

Addington, J.H.	Compressed Air and Gas Institute
Brownson, P.J.	American College of Occupational Medicine
Burnett, E.D.	National Institute of Standards and Technology
Campell, R.	Audio Engineering Society, Inc.
Conger, C.D.	Hearing Industries Association (HIA)
Michael, L.A.	American Academy of Otolaryngology Head and Neck Surgery
Michel, G.C.	Bruel & Kjaer Instruments, Inc.
Patterson, J.H.	U.S. Army Aeromedical Res. Lab.

- 3 -

Letter Ballot S3.44/357

Continuation of results of letter ballot S3.44/357:

LATE RESPONSE:

Bovi, A.M.	Industrial Safety Equipment Association, Inc.
Hopmeier, W.F.S.	National Hearing Aid Society
Mayer, M.S.	AT&T
Nixon, C.	U.S. Dept. of the Air Force
Zagzebski, J.	American Institute of Ultrasound in Medicine

INDIVIDUAL EXPERTS:

- 1) Individual Experts stating they will participate in the review of the document:

Barry, S.J.
Benson, R.W.
Fletcher, J.L.
Wasserman, D.E.
Yost, W.A.

- 2) Individual Experts stating they will not participate in the review of the document:

NONE

- 3) Comments and/or recommendations were received from one Individual Experts, as follows:

Young, R.W. NEGATIVE COMMENTS

Avril Brenig
Standards Manager

cc: Vice Chair, Standards Committee
Chair and Vice Chair, ASACOS
Chair, Working Group



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S3/368
ATTACHMENT F-4

IMMEDIATE RETURN REQUESTED

LB/S3.44/357
25 January 1993

Return to: Letter Ballot Department
Due date: 8 March 1993

LETTER BALLOT ACCREDITED STANDARDS COMMITTEE ON BIOACOUSTICS, S3

Topic: Approval of proposed draft standard, ANSI S3.44-199X Determination of Occupational Noise Exposure and Estimation of Noise Induced Hearing Impairment, draft dated October 1992

Authorized by: J.D. Royster, Chair S3

Circulated by: A. Brenig, ASA Standards Manager

Reference Document(s):

ATTACHMENT A Proposed draft standard, ANSI S3.44-199X,
DOC/LB/S3.44/357 Determination of Occupational Noise Exposure
and Estimation of Noise Induced Hearing Impairment

ATTACHMENT B Letter from J.D. Royster, Chair S3, to A. Brenig,
dated 5 October 1992

Background Information:

Working Group S3/WG58 under co-chairmanship of D.L. Johnson and W. Melnick, assisted Accredited Standards Committee S3, Bioacoustics, in the preparation of this draft of ANSI S3.44-199X. The working was originally chaired by J. Tonndorf.

Both the Chair of S3, J.D. Royster, and the co-chairs of the preparatory working group, S3/WG58 D.L. Johnson and W. Melnick recommend approval of the draft of ANSI S3.44-199X, as a proposed American National Standard.



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S3/368
ATTACHEMNT G-1

TO: G.S.K. Wong, Chair S1

Re: Letter Ballot LB/S1.1/380 sent to the Accredited
Standards Committee S1 for vote (and to S2, S3 and S12
for review and comment) on 26 March 1993, and closed
on 5 May 1993

SUBJECT: Approval of proposed revision of ANSI S1.1-1960 (R 1976)
Acoustical Terminology, draft dated March 1993

Enclosed please find tally of the above letter ballot, showing results
as follows:

CLASSIFICATION OF MEMBERS

AFFIRMATIVE VOTES	6	P - PRODUCER	5
NEGATIVE VOTES	3	C - CONSUMER	3
ABSTENTIONS	0	G - GOVERNMENT	6
NOT RETURNED	8	GI - GENERAL INTEREST	3
	—		—
TOTAL	<u>17</u>	TOTAL	<u>17</u>

Continuation of results of letter ballot S1.1/380:

AFFIRMATIVE VOTES:

Arrington, J.	U.S. Army Primary Standards Laboratory
Augsburger, G.L. (Alt.)	National Council of Acoustical Consultants
Fung, T.	U.S. Army Communication Electronics Command
Mayer, M.S.	AT&T
Michel, G.C.	Bruel & Kjaer Instruments, Inc.
Sepmeyer, L.W.	Audio Engineering Society

NEGATIVE VOTES:

Bohl, C.D.	American Industrial Hygiene Association
Schomer, P.D.	Acoustical Society of America
Schomer, P.D.	U.S. Army Construction Engineering Research Laboratory

ABSTENTIONS:

NONE

NOT RETURNED:

Anderson, R.	Larson-Davis Laboratories
Kalb, J.	U.S. Army Human Engineering Laboratory
Linderoth, R.T.	Sonetronics, Inc.
Lotz, R.	Computer & Business Equipment Manufacturers, Assn.
McKinley, R.	U.S. Department of the Air Force (USAF)
Mozo, B.	U.S. Army Aeromedical Research Laboratory
Nedzelinsky, V.	National Institute of Standards and Technology
Wang, S.	Air-Conditioning & Refrigeration Institute

LATE RESPONSE:

NONE

Continuation of results of letter ballot S1.1/380:

INDIVIDUAL EXPERTS:

- 1) Individual Experts stating they will participate in the review of this document:

Ehrlich, S.L.
Thornton, W.R.

- 2) Individual Experts stating they will not participate in the review of the document:

Flynn, D.R.

- 3) Comments and/or recommendations were received from 3 Individual Expert(s) as follows:

Ehrlich, S.L.	Negative Comments
Flynn, D.R.	Affirmative Comments
Thornton, W.R.	Affirmative Comments

OTHER

See Attached sheets

Avril Brenig
Standards Manager

cc: Vice Chair, Standards Committee S1
Chair and Vice Chair, ASACOS
Chair, Working Group



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S3/368
ATTACHMENT G-4

IMMEDIATE RETURN REQUESTED

LB/S1.1/380
26 March 1993

Return to: Letter Ballot Department
Due date: 7 May 1993

LETTER BALLOT ACCREDITED STANDARDS COMMITTEE ON ACOUSTICS, S1

Topic: Approval of proposed revision of ANSI S1.1-1996, (R 1976)
Acoustical Terminology, draft dated March 1993

Authorized for circulation by: G.S.K. Wong, Chair S1

Circulated by: A. Brenig, ASA Standards Manager

Reference Document(s):

ATTACHMENT A Proposed revision of ANSI S1.1-1960 (R 1976)
DOC/LB/S1.1/380 Acoustical Terminology, draft dated March 1993

ATTACHMENT B Memo from W.J. Galloway to Chairs, Standards Committees S1,
S2, S3 S12, ASA Standards Director and ASA Standards
Manager, dated 5 January 1993

ATTACHMENT C Letter from G.S.K. Wong to A. Brenig, dated 12 March 1993

Background Information:

This proposed revision of ANSI S1.1-1960 Acoustical Terminology, draft dated March 1993, has been prepared by an ad hoc group, chaired by W.J. Galloway, which assisted Accredited Standards Committee S1 in its preparation.

G.S.K. Wong, Chair, Accredited Standards Committee S1, Acoustics, and the chair of the ad hoc group, W.J. Galloway, both recommend approval of the current draft as a proposed ANSI standard.

This document is being circulated to S1 for vote, and to S2, S3 and S12 for information and comment. Any changes which are submitted in response to this ballot must be accompanied by proposed textual changes given in writing. These proposed changes should be given on separate sheets of paper, not incorporated in the document itself.

MEMORANDUM 9304

Subject: Draft Revision of S1.1-1960 (R1976) Acoustical Terminology

From: W.J. Galloway

To: Chairs, Standards Committees S1, S2, S3, S12,
ASA Standards Director, ASA Standards Manager

Date: 5 January 1993

The enclosed draft for a revised S1.1-1960 is, I believe, ready for ballot. Section 13 on music is as I received it from R.W.Young. It is not precisely in the same format as the rest of the document, but it is about 98% so. I will retype it into the same format as the rest of the document in the next day or so, but the text will remain the same.

The annex containing the alphabetical index could stand some editing- I wasn't as sophisticated as I should have been in the sort process that generated it. By the time Avril is ready to send the document out (about the end of March), I should have some replacement pages for her to incorporate.

I have not prepared an information note for the ballot, since this is your prerogative. However, it might include the following statement.

"This draft proposal for S1.1-1993 is a revision of S1.1-1960 (R1976), Acoustical Terminology. It differs from the draft circulated for comment in 1990 in the following ways:

The style of the document has been converted to be in accord with the current ANSI and ASACOS editorial guidelines.

The alphabetical structure of the 1990 draft has been converted to the numbered subject structure of S1.1-1960, where every term has an individual number, keyed to numbered subject sections. An alphabetical index of individual terms is provided, along with the number associated with each term.

A substantial number of terms not included in the 1990 draft are provided, including many in the S1.1-1960 version that had been omitted. Numerous errors have also been corrected. The entire section on "Recording and reproducing" that exists in S1.1-1960 has been omitted, as it was in the 1990 draft. This material is obsolete and is being superseded by activities in S1.4 under the auspices of the Audio Engineering Society. In the 1990 draft no material was provided covering "Sonics", a section included in S1.1-1960. A new section has been incorporated in this 1993 draft entitled "Sonics and ultrasonic testing", which includes terms

originally contained in S1.1-1960 as well as a number of terms on ultrasonic testing provided by a Canadian group working on a parallel effort to produce a standard on acoustical terminology.

A number of the terms in the 1990 draft were based on their counterparts in the international standard on terminology IEC 50(801)-1984, *Acoustic and electroacoustics*. Every effort has been made in this 1993 draft to incorporate as much of the international wording as possible, including a large number of revisions of the IEC document that are now in press in Geneva. Where the international document refers to international standards, however, this 1993 draft for S1.1 incorporates current ANSI or other domestic standards instead, if they exist.

The 1990 draft received a large number of comments from its reviewers. These have been considered term by term in the preparation of the 1993 draft. Many of the reviewers comments are accounted for by using the current IEC definitions; others have been accepted wherever feasible."

NOTE TO REVIEWERS OF PROPOSED DRAFT REVISION OF S1.1-1960:

Between the time of submittal of the 5 March 1993 draft of the proposed revision of S1.1-1960 (R1976) Acoustical Terminology to the S committee chairs and the Standards Secretariat several changes of an editorial nature and one change of technical substance have occurred. In an attempt to expedite the circulation of the draft, the secretariat immediately began its duplication and preparation for ballot upon receipt of the 5 March draft. Rather than expend the considerable time and money that would be required to reproduce the entire document over again in order to incorporate the recent changes, it was agreed with the Standards Secretariat that the one technical change would be provided as an addendum, along with this note of explanation. All editorial changes will, of course, be included with revisions of the document which will undoubtedly be required to accommodate comments received from the ballot and review by the S committees.

One of the major editorial changes has been a refinement of the alphabetical index included as Annex A. Reviewers are asked to look kindly at the current draft and to realize that it deserves a great deal of refinement, much of which has already been performed, but too late to include in the copy which you are being asked to review.

The one technical change which you are asked to consider is included with this memorandum. Namely, there were a few numerical errors in Table 13.1, "Interval comparisons in different mathematical tuning systems". A replacement page is attached.

Thank you for your indulgence.

William J. Galloway

Table 13.1

Interval comparisons in different mathematical tuning systems

Name of interval	Pythagorean			Equally tempered		Just		
	Origin	Ratio	Cents	Ratio	Cents	Origin	Ratio	Cents
Unison	1:1	1.000	0.00	1.000	0	1:1	1.000	0.00
Minor second	$2^8:3^5$	1.054	90.22	1.059	100	16:15	1.067	111.73
Lesser major second	$3^2:2^3$	1.125	203.91	1.122	200	10:9	1.111	182.40
Greater major second						9:8	1.125	203.91
Minor third	$2^5:3^3$	1.185	294.13	1.189	300	6:5	1.200	315.64
Major third	$3^4:2^6$	1.266	407.82	1.260	400	5:4	1.250	386.31
Perfect fourth	$2^2:3$	1.333	498.04	1.335	500	4:3	1.333	498.04
Augmented fourth	$3^6:2^9$	1.424	611.73	1.414	600	45:32	1.406	590.22
Diminished fifth	$2^{10}:3^6$	1.405	588.27	1.414	600	64:45	1.422	609.78
Perfect fifth	3:2	1.500	701.96	1.498	700	3:2	1.500	701.96
Minor sixth	$2^7:3^4$	1.580	792.18	1.587	800	8:5	1.600	813.69
Major sixth	$3^3:2^4$	1.688	905.87	1.682	900	5:3	1.667	884.36
Minor seventh	$2^4:3^2$	1.778	996.09	1.782	1000	7:4	1.750	968.83
Harmonic minor seventh						16:9	1.778	996.09
Grave minor seventh						9:5	1.800	1017.60
Major seventh	$3^5:2^7$	1.898	1109.78	1.888	1100	15:8	1.875	1088.27
Octave	2:1	2.000	1200.00	2.000	1200	2:1	2.000	1200.00



ACOUSTICAL SOCIETY OF AMERICA

S3/368
ATTACHMENT G-9

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11 May 1993

COMMENTS RECEIVED FROM ACCREDITED STANDARDS COMMITTEE S2
in response to S2/249 circulated with the letter ballot sent
to S1 (LB/S1.1/380) on the proposed revision of ANSI S1.1-1960
Acoustical Terminology - S1 ballot circulated on 26 March with
a closing date of 7 May 1993

The comments received from Accredited Standards Committee S2, Mechanical Vibration and Shock, in response to S2/249 circulated with the letter ballot sent to S1 (LB/S1.1/380) on the proposed revision of ANSI S1.1-1960 Acoustical Terminology are enclosed herewith.

Response were received as follows:

NAME	ORGANIZATION REPRESENTED	INDIVIDUAL EXPERT
No responses were received		



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S3/368
ATTACHMENT G-10

11 May 1993

COMMENTS RECEIVED FROM ACCREDITED STANDARDS COMMITTEE S3 in response to S3/365 circulated with the letter ballot sent to S1 (LB/S1.1/380) on the proposed revision of ANSI S1.1-1960 Acoustical Terminology - S1 ballot circulated on 26 March with a closing date of 7 May 1993

The comments received from Accredited Standards Committee S3, Bioacoustics, in response to S3/365 circulated with the letter ballot sent to S1 (LB/S1.1/380) on the proposed revision of ANSI S1.1-1960 Acoustical Terminology are enclosed herewith.

Response were received as follows:

NAME	ORGANIZATION REPRESENTED	INDIVIDUAL EXPERT
Burkard, R.F.	American Speech-Language Hearing Association (ASHA)	



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S3/368
ATTACHMENT G-11

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11 May 1993

COMMENTS RECEIVED FROM ACCREDITED STANDARDS COMMITTEE S12
in response to S12/268 circulated with the letter ballot sent
to S1 (LB/S1.1/380) on the proposed revision of ANSI S1.1-1960
Acoustical Terminology - S1 ballot circulated on 26 March with
a closing date of 7 May 1993

The comments received from Accredited Standards Committee S12, Noise, in response to S12/268 circulated with the letter ballot sent to S1 (LB/S1.1/380) on the proposed revision of ANSI S1.1-1960 Acoustical Terminology are enclosed herewith.

Response were received as follows:

<u>NAME</u>	<u>ORGANIZATION REPRESENTED</u>	<u>INDIVIDUAL EXPERT</u>
Berger, E.H.	National Hearing Conservation Association (S12 Alternate)	



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S3/368
ATTACHMENT G-12

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11 May 1993

GENERAL COMMENTS RECEIVED
(OTHER THAN THOSE FROM STANDARDS
COMMITTEES S1, S2, S3 OR S12)

The general comments received as a result of circulation of the S1 ballot on the proposed revision of the Acoustical Terminology standard (ansi s1.1-1960) - circulated on 26 March with a closing date of 7 May 1993 (LB/S1.1/380) are enclosed.

General comments were received as follows:

<u>Name</u>	<u>Affiliation</u>
Van Buren, A.L.	ASACOS representative; TC on Underwater Acoustics

COMMITTEE CORRESPONDENCE

41 Byron Ave., Dorchester, ON, CANADA, N0L 1G0, Phone 519-268-3313, FAX 519-268-3256

ASA STANDARDS COMMITTEE S3/WG80

4.25.93

Ms. Julia D. Royster Ph.D
Chair S3, Bioacoustics
4706 Connell Drive
Raleigh NC 27612

Dear Julie:

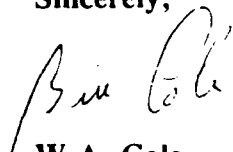
Thank you for your kind letter of January 29, welcoming me to the chairmanship of S3/WG80 and revealing the name (and gender) behind the initials J.D. As instructed, I have delayed sending my report until after our meeting in Phoenix. It follows:

This WG met April 14, 1993 in Phoenix AZ with 15 members present. A report was given on the meeting of ISO/IEC JWG1 - Real Ear Measurements and Equipment, which was attended by the chairman and two members of S3/WG80. Prospects for harmonization of work appear to be good. Specific editorial comments re the working draft were addressed and draft text for two appendices was introduced for discussion. Experimental data regarding variability of real ear measurements were presented which supported the need for procedures to assess variability and guidance toward its reduction which is the focus of one of the appendices. Members will comment on the draft text presented and additional draft text for the appendices will be prepared and circulated before the next meeting.

The members of this WG have voted to hold the next meeting either before or after the fall ASA meeting in Denver with a preference for the latter. The exact date will be worked out in consultation with the chairs of WG 37 and 48.

I am also enclosing an updated membership list as this group has grown in the last year.

Sincerely,



W.A. Cole
Chair

cc ASA Standards Secretariat FAX 212-949-0473

15 May 1993

Dr. Avril Brenig
Standards Manager,
Acoustical Society of America
335 East 45th St.
New York NY 10017-3483

Subject: Report on activities of the US TAG for IEC/TC87
(Ultrasonics).

Dear Dr. Brenig:

Since my last report on this topic (5 April 1993) there have been no meetings of the above TAG, but I have sent comments on the following three documents, which were listed in my April report.

1. 87/62D(Sec.)48/100 - Committee Draft: Ultrasonics - Physiotherapy Systems - Performance requirements and methods of measurement in the frequency range 0.5 MHz to 5 MHz.
2. 87(Central Office)26: Draft of IEC 1205 - Ultrasonics - Dental Descaler Systems - Measurement and Declaration of the Output Characteristics.
3. 87/62B(Sec.)51/195 - Committee Draft: Ultrasonics - Field safety - Part 1: Classification scheme for medical diagnostic fields.

The first and third of these reports were distributed to TAGs for both IEC 87 and 62 committees, by an agreement reached last year.

In respect to the first document, dealing with physiotherapy equipment, my primary recommendation was that the quantities to be declared should include an index of the temperature rise that would be produced in a patient during a treatment. Methods have been developed for obtaining a rough estimate of the temperature rise produced by a procedure involving diagnostic ultrasound; it is just as appropriate, if not more so, to provide analogous information to operators of physiotherapy equipment.

In respect to the second document, on dental descaler systems, I agreed to U.S. approval.

The third document is one in which the goal is to define "a safety class of diagnostic ultrasound field which can be used without concern for patient safety on thermal and cavitation grounds". In the USA, comparable definitions have been developed, after considerable time and effort, and are proving useful, though they are not ideal. The goal is a good one, but must be approached with care. The present draft proposes a peak negative pressure of

1 MPa as a safe level. More evidence is needed to support this proposal. I recommended against identifying a specific acoustic pressure level as "safe" at this time. I suspect that there will be quite a range of opinion on this matter.

Sincerely yours,



Wesley L. Nyborg
Representative of ASA to U.S. TAG for IEC 87.

cc: J. Royster, S3
G. Wong, S1
W. Wright, Physical Acoustics



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S3/368
ATTACHMENT J-1

IEC/TC 29 ELECTROACOUSTICS

U.S. Technical Advisor: V. Nedzelnitsky

Documents processed by the ASA Standards Secretariat from November 1992 through April 1993.

The following documents were received by the U.S. Member Body for VOTE AND/OR COMMENT:

Coordinator	TAG	CENTRAL OFFICE (CO) DOCUMENTS
L.W. Sepmeyer	S1/S12	<u>IEC/TC 29 (Central Office) 186</u> - Draft IEC 225: Second Edition - Electroacoustics - Octave-Band and Fractional Octave Band Filters

announced to S1 and S12 (S1/373) on 17 September 1992. The U.S. position, NEGATIVE WITH COMMENTS, was sent from USNC to IEC on 12 January 1993.

J. Tichy V. Nedzelnitsky	S1/S12	<u>IEC/TC 29 (Central Office) 185</u> - Draft IEC 1043: Electroacoustics - Instruments for the Measurement of Sound Intensity. Measurements with Pairs of Pressure Sensing Microphones.
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announced to S1 and S12 (S1/381) on 29 March 1993.

R.W. Krug	S1/S12	<u>IEC/TC 29 (Central Office) 203</u> - Draft IEC 651: Amendment 1: Sound Level Meters.
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announced to S1 and S12 on 14 May 1993.

Coordinator	TAG	CENTRAL OFFICE (CO) DOCUMENTS
R.W. Krug	S1/S12	<u>IEC/TC 29 (Central Office) 204</u> - Draft IEC 804: Amendment 2: Integrating- Averaging Sound Level Meters.

announced to S1 and S12 on 14 May 1993.

Coordinator	TAG	SECRETARIAT DOCUMENTS
V. Nedzelnitsky	S1	<u>IEC/TC 29 (Secretariat) 256</u> <u>1st CD: Measurement Microphones. Part</u> <u>3: Primary method for free-field</u> <u>calibration of Laboratory Standard</u> <u>Microphones by the reciprocity</u> <u>technique.</u>

announced to S1 (S1/383) on 23 April 1993.

R.M. Campbell	S1/S3	<u>IEC/TC 29 (Secretariat) 242</u> <u>1st CD 318 Ear simulator for the</u> <u>calibration of supra-aural earphones</u> <u>(Revision of IEC 318:1970)</u>
		<u>IEC/TC 29 (Secretariat) 243</u> <u>1st CD 303 Acoustics coupler for the</u> <u>calibration of supra-aural earphones used</u> <u>in audiometry (Revision of IEC 303:1970)</u>

announced to S1 and S3 (S1/376) on 2 November 1992. The U.S. position, NEGATIVE WITH COMMENTS, was submitted to USNC by the Technical Advisor on 6 January

R.L. Grason	S3	<u>IEC/TC 29 (Secretariat) 244</u> <u>Revision of IEC 645-3: Third CD:</u> <u>Audiometers, Part 3: Methods for the</u> <u>Specification of Auditory Test Signals of</u> <u>Short Duration for Audiometric and</u> <u>Neuro-Otological Purposes.</u>
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announced to S3 (S3/358) on 15 December 1992. The U.S. were sent to USNC from the Technical Advisor on 9 March 1993, and from USNC to IEC on 9 March 1993.

Coordinator	TAG	SECRETARIAT DOCUMENTS
D.A. Preves	S3	<u>IEC/TC 29 (Secretariat) 255</u> <u>1st CD: Dimensions of electrical connector systems for hearing aids.</u>

announced to S3 (S3/362) on 26 February 1993. The U.S. position, AFFIRMATIVE WITH COMMENTS, was submitted from USNC to IEC on 28 April 1993.

D.A. Preves	S3	<u>IEC/TC 29 (Secretariat) 252</u> <u>Second CD 118-1: Hearing Aids with induction pick-up coil input audiometry.</u>
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announced to S3 (S3/363) on 8 March 1993. The U.S. position, ABSTAIN WITH COMMENTS, was submitted to L. Nielsen from USNC on 4 May 1993.

R.L. Grason	S3	<u>IEC/TC 29 (Secretariat) 253</u> <u>IEC 654-4: Audiometers Part 4: Equipment for extended high frequency audiometry.</u>
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announced to S3 (S3/364) on 8 March 1993. The U.S. position, AFFIRMATIVE WITH COMMENTS, was submitted to USNC by the Technical Advisor on 26 April 1993, and from USNC to L. Nielsen on 4 May 1993.

OTHER ACTIONS

The U.S. Technical Advisor recommended to the USNC for IEC votes on fourteen (14) IEC Central Office Documents circulated for confirmation, revision or withdrawal, on 28 July 1992 (see following page):

LIST OF CENTRAL OFFICE (CO) DOCUMENTS, IEC
STANDARDS/PUBLICATIONS, AND RECOMMENDED USNC/IEC VOTING POSITIONS

CENTRAL OFFICE DOCUMENT	IEC STD./PUB.	REC. USNC/IEC VOTE
29 (CO) 171A	118-3 (1983)	CONFIRMATION
29 (CO) 172A	118-4 (1981)	REVISION
29 (CO) 173A	118-5 (1983)	CONFIRMATION
29 (CO) 174A	118-6 (1983)	CONFIRMATION
29 (CO) 175A	118-8 (1983)	REVISION
29 (CO) 176A	118-9 (1985)	CONFIRMATION
29 (CO) 177A	118-11 (1983)	ABSTAIN
29 (CO) 178A	126 (1973)	REVISION
29 (CO) 179	184 (1965)	WITHDRAWAL
29 (CO) 180	222 (1966)	WITHDRAWAL
29 (CO) 181A	263 (1982)	CONFIRMATION
29 (CO) 182	402 (1972)	WITHDRAWAL
29 (CO) 183	537 (1976)	WITHDRAWAL
29 (CO) 184A	711 (1981)	REVISION

New Work Items proposed for IEC/TC 29:

- IEC/TC 29 (U.K.) 105
Proposal from the British Committee for an addition to the IEC 118 series of hearing aid standards.

- IEC/TC 29 (U.K.) 106
Extension of EMC Measurements to cover the region 20 to 900 Hz for checking immunity of hearing aids.

- IEC/TC 29 (U.K.) 107
Addendum to IEC 118-0 to cover the measurement of immunity of hearing aids from electromagnetic interference.

Votes on the above proposals are due at IEC (Geneva) by 31 July 1993.



NIST

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

COMMITTEE CORRESPONDENCE

Building 233 (Sound), Room A147

May 13, 1993

**REPORT TO: ASACOS, TAG for TC 29 Electroacoustics, and other
directly and materially interested parties**

**From: Victor Nedzelnitsky, Sc.D.
Technical Advisor to USNC/IEC
for TC 29 Electroacoustics**

**SUBJECT: Activities concerning IEC/TC 29 since the previous
report of the Technical Advisor**

1. The next meetings of TC 29 and many of its WGs are to be held in Oslo, Norway, from May 24-28, 1993. Registration material for delegates to the TC 29 meeting has been distributed for return to the Secretary, USNC/IEC; see the attached copy of my memo. dated April 14, 1993, for a list of USNC/IEC Delegates/Expert Members expected to attend.

2. Updated lists of the Roster of Delegates/Expert Members (including those who are not expected to attend the above Oslo meetings) and of the full Technical Advisory Group (TAG) were sent to the USNC/IEC, with the recommended appointment of Dr. David A. Preves as our Expert Member, and Mr. George J. Frye as our Alternate Expert Member, on WG 13 and WG 14 of TC 29. See the attached copy of my memo. dated April 16, 1993. An address correction was received subsequently:

Mr. Rufus L. Grason
Lucas-GSI
1 Westchester Drive
Milford, NH 03055-3056
(603) 672-0470, FAX: (603) 672-0487

2. Published copies of IEC International Standard 118-2 1983, Amendment 1 1993-02, Hearing aids, Part 2: Hearing aids with automatic gain control circuits, has been received by USNC/IEC. This Standard can be purchased at \$26.00 per

copy, plus shipping and handling, from USNC/IEC, 11 West 42nd Street, New York, NY 10036, telephone 212-642-4936, FAX (for sales only) 212-302-1286.

3. Documents received and/or processed for ballot or comment are announced via the ASA Standards Secretariat and are listed separately in the ASACOS/S1/S3 Minutes. Consequently, a list is not repeated in this report.

cc:

D. G. Eitzen

R. C. Geiseman

C. T. Zegers

Attachments.



NIST

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

COMMITTEE CORRESPONDENCE

Building 233 (Sound), Room A147

April 14, 1993

To: Robert C. Geiseman, Manager, USNC/IEC Electronics Group 4
Charles T. Zegers, Secretary, USNC/IEC

From: Victor Nedzelnitsky, Sc.D.
Technical Advisor to USNC/IEC
for TC 29, Electroacoustics

V. Nedzelnitsky

Subjects: (1) Composition of the U.S. delegation to the meetings
of TC 29 and its WGs in Oslo, Norway, 24-28 May 1993

(2) Return of my own completed
registration/accommodation forms for these meetings
(enclosed for Secretary Zegers only)

This transmission via express carrier to you contains the completed USNC/IEC form regarding the composition of the U.S. delegation to these meetings, including the list (as of 14 April, 1993) of USNC/IEC Delegates/Expert Members that are expected to attend, and who are sending you their own completed registration/accommodation forms.

Also enclosed (for Secretary Zegers only) are my own completed registration forms for his signature and transmission via the appropriate channels.

In response to your prior request, I am completing an updated version of the full TAG (for TC 29) membership list that I expect to transmit to you via FAX very soon, perhaps tomorrow.

enc.

cc:

A. V. Brenig
D. G. Eitzen
J. D. Royster
G. S. K. Wong

List (14 April, 1993) of USNC/IEC Delegates/Expert Members of TC 29
Electroacoustics and its Working Groups Attending the May 1993 Oslo Meetings

Primary Responsibilities (by TC29 WG Numbers), D - Delegate, A - Alternate, 2A - 2nd Alternate, L - Liaison	Name, Address, Phone/Fax Numbers	Financing (To Extent Known)
D, WG 3	Mr. Richard H. Campbell Bang-Campbell Associates Three Water Street, Box 47 Woods Hole, MA 02543-0047	David Clark Co. and/or Person
A, WG 3 A, WG 13 A, WG 14 D, JWG 1	Mr. George J. Frye Frye Electronics, Inc. P.O. Box 23391 Tigard, OR 97223 (503) 620-2722	Person or Company
2A, WG 3 D, WG 10	Mr. Rufus L. Grason Grason Stadler Inc. 537 Great Road P.O. Box 5 Littleton, MA 01460 (508) 486-3514, FAX: (508) 486-8059	Person or Company
D, WG 4 A, WG 9 A, WG 12 2A, WG 17	Mr. Robert W. Krug Cirrus Research, Inc. 6818 W. State St., Suite 170 Wauwatosa, WI 53213 (414) 258-0717, FAX: (414) 258-0896	Company
2A, WG 4 2A, WG 9 3A, WG12 D, WG 17	Mr. Theodore J. Kuemmel Engineering Manager Quest Electronics 510 South Worthington Oconomowoc, WI 53066 (414) 567-9157, FAX: (414) 567-4047	Company
D, WG 4 A, WG 9 D, WG 12 D, WG 15	Mr. Alan H. Marsh DyTec Engineering, Inc. 5092 Tasman Drive Huntington Beach, CA 92649 (714) 891-1407, FAX: (714) 897-1611	Person or Company
Chief D; USNC/IEC Technical Advisor for TC 29; D, WG 5; D, WG 8; A, WG 17; Other WGs as necessary; OIML	Dr. Victor Nedzelnitsky Project Leader, Acoustic Calibrations National Institute of Standards and Technology (Formerly NBS) Sound Bldg., Rm. A147 Gaithersburg, MD 20899-0001 (301) 975-6638 FAX: (301) 417-0514 or (301) 869-3536	NIST

2A, WG 4 2A, WG 9 3A, WG12 D, WG 17	Mr. Theodore J. Kuemmel Engineering Manager Quest Electronics 510 South Worthington Oconomowoc, WI 53066 (414) 567-9157, FAX: (414) 567-4047	Company
D, WG 4 A, WG 9 D, WG 12 D, WG 15	Mr. Alan H. Marsh DyTec Engineering, Inc. 5092 Tasman Drive Huntington Beach, CA 92649 (714) 891-1407, FAX: (714) 897-1611	Person or Company
Chief D; USNC/IEC Technical Advisor for TC 29; D, WG 5; D, WG 8; A, WG 17; Other WGs as necessary; OIML	Dr. Victor Nedzelnitsky Project Leader, Acoustic Calibrations National Institute of Standards and Technology (Formerly NBS) Sound Bldg., Rm. A147 Gaithersburg, MD 20899-0001 (301) 975-6638 FAX: (301) 417-0514 or (301) 869-3536	NIST
D, WG 13 D, WG 14 A, WG 15	Dr. David A. Preves Argosy Electronics, Inc. 10300 West 70th Street Eden Prairie, MN 55344 (612) 942-9232, FAX: (612) 942-0503	HIA
D, WG 9	Mr. Ludwig W. Sepmeyer Consulting Engineer 1862 Comstock Ave. Los Angeles, CA 90025 (310) 277-3210	Person
D, WG 11	Prof. Jiri Tichy P.O. Box 30 Graduate Program in Acoustics Pennsylvania State University Applied Research Lab. University Park, PA 16802 (814) 865-6364	Person or University
A, WG 3	Mr. Allen K. Woo Plantronics 345 Encinal Street Santa Cruz, CA 95060-2132 (408) 426-5858 x351 FAX: (408) 458-0423	Company

L w/TC1 activity
rel. to TC 29
A, WG 4
2A, WG 12

Dr. Robert W. Young
Consultant in Acoustics
1696 Los Altos Road
San Diego, CA 92109
(619) 273-8732

Person

Alternates for IEC TC 29 - ISO TC 43 JWG 1:

1A JWG 1

Dr. Laura A. Wilber
422 Skokie Boulevard
Wilmette, IL 60091
(719) 632-9331

Person

2A JWG 1

Dr. Christopher Schweitzer
Family Hearing Center
D. A. Smith Lab.
Karistech, Inc.
3004 Folsom
Boulder, CO 80304
(303) 443-9786

Company

3A JWG 1

Mr. Lawrence J. Revit
Frye Electronics, Inc.
P. O. Box 23391
Tigard, OR 97223
(503) 620-2722

Company



NIST

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

COMMITTEE CORRESPONDENCE

Building 233 (Sound), Room A147

April 16, 1993

To: Robert C. Geiseman, Manager, USNC/IEC Electronics Group 4
Charles T. Zegers, Secretary, USNC/IEC

From: Victor Nedzelnitsky, Sc.D.
Technical Advisor to USNC/IEC
for TC 29, Electroacoustics

V. Nedzelnitsky

Subjects: (1) Update of full Technical Advisory Group (TAG)
membership list for TC 29

(2) Recommended appointment of Dr. David A. Preves as
our Expert Member, and Mr. George J. Frye as our
Alternate Expert Member, on WG 13 and WG 14 of TC 29

This transmission via FAX to you will be followed by a clean copy
via first class mail, which should be more legible than the FAX.

The TAG consists of the enclosed Roster (as of 15 April, 1993) of
Delegates/Expert Members, as well as the membership of the ANSI-
accredited (administered by the ASA) Standards Committees S1,
Acoustics, and S3, Bioacoustics. Enclosed are listings of the
memberships of these committees, categorized by "Organizational
Representation" and "Individual Experts." These listings have
been copied from the current (No. 2-1989) ASA Standards
Directory; changes since its publication are recorded by, and
available from, the ASA Standards Secretariat.

When possible, the Delegates/Expert Members on the Roster have
been selected from the Chairs of the Working Groups (WGs) of S1
and S3 that most nearly correspond to the principal IEC areas of
responsibility of those Delegates/Expert Members. In cases where
such Chairs are unable to travel (usually because of travel
funding problems), Delegates/Expert Members are selected who are
almost invariably active and capable members of these
corresponding S1 and S3 WGs, and who cooperate with their Chairs
in the IEC and ANSI standardization work. For your information,
listings of the Scopes, WGs, and names of Chairs of these WGs are
also enclosed. These listings are from (ASA-distributed)
documents S1/375 and S3/355, the Minutes (with attachments) of
the 3 November, 1992 meetings of S1 and S3 in New Orleans.

Occasionally it is necessary on short notice to solicit comments
or recommendations for vote on IEC documents from directly and

materially interested parties who are not necessarily in this TAG. One example is the Hearing Industries Association (HIA): with the excellent administrative support of Carole M. Rogin of HIA, comments/recommendations on documents concerning hearing aids have been obtained by HIA. HIA has also acted to support travel of Dr. David A. Preves, the Chair of S3/WG 48 Hearing Aids, to meetings of pertinent IEC WGs including TC 29/WG 13, Supplement to IEC 118-2: Hearing aids with automatic gain control circuits, and TC 29/WG 14, Addendum to IEC 118-0 (1983) and IEC 118-7 (1983). This is a noteworthy example of industry cooperation in supporting standardization efforts.

From document 29(Sec.)247, the IEC list of members in TC 29 WGs, our Expert Memberships in WG 13 and WG 14 have been vacant since the resignation of William Balmer. Please secure the appointment of Dr. Preves as our Expert Member, and of Mr. Frye as our Alternate Expert Member, on WG 13 and WG 14. Their addresses and telephone numbers are on the enclosed Roster.

enc.

cc:

- A. V. Brenig (without S1 and S3 membership and WG lists)
- D. G. Eitzen
- G. J. Frye
- D. A. Preves
- J. D. Royster (without S1 and S3 membership lists)
- G. S. K. Wong (without S1 and S3 membership lists)

Roster (15 April, 1993) of USNC/IEC Delegates/Expert Members of
TC 29 Electroacoustics and its Working Groups

Primary Responsibilities (by TC29 WG Numbers), D - Delegate, A - Alternate, 2A - 2nd Alternate, L - Liaison	Name, Address, Phone/Fax Numbers	Financing (To Extent Known)
L w/ISO TC 43 activity for JWG 1 2A, WG 13 2A, WG 14	Mr. Jeremy Agnew Starkey Laboratories 3020 North El Paso Colorado Springs, CO 80907 (719) 632-9331	Company
D, WG 15	Mr. Donald W. Boston Boeing Commercial Airplanes Data System Development Mail Code 1W03, P. O. Box 3707 Seattle, WA 98124-2207 (206) 544-1015, FAX: (206) 655-0523	Company
D, WG 3	Mr. Richard H. Campbell Bang-Campbell Associates Three Water Street, Box 47 Woods Hole, MA 02543-0047 (508) 540-1309, FAX: (508) 540-8347	David Clark Co. and/or Person
L w/ISO activity rel. to WG 11 A, WG 11	Prof. Malcolm J. Crocker Dept. of Mechanical Engineering Auburn University Auburn, AL 36849 (205) 844-3310, FAX: (205) 844-3307	
A, WG 3 A, WG 13 A, WG 14 D, JWG 1	Mr. George J. Frye Frye Electronics, Inc. P.O. Box 23391 Tigard, OR 97223 (503) 620-2722	Person or Company
2A, WG 3 D, WG 10	Mr. Rufus L. Grason Grason Stadler Inc. 537 Great Road P.O. Box 5 Littleton, MA 01460 (508) 486-3514, FAX: (508) 486-8059	Person or Company
D, WG 4 A, WG 9 A, WG 12 2A, WG 17	Mr. Robert W. Krug Cirrus Research, Inc. 6818 W. State St., Suite 170 Wauwatosa, WI 53213 (414) 258-0717, FAX: (414) 258-0896	Company

D,	WG 9	Mr. Ludwig W. Sepmeyer Consulting Engineer 1862 Comstock Ave. Los Angeles, CA 90025 (310) 277-3210	Person
D,	WG 11	Prof. Jiri Tichy P.O. Box 30 Graduate Program in Acoustics Pennsylvania State University Applied Research Lab. University Park, PA 16802 (814) 865-6364	Person or University
A,	WG 3	Mr. Allen K. Woo Plantronics 345 Encinal Street Santa Cruz, CA 95060-2132 (408) 426-5858 x351 FAX: (408) 458-0423	Company
L w/TCI activity rel. to TC 29 A, 2A,	WG 4 WG 12	Dr. Robert W. Young Consultant in Acoustics 1696 Los Altos Road San Diego, CA 92109 (619) 273-8732	Person



ACOUSTICAL SOCIETY OF AMERICA

OFFICE OF THE
STANDARDS SECRETARIAT

AVRIL BRENIG, Dr. P. H.
STANDARDS MANAGER

335 EAST 45TH STREET, NEW YORK, NEW YORK 10017-3483

Telephone (212) 661-9404
Telex 960983 AMINSTPHYS NYK
Telefax (212) 949-0473

S3/368
ATTACHMENT L-1

ISO/TC 43 ACOUSTICS and ISO/TC 43/SC1 NOISE

U.S. TAG Chair: H.E. von Gierke

U.S. TAG Vice Chair: P.D. Schomer

Documents processed by the ASA Standards Secretariat from October through April 1993

The following documents were received for VOTE AND/OR COMMENT by the U.S. Member Body:

Technical Coordinator	TAG	DRAFT INTERNATIONAL STANDARDS (DIS)
J.B. Malosh	S12	<u>ISO/DIS 5135</u> : Acoustics - Determination of sound power levels of noise from air terminal units, dampers and valves by measurement in a reverberation room.

announced to S12 (S12/246) on 15 October 1992. The U.S. position, AFFIRMATIVE WITH COMMENTS, was submitted to ANSI on 8 December 1992, and from ANSI to ISO on 15 December 1992.

L.A. Jennings	S1/S3/S12	<u>ISO/DIS 5131</u> : Acoustics - Tractors and machinery for agriculture and forestry - Measurement of noise at the operator's position - Survey method
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announced to S1, S3, and S12 (S1/379). The U.S. position, AFFIRMATIVE WITH COMMENTS, was sent to ANSI on 12 April 1993, and from ANSI to ISO on 20 April 1993.

Technical Coordinator	TAG	DRAFT INTERNATIONAL STANDARDS (DIS)
R.M. Guernsey	S12	<u>ISO/DIS 11546-1</u>: Acoustics - Determination of sound insulation performances of enclosures <u>Part 1</u>: Measurements in small enclosures under laboratory conditions <u>ISO/DIS 11546-2</u>: Acoustics - Determination of sound insulation performances of enclosures <u>Part 2</u>: Measurements of in situ sound insulation performance of enclosures (for acceptance/verification purposes)

announced to S12 (S12/253) on 15 January 1993. The U.S. position, AFFIRMATIVE WITH COMMENTS was submitted to ANSI on 7 May 1993.

B.M. Brooks	S12	<u>ISO/DIS 11690-1</u>: Acoustics - Recommended practice for the design of low-noise workplaces <u>Part 1</u>: Noise control strategies. <u>ISO/DIS 11690-2</u>: Acoustics - Recommended practice for the design of low-noise workplaces <u>Part 2</u>: Noise control measures.
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announced to S12 (S12/254) on 15 January 1993. The U.S. position, AFFIRMATIVE WITH COMMENTS, was submitted to ANSI on 5 May 1993, and from ANSI to ISO on 6 May 1993.

P.K. Baade	S12	<u>ISO/DIS 3746</u>: Acoustics - Determination of sound power levels of noise sources. Survey method employing and enveloping measurement surface over a reflecting plane.
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announced to S12 (S12/264) on 17 February 1993. The U.S. position, AFFIRMATIVE WITH COMMENTS, was submitted to ANSI on 10 May 1993.

Technical Coordinator	TAG	DRAFT INTERNATIONAL STANDARD (DIS)
R. Lotz	S12	<u>ISO/DIS 10302</u> : Acoustics - Measurement for the measurement of airborne noise emitted by small air-moving devices.
announced to S12 (<u>S12/270</u>) on 27 April 1993.		
A. Konheim	S12	<u>ISO/DIS 3095</u> : Acoustics - Measurement of noise emitted by railbound vehicles.
announced to S12 (<u>S12/267</u>) on 16 March 1993.		
R.F. Schumacher	S12	<u>ISO/DIS 6798</u> : Acoustics - Test code for the measurement of airborne noise emitted by reciprocating internal combustion engines. Engineering method and survey method.
announced to S12 (<u>S12/271</u>) on 27 April 1993.		
S.I. Roth	S12	<u>ISO/DIS 11200</u> : Acoustics - Noise emitted by machinery and equipment. Guidelines for the use of basic standards for the determination of emission sound pressure levels at the work station and at other specified positions.
announced to S12 (<u>S12/272</u>) on 30 April 1993.		
S.I. Roth	S12	<u>ISO/DIS 11201</u> : Acoustics - Noise emitted by machinery and equipment. Measurement of emission sound pressure levels at the work station and at other specified positions. Engineering method in an essentially free field over a reflecting plane.

announced to S12 (S12/273) on 30 April 1993.

Technical Coordinator	TAG	DRAFT INTERNATIONAL STANDARDS (DIS)
S.I. Roth	S12	<u>ISO/DIS 10203</u> : Acoustics - Noise emitted by machinery and equipment. Determination of emission sound pressure levels at the work station and at other specified positions.

announced to S12 (S12/275) on 30 April 1993.

S.I. Roth	S12	<u>ISO/DIS 11202</u> : Acoustics - Noise emitted by machinery and equipment. Measurement of emission sound pressure levels at the work station and at other specified positions. Survey method in situ.
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announced to S12 (S12/274) on 30 April 1993.

S.I. Roth	S12	<u>ISO/DIS 11204</u> : Acoustics - Noise emitted by machinery and equipment. Measurement of emission sound pressure levels at the work station and at other specified positions. Method requiring environmental corrections.
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announced to S12 (S12/276) on 30 April 1993.

S.I. Roth	S12	<u>ISO/DIS 12001</u> : Acoustics - Noise emitted by machinery and equipment. Rules for the drafting and presentation of a noise test code.
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announced to S12 (S12/277) on 30 April 1993.

Technical Coordinator	TAG	DRAFT INTERNATIONAL STANDARDS (DIS)
R.M. Guernsey	S12	<u>ISO/DIS 11691</u> : Acoustics - Measurements of insertion loss of ducted silencers without flow. Laboratory survey method.

announced to S12 (S12/266) on 16 March 1993.

Technical Coordinator	TAG	COMMITTEE DRAFTS (CD)
M.J. Crocker	S12	<u>ISO/CD 9614-2</u> : Acoustics - Determination of sound power levels of noise sources using sound intensity. <u>Part 2</u> : Measurement by scanning.

announced to S12 (S12/255) on 30 December 1992. The U.S. position, NEGATIVE WITH COMMENTS, was submitted to ANSI on 9 February 1993, and from ANSI to ISO on 11 February 1993.

P.D. Schomer	S12	<u>ISO/CD 11820</u> : Acoustics - Testing of silencers in situ.
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announced to S12 (S12/257) on 30 December 1992. The U.S. position, AFFIRMATIVE WITH COMMENTS, was submitted to ANSI on 9 February 1993, and from ANSI to ISO on 11 February 1993.

P.D. Schomer	S12	<u>SECOND ISO/CD 10843</u> : Acoustics - Methods for the measurement of single bursts of noise.
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announced to S12 (S12/260) on 22 January 1993. The U.S. position, AFFIRMATIVE WITHOUT COMMENTS, was submitted to ANSI on 24 February 1993, and from ANSI to ISO on 17 March 1993.

Technical Coordinator	TAG	COMMITTEE DRAFTS (CD)
S.I. Roth	S12	<u>SECOND ISO/CD 11821: Acoustics - Measurement of the in situ sound attenuation of a removable screen.</u>

announced to S12 (S12/261) on 22 January 1993. The U.S. position, NEGATIVE WITH COMMENTS, was submitted to ANSI on 1 March 1993, and from ANSI to ISO on 5 March 1993.

B.M. Brooks	S12	<u>FIRST ISO/CD 11690-3: Recommended practice for the design of low-noise workplaces. Part 3: Sound propagation and noise prediction in workshops.</u>
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announced to S12 (S12/262) on 22 January 1993. The U.S. position, AFFIRMATIVE WITH COMMENTS, was submitted to ANSI on 2 March 1993, and from ANSI to ISO on 5 March 1993.

P.D. Schomer	S12	<u>SECOND ISO/CD 11688-1: Acoustics - Recommended practice for the design of low-noise machinery and equipment. Part 1: Planning.</u>
		<u>SECOND ISO/CD 11688-2: Acoustics - Recommended practice for the design of low-noise machinery and equipment. Part 2: Noise generation principles.</u>

announced to S12 (S12/263) on 22 January 1993. The U.S. position, AFFIRMATIVE WITH COMMENTS, was submitted to ANSI on 2 March 1993, and from ANSI to ISO on 5 March 1993.

L.A. Wilber	S3	<u>SECOND ISO/CD 226-1: Acoustics - Equal Loudness level contour for otologically normal listeners. Part 1: Reference threshold of hearing under free-field and diffuse-field listening conditions.</u>
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announced to S3 (S3/361) on 26 February 1993. The U.S. position, AFFIRMATIVE WITH COMMENTS, was submitted to ANSI on 8 March 1993, and from ANSI to ISO on 21 April 1993.

DOCUMENTS CIRCULATED AD-HOC

DOCUMENT	TITLE	COORDINATOR(S)	COMMITTEE
<u>ISO/CD 10847</u>	Acoustics - Determination of insertion loss of outdoor noise barriers of all types	W. Bowlby G. Fleming	S12

sent to G. Fleming on an ad-hoc basis (S12 Ad-Hoc 1) on 8 February 1993. The U.S. position, ABSTENTION WITH COMMENTS, was submitted to ANSI on 6 April 1993, and from ANSI to ISO on 19 April 1993.

OTHER ACTIONS:

ISO/TC 43/SC1 Noise-Representation from the United States.

(1) ISO/TC 43/WG5 - Hearing Conservation Programs

U.S. Convener: L.H. Royster
North Carolina State University
Department of Mechanical and Aerospace Engineering
P.O. Box 7910
Raleigh, North Carolina 27695-7910
Tel: (919) 782-1624
Fax: (919) 781-2396

U.S. Member: J.D. Royster
P.O. Box 30698
Raleigh, North Carolina 27622-0698
Tel: (919) 782-1624

(2) ISO/TC 43/SC1/WG36 - Methods for the Determination of acoustical performance of noise attenuation devices:

U.S. Member(s): D.B. Nelson
Sandia Laboratory Division 8413
Livermore, California 94550
Direct Tel: (415) 455-2091
General Tel: (415) 455-7011 ext. 2091

R.M. Guernsey
Director
R.M. Guernsey and Associates
P.O. Box 1517
20 Northbridge Place
Morristown, New Jersey 07960-1517
Tel: (201) 267-7037

Douglas D. Reynolds, Alternate
3939 Briar Crest Court
Las Vegas, Nevada 89120
Tel: (702) 458-1681

OTHER ACTIONS
(continued)

(3) ISO/TC 43/SC1/WG41 - Sirens

U.S. Member: Richard Morrow
Whelan Engineering
Route 145
Winthrop Road
Chester, Connecticut 06412
Tel: (203) 526-9504
Fax: (203) 526-4078

Alternate: P.D. Graham
Manager of Research & Development
Signal Division Federal Signal Corporation
2615 Federal Signal Drive
University Park, Illinois 60466
Tel: (708) 534-4739

March 29, 1993

standard\ansi_93.rpt

The following is the reports by Paul Schomer for S12 WG1, WG15, WG32 and TC43 and SC1.

S12 WG1:

Efforts have continued on methods to streamline the functioning of the S12 Committee. In S12 we face three formidable tasks. First, we face the huge challenge of representing US interests and ANSI in ISO. Overall, there are over 50 documents under some stage of development within ISO TC 43/SC 1 which fall under the purview of the S12 committee. Second, we have the continuing need to identify priorities for new work and to critically examine existing Standards as they come due for review. Finally we must increase our efforts to coordinate ANSI, ISO, and other documents and better insure that conflicting requirements and definitions do not reach the public.

In an attempt to better perform these three tasks, we are organizing our S12 effort into 7 major technical thrust areas. Each area will have an area leader or, in a few cases, two co-leaders. It will be the task of these technical area leaders to:

1. Recommend new work efforts and documents requiring updating in their area.
2. Coordinate among the different documents in the technical area including ANSI, ISO and other Standards documents, identify conflicts, and develop plans and work to eliminate any conflicts.
3. Coordinate and streamline US input to ISO documents by maintaining cognizance of ongoing work efforts. Develop a core group of individuals who will be able and willing to coordinate and provide meaningful input to US review. Assist the S-12 Chair with the identification of US delegates to ISO working groups and meetings.

Note: The technical area leaders are not expected to do all the coordination of the US review. Rather, it is expected that they will help identify and establish a group of people who will comment on documents in their area, and a smaller group who will assist with the coordination of documents.

Our division into technical areas and leaders is:

	S12 WGs	ISO SC 1 WGs	Technical Area	Leader(s)
A	23, 21,3 30, 33 L1, L2	13, 23* 25 28, 22	sound power, rating, labelling	J. Malosh
B	10 11 12, 19	17 19 TC 43/WG5	hearing conservation	Berger
C	9, 15 22, 27 31, 32	24 26 30	environmental (propagation, assessment)	Sutherland
D	7 20 8	23* 34 35	work-place design noise at the operator low-noise machinery	Brooks Roth
E	6 L3	27 29 32, 33	vehicle noise	Konheim Schumacher
F	18 L5	31 36 new HVAC	noise attenuaters building acoustics	Guernsey
G	1 2 L4, L6	37 new	construction aircraft other	Chair, S12 vice-Chair, S12

- * Split responsibility; sound power to Area A, sound pressure at the operator or bystander to Area D.

TC 43 and TC 43/SC1

We are well prepared for the upcoming meeting in Oslo (31 May to 4 June); we have the largest U.S. delegation in recent memory. We have processed or are processing about 25 ISO documents in the last 6 months - an almost unbelievable rate. The new subgroups to S12 are beginning to help in the process.

More help is still needed - especially in the area of work-place noise and quiet factories. Steve Roth and Bennett Brooks are doing a great job with documents (they, and especially Steve) have taken about 1/2 of the ISO load; but I am sure they would appreciate additional help.

In all of the areas, the more comments we get on ISO documents, the better we can make our U.S. input.

We are always looking for additional people who can actively participate in working groups and travel frequently to Europe.

**P.D. Schomer
Vice Chair
U.S. TAG for ISO/TC 43 and
ISO/TC 43/SC1**



ACOUSTICAL SOCIETY OF AMERICA

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S3/368
ATTACHMENT N-1

ISO/TC 108 MECHANICAL VIBRATION AND SHOCK
(and SUBCOMMITTEES SC1, SC2, SC3, and SC4)
(U.S. Technical Advisor, D. Muster for TC 108)

Documents processed by the ASA Standards Secretariat from October 1992 through April 1993:

The following documents were received for VOTE AND COMMENT by the U.S. Member Body:

Technical Coordinator	TAG	DRAFT INTERNATIONAL STANDARD(S) (DIS)
D.G. Stadelbauer	S2	<u>ISO/DIS 11342</u> : Mechanical Vibration - Methods and criteria for the mechanical balancing of flexible rotors.

announced to S2 (S2/244) on 15 September 1992. The U.S. position, **AFFIRMATIVE WITH COMMENTS**, was submitted to ANSI on 9 December 1992, and from ANSI to ISO on 10 December 1992.

P.H. Maedel	S2	<u>ISO/DIS 10816-1</u> : Mechanical Vibration - Evaluation of machine vibration by measurements on non-rotating parts. <u>Part 1</u> : General Guidelines
-------------	----	---

will be announced to S2 (S2/) on 31 May 1993.

Technical Coordinator	TAG	COMMITTEE DRAFTS (CD)
H.E. von Gierke	S3	<u>Fourth Committee Draft ISO/CD 2631</u> : Guide to the evaluation of human exposure to whole-body vibration.

announced to S3 (TAG for ISO/TC 108/SC4) (S3/360) on 21 January 1993. The U.S. vote, **AFFIRMATIVE WITH COMMENTS**, was submitted to ANSI on 2 March 1993.

OTHER ACTIONS

1. **Scope of ISO/TC 108 and proposed scope change for
Accredited Standards Committee S2**

See under ISO/TC 108 activities, on page of the Minutes (S2/251).

2. **New Work Item Proposals (NWIPs) for ISO/TC 108**

Ten (10) new work item proposals (NWIPs), ISO/TC 108 N 605-N 614, were circulated by the Secretariat of ISO/TC 108 to P and O Members on 17 August 1992. The ballot closed on 17 November 1992 and the work items were summarized in TC 108 N 615, circulated to S2 for vote (and detailed in the S2/247 Minutes).

3. **Review of various ISO/TC 108 standards**

The following list of standards was received from ISO for review by ISO/TC 108, ISO/TC 108/SC1, ISO/TC 108/SC2, ISO/TC 108/SC3, and ISO/TC 108/SC4:

- **ISO 2017: 1982** Vibration and shock - Isolators - Procedure for specifying characteristics
 - **ISO 5344: 1980** Electrodynamic test equipment for generating vibration - Methods of describing equipment characteristics
 - **ISO 5406: 1980** The mechanical balancing of flexible rotors
 - **ISO 5983: 1981** Vibration and shock - Mechanical driving point impedance of the human body
 - **ISO 6070: 1981** Auxiliary tables for vibration generators - Methods of describing equipment characteristics
 - **ISO/5347-0: 1987** Methods for the calibration of vibration and shock pick-ups
Part 0: Basic concepts
 - **ISO 5348: 1987** Mechanical vibration and shock - Mechanical mounting of accelerometers
 - **ISO 7962: 1987** Mechanical vibration and shock - Mechanical transmissibility of the human body in the z direction
-

At the ISO/TC 108 meeting held in London, U.K. (22 March to 2 April 1993), it was decided to confirm the following ISO Standards:

- ISO 8042: 1988 Shock and Vibration Measurements - characteristics to be specified for seismic pick-ups
- ISO 6070: 1981 Auxiliary tables for vibration generators. Methods of describing equipment characteristics.
- ISO 2954: 1975 Mechanical vibration of rotating and reciprocating machinery. Requirements for instruments for measuring vibration.
- ISO 2372: 1974 Mechanical vibration of machines with operating speeds from 10 to 200 rev/s. Basis for specifying evaluation standards Amendment 1-1983.



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S3/368
ATTACHMENT O-1

14 April 1993

TO: J.D. Royster, Chair S3

Re: Letter Ballot LB/S3/359 sent to the Accredited
Standards Committee S3 on 29 January 1993,
and closed on 12 March 1993

SUBJECT: Approval of reaffirmation of three (3) Standards, given in
ATTACHMENT A

Enclosed please find tally of the above letter ballot, showing results
as follows:

CLASSIFICATION OF MEMBERS

AFFIRMATIVE VOTES	11	P - PRODUCER	5
NEGATIVE VOTES	0	C - CONSUMER	9
ABSTENTIONS	3	G - GOVERNMENT	3
NOT RETURNED	8	GI - GENERAL INTEREST	5
	----		----
TOTAL	22	TOTAL	22

NOTE: A NEGATIVE RESPONSE WAS RECEIVED FROM T. FRANK (ASA ALTERNATE)
ON ONE STANDARD ONLY, ANSI S3.26-1981. HIS COMMENTS ARE
ATTACHED. A BALLOT TO WITHDRAW ANSI S3.26-1981 WAS THEREFORE
SENT TO S3 ON 24 MARCH 1993 (LB/S3/366). THIS BALLOT WILL CLOSE
ON 7 MAY 1993.

COPIES OF ALL COMMENTS ARE ATTACHED

- 2 -

Letter Ballot S3/359

Continuation of results of letter ballot S3/359:

AFFIRMATIVE VOTES:

Atack, R.M.	U.S. Army Medical Corps.
Bennett, J.L.	Power Tool Institute, Inc.
Bohl, C.D.	American Industrial Hygiene Association
Burkard, R.F.	American Speech-Language-Hearing Association
Garinther, G.	U.S. Army Human Engineering Laboratory
Mayer, M.S.	AT&T
Michel, G.C.	Bruel & Kjaer Instruments, Inc.
Naunton, R.F.	American Otological Society, Inc.
Nixon, C.	U.S. Dept. of the Air Force
Royster, J.D.	Acoustical Society of America
Toothman, E.H.	Fastener Industry Noise Control Research Program (FINCRP)

NEGATIVE VOTES:

NONE

ABSTENTIONS:

Addington, J.H.	Compressed Air and Gas Institute
Bovi, A.M.	Industrial Safety Equipment Association, Inc.
Campell, R.	Audio Engineering Society, Inc.

- 3 - Letter Ballot S3/359

Continuation of results of letter ballot S3/359:

NOT RETURNED:

Brownson, P.J.	American College of Occupational Medicine
Burnett, E.D.	National Institute of Standards and Technology
Conger, C.D.	Hearing Industries Association (HIA)
Hopmeier, W.F.S.	National Hearing Aid Society
Michael, L.A.	American Academy of Otolaryngology Head and Neck Surgery
Page, J.	U.S. Dept. of the Navy, BUREAU OF MEDICINE AND SURGERY
Patterson, J.H.	U.S. Army Aeromedical Res. Lab.
Zagzebski, J.	American Institute of Ultrasound in Medicine

LATE RESPONSE:

NONE

Avril Brenig
Standards Manager

cc: Vice Chair, Standards Committee
Chair and Vice Chair, ASACOS
Chair, Working Group



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S3/368
ATTACHMENT O-4

IMMEDIATE RETURN REQUESTED

LB/S3/359
29 January 1993

Return to: Letter Ballot Department
Due date: 12 March 1993

ADMINISTRATIVE LETTER BALLOT ACCREDITED STANDARDS COMMITTEE ON BIOACOUSTICS, S3

Topic: Approval of reaffirmation of three (3) S3 Standards, given in ATTACHMENT A

Approved by: J.D. Royster, Chair S3

Distributed by: A. Brenig, ASA Standards Manager

Reference Document(s):

ATTACHMENT A List of three (3) S3 standards proposed for reaffirmation by S3.

Background Information:

Section 4.4 of the ANSI Procedure for Development and Coordination of American National Standards requires that each complete American National Standard (including its supplements and addenda) be reviewed at least every five years to determine whether it should be reaffirmed, revised or withdrawn. Provision is made for extensions of time, except that no extension is granted beyond ten (10) years from the date of approval by ANSI.

The Chair of the S3 Committee, J.D. Royster, recommends that the three (3) standards listed in ATTACHMENT A be reaffirmed.

LB/S3/359
ATTACHMENT A
29 January 1993

The three (3) standards listed below are proposed for reaffirmation by S3:

- 1) ○ ANSI S3.13-1987 Mechanical Coupler for Measurement of Bone Vibrators.
- 2) ○ ANSI S3.18-1979 Guide for the Evaluation of Human Exposure to Whole-Body Vibration.
- 3) ○ ANSI S3.26-1981 Reference Equivalent Threshold Force Levels for Audiometric Bone Vibrators.



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S3/368
ATTACHEMNT P-1

10 May 1993

TO: J.D. Royster, Chair S3

Re: Letter Ballot LB/S3/366 sent to the Accredited
Standards Committee S3 on 24 March 1993, and closed
on 5 May 1993

SUBJECT: Approval of the withdrawal of one S3 Standard, ANSI S3.26-1981
Reference Equivalent Threshold Force Levels for Audiometric
Bone Vibrators

Enclosed please find tally of the above letter ballot, showing results
as follows:

CLASSIFICATION OF MEMBERS

AFFIRMATIVE VOTES	14	P - PRODUCER	4
NEGATIVE VOTES	0	C - CONSUMER	7
ABSTENTIONS	4	G - GOVERNMENT	4
NOT RETURNED	4	GI - GENERAL INTEREST	7
	-----		-----
TOTAL	22	TOTAL	22

- 2 -

Letter Ballot S3/366

Continuation of results of letter ballot S3/366:

AFFIRMATIVE VOTES:

Atack, R.M.	U.S. Army Medical Corps.
Brownson, P.J.	American College of Occupational Medicine
Burkard, R.F.	American Speech-Language-Hearing Association
Frank, T.	Acoustical Society of America
Garinther, G.	U.S. Army Human Engineering Laboratory
Hopmeier, W.F.S.	National Hearing Aid Society
Mayer, M.S.	AT&T
Michael, L.A.	American Academy of Otolaryngology Head and Neck Surgery
Michel, G.C.	Bruel & Kjaer Instruments, Inc.
Naunton, R.F.	American Otological Society, Inc.
Nixon, C.	U.S. Dept. of the Air Force
Page, J.	U.S. Dept. of the Navy, BUREAU OF MEDICINE AND SURGERY
Patterson, J.H.	U.S. Army Aeromedical Res. Lab.
Toothman, E.H.	Fastener Industry Noise Control Research Program (FINCRP)

NEGATIVE VOTES:

NONE

ABSTENTIONS:

Bovi, A.M.	Industrial Safety Equipment Association, Inc.
Brown, M. (Alternate)	Power Tool Institute, Inc.
Campbell, R.	Audio Engineering Society, Inc.
Conger, C.D.	Hearing Industries Association (HIA)

- 3 - Letter Ballot S3/366

Continuation of results of letter ballot S3/366:

NOT RETURNED:

Addington, J.H.	Compressed Air and Gas Institute
Bohl, C.D.	American Industrial Hygiene Association
Burnett, E.D.	National Institute of Standards and Technology
Zagzebski, J.	American Institute of Ultrasound in Medicine

LATE RESPONSE:

NONE

Avril Brenig
Standards Manager

cc: Vice Chair, Standards Committee
Chair and Vice Chair, ASACOS



ACOUSTICAL SOCIETY OF AMERICA

S3/368
ATTACHMENT P-4

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APPROVAL OF: the withdrawal of one S3 Standards,
ANSI S3.26-1981 Reference Equivalent Threshold
Force for Audiometric Bone Vibrators

LETTER BALLOT NO: LB/S3/366
DISTRIBUTION DATE: 3/24/93
FOLLOW-UP DATE: 4/24/93
DUE DATE: 5/05/93
CLOSED: 5/05/93
VOTING MEMBERS: S3

SENT TO STANDARDS COMMITTEE: S3

NAME	GROUP REPRESENTED	DATE	CC*	YES	NO	ABS- TAIN	NOT RET'D	COMM ENTS
Addington, J.H.	Compressed Air and Gas Institute		P				X	
Atack, R.M.	U.S. Army Medical Corps.	4/05/93	G	X				
Bohl, C.D.	American Industrial Hygiene Association		C				X	
Bovi, A.M.	Industrial Safety Equipment Association, Inc.	5/03/93	P			X		
Brown, M.	Power Tool Institute, Inc. (Alt. for Bennett)	4/15/93	GI			X		
Brownson, P.J.	American College of Occupational Medicine	4/02/93	GI	X				
Burkard, R.F.	American Speech-Language- Hearing Association (ASHA)	4/02/93	C	X				X
Burnett, E.D.	National Institute of Standards and Technology		GI				X	
Campell, R.	Audio Engineering Society, Inc.	3/29/93	C			X		
Frank, T.	Acoustical Society of America (Alt. for Royster)	4/06/93	GI	X				
Garinther, G.	U.S. Army Human Engineering Lab.	4/13/93	G	X				
Hopmeier, W.F.S.	National Hearing Aid Society	4/06/93	C	X				
Mayer, M.S.	AT&T (Alt. for Sachs)	4/06/93	GI	X				
Michael, L.A.	American Academy of Otolaryngology H&N Surgery (Alternate)	4/06/93	C	X				
Michel, G.C.	Bruel & Kjaer Instruments, Inc.	4/02/93	P	X				

*CC-Classification

NAME	GROUP REPRESENTED	DATE	CC*	YES	NO	ABS- TAIN	NOT RET'D	COMM ENTS
Naunton, R.F.	American Otological Society, Inc.	4/05/93	GI	X				
Nixon, C.	U.S. Department of the Air Force	4/12/93	G	X				
Page, J.	U.S. Department of Navy, BUREAU OF MEDICINE AND SURGERY	5/03/93	G	X				
Patterson, J.H.	U.S. Army Aeromedical Research Laboratory	5/03/93	C	X				
Rogin, C	Hearing Industries Association (HIA) (Alt. for Conger)	3/31/93	P			X		
Toothman, E.H.	Fastener Industry Noise Control Research Program (FINCRP)	4/02/93	C	X				
Zagzebski, J.	American Institute of Ultrasound in Medicine		GI				X	

FINAL RESULTS:

14	YES
0	NO
4	ABSTAIN
4	NOT RETURNED
22	TOTAL

CLASSIFICATIONS:

P - PRODUCER	4
C - CONSUMER	7
G - GOVERNMENT	4
GI - GENERAL INTEREST	7



ACOUSTICAL SOCIETY OF AMERICA

S3/368
ATTACHMENT P-6

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IMMEDIATE RETURN REQUESTED

LB/S3/366
24 March 1993

Return to: Letter Ballot Department
Due date: 5 May 1993

ADMINISTRATIVE LETTER BALLOT ACCREDITED STANDARDS COMMITTEE ON BIOACOUSTICS, S3

Topic: Approval of the withdrawal of one S3 Standard, ANSI S3.26-1981 Reference Equivalent Threshold Force Levels for Audiometric Bone Vibrators

Approved by: J.D. Royster, Chair S3

Distributed by: A. Brenig, ASA Standards Manager

Reference Document(s):

ATTACHMENT A Memorandum from T. Frank, Vice Chair S3, dated 30 October 1992

Background Information:

Section 4.4 of the ANSI Procedure for Development and Coordination of American National Standards requires that each complete American National Standard (including its supplements and addenda) be reviewed at least every five years to determine whether it should be reaffirmed, revised or withdrawn. Provision is made for extensions of time, except that no extension is granted beyond ten (10) years from the date of approval by ANSI.

The Chair of the S3 Committee, J.D. Royster, recommends that ANSI S3.26-1981 Reference Equivalent Threshold Force Levels for Audiometric Bone Vibrators be WITHDRAWN because it has been superseded by ANSI S3.43-1992 Standard Reference Zero for the Calibration of Pure-Tone-Bone Conduction Audiometer. Please note that this standard was recommended for reaffirmation via letter ballot LB/S3/359 dated 29 January 1993. This letter ballot LB/S3/366 recommending the withdrawal of ANSI S3.26-1981, as per the recommendations given in ATTACHMENT A, supersedes the earlier ballot dated 29 January 1993.

COMMITTEE CORRESPONDENCE

Tom Frank, Ph.D.
110 Moore Building
Penn State University
University Park, PA 16802

Date: October 30, 1992
To: J.D. Royster, Ph.D., Chair, Committee S3-Bioacoustics
From: T. Frank, Ph.D. *T. Frank*
Subject: S3/WG43 Activities, Recommendations for ANSI S3.13 and S3.26-1981

Sometime ago Don Dirks requested that he be replaced as chair of WG43-Method for Calibration of Bone Conduction. In turn, you requested that I assume the chair of the WG/43 and I accepted. Since then, I sent a letter (dated 9/21/92; your received a copy) to the members of WG/43 (E. Corliss, D. Dirks, S. Lybarger, W. Olsen, L. Wilber, & S. Gilman). The intent of the letter was to: (a) advise committee members that Don had resigned and that I replaced him as chair, (b) to obtain a ballot vote concerning reaffirmation of ANSI S3.13 and withdrawal of S3.26 (recall, this was recommended by D. Dirks), and (c) to determine if committee members would still be interested serving on WG/43.

The following recommendations are made as a result of the ballot vote of WG43 members.

1. ANSI S3.13-1987 [Revision of ANSI S3.13-1972] should be reaffirmed. The vote was 5 yes, 0 no, 1 non-vote (Gilman did not respond).
2. ANSI S3.26-1981 (R-1990) should be withdrawn. The vote was 5 yes, 0 no, 1 non-vote (Gilman did not respond).

I was very happy to learn that E. Corliss, D. Dirks, S. Lybarger, W. Olsen, and L. Wilber would like to continue as members of WG/43. As such, they should be listed as current members of WG/43. Since I did not receive a response from S. Gilman, I will make every effort to contact him to see if he wishes to continue on WG/43 and let you know his decision.

As a result of WG/43's efforts, ANSI S3.43 (description of reference levels for bone conduction) is now standard. However, as pointed out by L. Wilber and D. Dirks, the information provided in S3.43 should really be contained in S3.6 so that the specification of reference hearing levels for both air and bone conduction are in one document. Consequently, I agree with L. Wilber and D. Dirks, that the next revision of S3.6 should include the S3.43 bone conduction values. This would eliminate the need for S3.43.

cc: A. Brenig, WG/43 Committee Members



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S3/368
ATTACHMENT Q-1

14 March 1993

TO: J.D. Royster, Chair S3

Re: Letter Ballot LB/S3/356 sent to the Accredited
Standards Committee S3 on 18 December 1993, and
closed on 29 January 1993

SUBJECT: Approval of Officers and Individual Experts, and U.S. TAG
Chairs for 1993/1994

Enclosed please find tally of the above letter ballot, showing results
as follows:

CLASSIFICATION OF MEMBERS

AFFIRMATIVE VOTES	18	P - PRODUCER	5
NEGATIVE VOTES	0	C - CONSUMER	8
ABSTENTIONS	0	G - GOVERNMENT	4
NOT RETURNED	4	GI - GENERAL INTEREST	5
	-----		-----
TOTAL	22	TOTAL	22

- 2 -

Letter Ballot S3/356

Continuation of results of letter ballot S3/356:

AFFIRMATIVE VOTES:

Addington, J.H.	Compressed Air and Gas Institute
Atack, R.M.	U.S. Army Medical Corps.
Bennett, J.L.	Power Tool Institute, Inc.
Bohl, C.D.	American Industrial Hygiene Association
Bovi, A.M.	Industrial Safety Equipment Association, Inc.
Brownson, P.J.	American College of Occupational Medicine
Burkard, R.F.	American Speech-Language-Hearing Association
Campell, R.	Audio Engineering Society, Inc.
Garinther, G.	U.S. Army Human Engineering Laboratory
Hopmeier, W.F.S.	National Hearing Aid Society
Marshall, L.	U.S. Dept. of the Navy, BUREAU OF MEDICINE AND SURGERY
Michel, G.C.	Bruel & Kjaer Instruments, Inc.
Naunton, R.F.	American Otological Society, Inc.
Nixon, C.	U.S. Dept. of the Air Force
Royster, J.D.	Acoustical Society of America
Sachs, R.M.	AT&T
Toothman, E.H.	Fastener Industry Noise Control Research Program (FINCRP)
Zagzebski, J.	American Institute of Ultrasound in Medicine

NEGATIVE VOTES:

NONE

ABSTENTIONS:

NONE

- 3 - Letter Ballot S3/356

Continuation of results of letter ballot S3/356:

NOT RETURNED:

Burnett, E.D.	National Institute of Standards and Technology
Conger, C.D.	Hearing Industries Association (HIA)
Michael, L.A.	American Academy of Otolaryngology Head and Neck Surgery
Patterson, J.H.	U.S. Army Aeromedical Res. Lab.

LATE RESPONSE:

Bennett, J.L.	Power Tool Institute, Inc.
Zagzebski, J.	American Institute of Ultrasound in Medicine

Avril Brenig
Standards Manager

cc: Vice Chair, Standards Committee
Chair and Vice Chair, ASACOS
Chair, Working Group



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IMMEDIATE RETURN REQUESTED

LB/S3/356
18 December 1992

Return to: Letter Ballot Department
Due date: 29 January 1993

ADMINISTRATIVE LETTER BALLOT
ACCREDITED STANDARDS COMMITTEE
ON BIOACOUSTICS, S3
AND U.S. TECHNICAL ADVISORY GROUP (TAG) FOR
IEC/TC 29 ELECTROACOUSTICS AND ISO/TC 43 ACOUSTICS
AND ISO/TC 108/SC4 HUMAN EXPOSURE TO MECHANICAL
VIBRATION AND SHOCK

Topic: Approval of Officers and Individual Experts, and U.S. TAG Chairs for 1993/1994

Approved for circulation by: J.D. Royster, Chair S3

Distributed by: A. Brenig, ASA Standards Manager

Reference Document(s): ATTACHMENT A - Lists officers, Individual Experts for S3 and U.S. TAG Chairs for parallel international groups

Background Information:

According to ANSI's procedures, under which the Accredited Standards Committees operate, the Officers of the Standards Committees are to be confirmed (at the beginning of their terms), as well as Individual Experts (the latter to be confirmed annually) by the respective Standards Committees.

The officers and Individual Experts are proposed by the ASA Committees, on Standards (ASACOS) as the Secretariat for the Standards Committees, in concert with the Chairs of the respective Standards Committees.

No change in S3 Officers is proposed for 1993/1994. The list of Officers and Individual Experts is attached for your consideration for confirmation. The ASA representatives to S3 for 1993/1994 are listed for your information.

ATTACHMENT A

S3 ACCREDITED STANDARDS COMMITTEE ON BIOACOUSTICS

S3 Appointments

<u>Position</u>	<u>Individual</u>	<u>TERM</u>
Chairman	J.D. Royster	1991-1994
Vice Chairman	T. Frank	1992-1995
ASA Representative	J.D. Royster	1993-1994
Alt. ASA Representative	T. Frank	1993-1994
<u>Individual Experts:</u>	J.R. Bareham	1993-1994
	S.J. Barry	1993-1994
	R.W. Benson	1993-1994
	K.M. Eldred	1993-1994
	J.L. Fletcher	1993-1994
	R.S. Gales	1993-1994
	W.J. Galloway	1993-1994
	R.M. Guernsey	1993-1994
	J.C. Guignard	1993-1994
	D.L. Johnson	1993-1994
	K.D. Kryter	1993-1994
	H. Levitt	1993-1994
	S.F. Lybarger	1993-1994
	R.L. McKinley	1993-1994
	W. Melnick	1993-1994
	H.E. von Gierke	1993-1994
	D.E. Wasserman	1993-1994
	L.A. Wilber	1993-1994
	W. Yost	1993-1994
	R.W. Young	1993-1994

ATTACHMENT A

S3 ACCREDITED STANDARDS COMMITTEE ON BIOACOUSTICS
S3 Appointments

U.S. TAG Chairs:

<u>Position</u>	<u>Individual</u>	<u>Term</u>
ISO/TC 43	H.E. von Gierke	1993-1994
ISO/TC 43 (Vice Chair)	P.D. Schomer	1993-1994
IEC/TC 29	V. Nedzelnitsky	1993-1994
ISO/TC 108/SC4	H.E. von Gierke	1993-1994

S3/368
ATTACHMENT R

Excerpt from letter from D. Stevens
of Lucas Industrial Instruments to
J. Seiler, dated 13 April 1993

The general opinions of the audiometer manufacturers were that there could be an EMS problem with audiometers, and that it shouldn't be a problem to screen them against interference in a superior way. However, most of these people couldn't really envisage RFI problems occurring.

A more fundamental point was raised by one company though. They felt that audiometers were not acoustical measurement instruments, but were "Auditory systems testing devices". This is backed up by the fact that the 1989 "Specification for audiometers" was written by the Standards committee S3 Bioacoustics. After further checking, it does seem that audiometers fall under S3 Bioacoustics, and not S1. I have been told that there is a group of audiometry specialists working on Audiometry brainstem measurements, which utilizes fine sensors attached to the skin. RFI is a problem to this form of measurement, and they are investigating anechoic rooms, etc. in order to improve and standardize the technique.

S3 COMMITTEE CORRESPONDENCE

Julia D. Royster, Ph.D.

Chair, Accredited Standards Committee S3, Bioacoustics
4706 Connell Drive, Raleigh, NC 27612

May 19, 1993

Avril Brenig, Dr.P.H.
Standards Manager
Acoustical Society of America
335 East 45th Street
New York, NY 10017-3483

Dear Dr. Brenig:

I have attached a letter from Tom Frank, Vice-Chair of S3, concerning a proposal for a new working group on sound field audiometry. His letter includes a suggested scope statement. The rationale for the proposed new work effort is as follows:

- a. as documented in a recent journal article ["Status of sound field audiometry among audiologists in the United States" by G.D. Rochlin, Journal of the American Academy of Audiology 4:59-68 (1993)] clinical practitioners are following a variety of different procedures for sound field audiometry, so standardization is needed, and
- b. defined values for thresholds of normal hearing as measured in a sound field are needed as input for future revisions of existing standards S3.1 and S3.6.

A chair has volunteered (see Frank's letter) to head a new working group on this topic, and John Franks has expressed interest in serving on the working group, if established.

Please prepare a ballot for voting members of S3 proposing the establishment of a new working group concerning sound field audiometry.

Thanks for your assistance.

Sincerely,



Julia D. Royster

cc: Tom Frank

S3 COMMITTEE CORRESPONDENCE

**Tom Frank, Ph.D.
Vice-Chair, S3
5-A Moore Building
Penn State University
University Park, PA 16802
Phone: 814/863-2006; FAX 814/863-3759**

Date: April 29, 1993
To: J.D. Royster, Chair, S3-Bioacoustics Committee
From: T. Frank, Vice-Chair, S3-Bioacoustics Committee
Subject: Establishing a Working Group for Sound-Field Audiometry

There is a need to establish a Working Group (WG) to develop a standard for Sound-Field Audiometry. The need has been determined by informal contacts, requests from audiologists, and the results of a recent journal article.

As such, I would recommend that a S3 WG be organized under the name "Sound-Field Audiometry." Further, I would recommend that the scope of the WG be "to develop a standard specifying parameters for sound-field audiometry, instrumentation and tolerances for measuring stimuli presented in a sound-field, and reference threshold values for the measurement of hearing."

Further, I would like to recommend that the Tomasz R. Letowski, Ph.D. be appointed as chair of the WG. Dr. Letowski has indicated to me that if he is asked to become the WG chair, he will accept the appointment. Dr. Letowski can be contacted at the following address.

**Tomasz R. Letowski, Ph.D.
5-B Moore Building
Department of Communication Disorders
Penn State University
University Park, PA 16802
Phone: 814/863-2018; FAX: 814/863-3759**