Duthie, Procter and Gamble Company) reviewed the intensity and scale of industry's efforts to find alternative detergent formulations. These detailed and costly studies have met with little success to date. Clearly, it is exceedingly difficult to develop efficient alternative cleaning agents that will not harm man or the environment. Seven years of lead time are required to test and market a new product. Extensive study and testing of NTA (nitrilotriacetic acid) as a possible replacement for phosphorus in detergents have been done (R. D. Hamilton, Canada Freshwater Institute), but the question of its continued and widespread use is yet to be decided.

The symposium concluded with a panel discussion of "prospects and options for the future." The broader aspects of eutrophication management and control were discussed by panelists A. F. Bartsch, T. Winter (President's Council for Environmental Quality), T. F. Derr (FMC Corporation), and J. R. Vallentyne.

Unquestionably, the aquatic ecosystem is variable and exceedingly complex (G. E. Likens, Cornell University). But a general consensus of the group seemed to be that in the majority of lakes of low or medium biological productivity the nutrient concentration ratio both inside and outside the algal cell points unambiguously to phosphorus as the most limiting element. At higher levels of production (eutrophic conditions), stimulated by an excess supply of phosphorus, other nutrients may become limiting. It appears to be technologically feasible to reduce the excess supply of phosphorus and thus restore that element to its limiting role in lakes.

G. E. LIKENS

Cornell University, Ithaca, New York 14850

A. F. Bartsch

Pacific Northwest Water Laboratory, Water Quality Office, Environmental Protection Agency, Corvallis, Oregon 97330

G. H. LAUFF

Kellogg Biological Station, Michigan State University, Hickory Corners 49060

J. Е. Новвіе

North Carolina State University, Raleigh 27607

Reference

 Nutrients and Eutrophication, Symposium Volume 1, G. E. Likens, Ed. (American Society of Limnology and Oceanography, Allen Press, Lawrence, Kans., in press).

Forthcoming Events

June

20-24. American Medical Assoc., Atlantic City, N.J. (E. B. Howard, AMA, 535 N. Dearborn St., Chicago, Ill. 60610)

21–23. Fluid and Plasma Dynamics, 4th annual conf., Palo Alto, Calif. (A. Goldburg, Flight Sciences Lab., Boeing Scientific Research Lab., P.O. Box 3981, Seattle, Wash. 98124)

21-23. American College of **Preventive** Medicine, Atlantic City, N.J. (W. Bentley, ACPM, 801 Old Lancaster Rd., Bryn Mawr, Pa. 19010)

21–23. Secial and Economic Aspects of Water Resource Development, Ithaca, N.Y. (L. B. Dworsky, Water Research and Marine Sciences Center, 468 Hollister Hall, Cornell Univ., Ithaca, N.Y. 14850)

21–24. American Soc. for Engineering Education, Annapolis, Md. (L. Hitch, ASEE, Suite 400, 1 Dupont Circle, Washington, D.C. 20038)

21–24. Canadian Assoc. of **Physicists**, Ottawa, Ont. (Secretary, CAP, Suite 903, 151 Slater, Ottawa, Ont.)

21–25. American Assoc. for the Advancement of Science, Pacific Div., San Diego, Calif. (R. C. Miller, California Acad. of Sciences, Golden Gate Park, San Francisco 94118)

21–25. Health Physics Soc., 16th annual, New York, N.Y. (R. F. Cowing, HPS, 194 Pilgrim Rd., Boston, Mass. 02215)

21-25. Modern Methods for Industrial and Product Noise Control, Schenectady, N.Y. (W. L. Weifenbach, Carnegie Hall, Union College, Schenectady 12308)

21–25. Oil and Colour Chemists Assoc. 23rd annual, London, England. (Secretary, Wax Chandlers Hall, Gresham St., London, E.C.2)

21-25. Temperature—Its Measurement and Control in Industry and Science, 5th annual symp., Washington, D.C. (R. P. Hudson, Natl. Bureau of Standards, Washington, D.C. 20234)

22–23. American **Diabetes** Assoc., San Francisco, Calif. (J. R. Connelly, ADA, 18 E. 48 St., New York 10017)

22–25. American Assoc. of **Bioanalysts**, Chicago, Ill. (D. Birenbaum, Suite 805, 411 N. 7 St., St. Louis, Mo. 63101)

22–25. Data Management Assoc., Houston, Tex. (Secretary, Conference Dept., DMA, 505 Busse Hway, Park Ridge, Ill. 60068)

23–25. Applied Mechanics Conf., American Soc. of **Mechanical Engineers**, Philadelphia, Pa. (A. B. Conlin, 345 E. 47 St., New York 10017)

23–26. American **Optometric** Assoc., 74th annual congr., Houston, Tex. (G. Allen, AOA, 7000 Chippewa St., St. Louis, Mo. 63119)

24–26. Endocrine Soc., San Francisco, Calif. (Mrs. N. L. Mattox, 1211 N. Shartel, Oklahoma City, Okla. 73103)

25–27. American Assoc. of Neuropathologists, San Juan, P.R. (E. P. Richardson, Massachusetts General Hospital, Boston 02114)

27–30. American Soc. of Agricultural Engineers, Pullman, Wash. (J. L. Butt, ASAE, P.O. Box 229, St. Joseph, Mich. 49085)

27-1. Air Pollution Control Assoc.,

Atlantic City, N.J. (W. O. Farley, Director of Public Information, Consolidated Edison Co. of New York, 4 Irving Pl., New York 10003)

27-1. **Design Automation** Workshop, Atlantic City, N.J. (R. B. Hitchcock, IBM, Box 218, Yorktown Heights, N.Y. 10598)

27–2. Canadian Anaesthetists Soc., Quebec City. (Secretary, CAS, 178 St. George St., Toronto 5, Ont.)

27-2. Conference on Carbon, 10th annual, Bethlehem, Pa. (H. Leidheiser, Center for Surface and Coatings Research, Lehigh Univ., Bethlehem 18015)

27-2. National **Education** Assoc., Detroit, Mich. (S. M. Lambert, NEA, 1201 16th St., NW, Washington, D.C. 20006)

27-2. Forest Products Research Soc., Pittsburgh, Pa. (K. E. Huddleston, FPRS, 2801 Marshall Ct., Madison, Wis. 53705)

2801 Marshall Ct., Madison, Wis. 53705) 27-2. Society of Nuclear Medicine, Los Angeles, Calif. (Miss M. B. Glos, SNM, 211 E. 43 St., New York 10017)

27-2. American Soc. for **Testing and Materials**, Atlantic City, N.J. (T. A. Marshall, Jr., ASTM, 1916 Race St., Philadelphia, Pa. 19103)

27-3. International Congr. for Virology, 2nd annual, Budapest, Hungary. (J. L. Melnick, Dept. of Virology and Epidemiology, Baylor College of Medicine, Houston, Tex. 77025)

28-30. American Astronautical Soc., 17th annual, Seattle, Wash. (J. Vagners, Dept. of Aeronautics and Astronautics, Univ. of Washington, Seattle 98105)

28-30. Society for Industrial and Applied Mathematics, Seattle, Wash. (R. K. Windsor, SIAM, 33 S. 17 St., Philadelphia, Pa. 19103)

28-30. American Soc. of Safety Engineers, Tampa, Fla. (A. C. Blackman, 850 Busse Highway, Park Ridge, Ill. 60068)

28–1. Canadian **Ophthalmological** Soc., Montreal. (J. L. Burns, Suite 8, 825 **Cox**well Ave., Toronto, Ont., Canada)

well Ave., Toronto, Ont., Canada)
28-2. Biomedical Physics and Biomaterials Science Conf., Cambridge, Mass.
(H. E. Stanley, Room 13-2122. Physics Dept., Massachusetts Inst. of Technology, Cambridge 02139)

28–2. World Energy Conf., 8th annual, Bucharest, Roumania. (D. E. Hart, Engineers Joint Council, 345 E. 47 St., New York 10017)

28-3. British Council for **Rehabilitation** of **Disabled**, Edinburgh, Scotland. (I. R. Henderson, Tavistock House, Tavistock Sq., London, W.C.1, England)

29-1. Electron Microscopy and Analysis Group, 25th annual, Cambridge, England. (Meetings Officer, Inst. of Physics and Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

29-1. Institute of Navigation, 27th annual, Pasadena, Calif. (R. E. Freeman, IN, Suite 832, 815 15th St., NW, Washington, D.C. 20005)

29-1. Institute of Nuclear Materials Management, 12th annual, West Palm Beach, Fla. (L. K. Hurst, INMM, P.O. Box 273, Argonne, Ill. 60439)

29-1. Trace Substances in Environmental Health, 5th annual conf., Columbia, Mo. (D. D. Hemphill, Univ. of Missouri, 426 Clark Hall, Columbia 65201)

30-4. Idaho Medical Assoc., Sun Valley. (A. L. Bird, 407 W. Bannock St., Boise, Idaho 83702)

1-2. Effect of Environment on Material Properties in Nuclear Systems, intern. conf., London, England. (Meetings Officer, Inst. of Physics and Physical Soc., 47 Belgrave Sq., London, S.W.1)

1-3. European Dialysis and Transplant Assoc., 8th annual, East Berlin, Germany. (R. Natusch, 2nd Medical Clinic, Charite, Schumannstrasse 20/21 104 Berlin)

5-7. Rare Earths and Actinides, Durham, England. (Meetings Officer, Inst. of Physics and Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

5-8. Shock Tube, 8th annual intern. symp., London, England. (Meetings Officer, Inst. of Physics and Physical Soc., 47 Belgrave Sq., London, S.W.1)

5-9. Crystal Growth, Marseille, France. (Meetings Officer, Inst. of Physics and Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

5-9. **Gas Kinetics**, 2nd annual intern. symp., Swansea, Wales. (H. M. Frey, Dept. of Chemistry, The University, Whiteknights Park, Reading, England)

5-9. Rapid Methods for Measuring Radioactivity in the Environment, intern. symp.. Neuherberg, Germany. (B. Sansoni, Gesellschaft fur Strahlenforschung m.b.H., Ingolstadter Landstr. 1, D-8042 Neuherberg bei Munchen, West Germany)

5-10. General Relativity and Gravitation, intern. conf., Copenhagen, Denmark. (Meetings Officer, Inst. of Physics and Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

7-9. American Inst. of Aeronautics and Astronautics and Canadian Aeronautics and Space Inst., 12th Anglo-American Aeronautical Conf., Calgary, Alta., Canada. (Secretary, AIAA, 1290 Ave. of the Americas, New York 10019)

7-9. Northwest Pacific **Plastics** Conf., 8th annual, Pullman, Wash. (M. Adams, Head, Chemical Research Section, College of Engineering, Washington State Univ., Pullman 99163)

9. Phonon-Photon Interactions, Acoustics Group jointly with Optical Group, York, England. (Meetings Officer, Inst. of Physics and Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

10-13. International **Bronchoesophagological** Soc., 13th congr., Lyon, France. (C. M. Norris, 3401 N. Broad St., Philadelphia, Pa. 19140)

11-13. Denver Research Inst., 20th X-ray conf., Denver, Colo. (J. B. Newkirk, Metallurgy and Materials Science Div., Univ. of Denver, Denver 80210) 11-15. Health Physics Soc., 16th annual,

11–15. **Health Physics** Soc., 16th annual, New York, N.Y. (L. Gemmell, Health Physics Div., Brookhaven Natl. Lab., Upton, N.Y. 11973)

11-16. Weights and Measures, natl. conf., Washington, D.C. (Executive Secretary, Natl. Bureau of Standards, Washington, D.C. 20234)

11-17. Molecular Basis of Biological Activity, Caracas, Venezuela. (K. Gaede, Instituto Venezuela de Investigaciónes Científicas, Apartados 1827, Caracas)

12–14. Aircraft Design and Operations, 3rd annual mtg., Seattle, Wash. (R. E. Hage, McDonnell Douglas Corp., 3855 Lakewood Blvd., Long Beach, Calif. 90801)

Free



NEW Heath Scientific Instrumentation Catalog

...describes hundreds of Heath systems and instruments for academic and industrial laboratories. Includes latest additions to the famous Heath/Malmstadt-Enke Modular Analog-Digital System... two new versatile modules, over a dozen new plug-in logic circuit cards; the new Malmstadt-Enke Lab Expansion Package, which gives your Basic M-E Lab new capabilities in computer logic & digital electronics. New Heath instrumentation... 15 MHz dual trace scope... 80 MHz frequency counter. New low cost Specific Application Spectroscopy Systems and new modules. Plus the complete line of Heath test equipment... scopes, power supplies, generators, VTVM's & VOM's, testers and meters. Investigate the world's largest selection of high quality, low cost laboratory instrumentation... send for your FREE 1971 Heath Instrumentation Catalog now!

SEND
FOR YOUR
FREE COPY
TODAY!

HEATH COMPANY, Dept 520-19
Benton Harbor, Michigan 49022

a Schlumberger company
a Schlumberger company
a Schlumberger company
category
a Schlumberger company
schlip HEATH
Active
Active
City
State
Zip
*Mail order prices; FOB factory. Prices & specifications
subject to change without notice.

EK-302



Circle No. 80 on Readers' Service Card



WHY WASTE 3,839,800* gallons of water yearly?

HX-50

Capacity: 1.4 KVA Flow: 8 gpm (max) Pressure: 20 psi max Temp. Control: ± 0.3°C

If you use tap water to cool EPR and NMR magnets, electrophoresis units or other heat producing equipment, you can waste almost 4 million gallons of water a year! You can also suffer from temperature and pressure instability, clogged filters, water shut off and other problems.

A Neslab HX series Refrigerated Recirculating Heat Exchanger will operate with less effort and considerable increase in the reproducibility of results. It saves plenty of water, too...a mighty important consideration in this era of water shortages.

We offer several models with cooling capacities from 1.4 to 10 KVA and a variety of output pressures and temperature controls. Priced from \$900.

*Based on 8 gpm 24 hr. operation



12-14. Calorimetry and Thermodynamics, 2nd intern. conf., 26th annual, Orono, Maine. (S. R. Gunn, Univ. of California Radiation Lab., Box 808, Livermore 94550)

12-14. Reliability and Maintainability, 10th annual conf., Long Beach, Calif. (American Inst. of Aeronautics and Astronautics, 1290 Ave. of the Americas, New York 10019)

12-16. Society of Analytical Chemistry, 3rd annual symp., Durham, England. (C. A. Johnson, 9/10 Savile Row, London W1X 1AF, England)

12-16. Owner-Engineer-Contractor Relations in Tunneling, Deerfield, Mass. (Secretary, Engineering Foundation, 345 E. 47 St., New York 10017)

12-16. Microbiology and Sanitation in the Food Industry, St. Paul, Minn. (Inst. of Sanitation Management, Univ. of Minnesota, St. Paul)

12–16. Pacific Science Congr., 12th, Canberra, Australia. (O. Frankel, Australian Acad. of Sciences, Gordon St., Canberra City 2601)

12-16. International Union against **Tuberculosis**, 21st annual conf., Moscow, U.S.S.R. (Secretariat, IUAT, 20, rue Greuze, 75-Paris 16°, France)

12-16. Women in Engineering, Bridging the Gap between Technology and Society, Henniker, N.H. (Secretary, Engineering Foundation, 345 E. 47 St., New York 10017)

12–17. Industrial Measurement by Radiation Techniques, London, England. (Meetings Officer, Inst. of Physics and Physical Soc., 47 Belgrave Sq., London, S.W.1)

12-17. Useful Wildland Shrubs, Their Biology and Utilization, intern. symp., Logan, Utah. (C. M. McKell, Dept. of Range Science, College of Natural Resources, Utah State Univ., Logan 84321)

12-19. Relativity and Gravity, Trieste, Italy. (A. M. Hamande, Centre for Theoretical Physics, Miramare, P.O. Box 586, 34100 Trieste)

13–15. Electromagnetic Compatibility, intern. symp., Philadelphia, Pa. (F. Haber, Moore School of Electrical Engineering, Univ. of Pennsylvania, Philadelphia 19104)

13-15. Plastics in Building and Construction, Pullman, Wash. (R. A. V. Raff, College of Engineering, Research Div., Washington State Univ., Pullman 99163)

13-16. Synthesis in Organic Chemistry, Cambridge, England. (Meetings Officer, Inst. of Physics and Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

13-17. Society for the **Study of Fertility**, Nottingham, England. (Secretary, SSF, 141 Newmarket Rd., Cambridge, CB5, 8HA, England)

14-16. Molecular, Cellular and Developmental Biology, National Cancer Soc. Conf., Boulder, Colo. (K. R. Porter, Dept. of Molecular, Cellular and Developmental Biology, 126 Biosciences, Univ. of Colorado, Boulder 80303)

14-17. British Conf. on Audiology, Dundee, England. (Meetings Officer, Inst. of Physics and Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

14-17. Noise Control Conf. and Exhibi-



tion, West Lafayette, Ind. (M. J. Crocker, School of Mechanical Engineering, Purdue Univ., Lafayette 47907)

15-17. Extra-Corporeal Technology, 9th intern. conf., St. Paul, Minn. (E. C. Berger, American Soc. of Extra-Corporeal Technology Inc., 287 E. 6 St., St. Paul 55101)

17–21. Transportation Engineering, Milwaukee, Wis. (Secretary, American Soc. of Civil Engineers, United Engineers Center, 345 E. 47 St., New York 10017)

18–21. Multimedia in the Health Sciences, natl. conf., Cincinnati, Ohio. (G. Grupp, Dept. of Biomedical Communication, College of Medicine, Univ. of Cincinnati, Cincinnati)

18–22. American Soc. of **Pharmacognosy**, Columbus, Ohio. (J. L. Beal, College of Pharmacy, Ohio State Univ., Columbus 43210)

18-22. American Veterinary Medical Assoc., 108th annual, Detroit, Mich. (M. R. Clarkson, AVMA, 600 S. Michigan Ave., Chicago, Ill. 60605)

18–23. **Otolaryngology**, 3rd congr., Edinburgh, Scotland. (J. W. Dixon, Dept. of Otolaryngology, Royal Infirmary, Glasgow, C4, Scotland)

18-24. American Medical Technologists, Columbus, Ohio. (C. B. Dziekonski, AMT, 710 Higgins Rd., Park Ridge, Ill. 60068)

19-21. Space Systems, American Inst. of Aeronautics and Astronautics, Denver, Colo. (P. K. Eckman, Mission Analysis Div., Jet Propulson Lab., California Inst. of Technology, 4800 Oak Grove Dr., Pasadena 91103)

19-21. Computer Simulation Conf., Boston, Mass. (D. H. Niesse, Dept. K676, McDonnel Automation Co., Box 516, St. Louis, Mo. 63166)

19-23. Clinical Engineering, Deerfield, Mass. (Secretary, Engineering Foundation, 345 E. 47 St., New York 10017)

19–23. Cultural Factors in Mental Test Development, Application, and Interpretation, Istanbul, Turkey. (L. J. Cronbach, 16 Laburnum Rd., Atherton, Calif. 94025)

19-23. Quantitative Decision Making for the **Delivery of Ambulatory Care**, Henniker, N.H. (A. R. Jacobs, Statistics and Evaluation Unit, Univ. of Rochester School of Medicine, Rochester, N.Y.)

19-23. Light Scattering in Solids, 2nd intern. congr., Paris, France. (M. Balkanski, Laboratoire de Physique des Solides, Faculte des Sciences, Tour 13, 9, Quai Saint-Bernard, Paris 5e)

19-23. British Medical Assoc., scientific mtg., Leicester, England. (Secretary, BMA, BMA House, Tavistock Sq., London, W.C.1, England)

19-23. Molecular Energy Transfer Conf., Cambridge, England. (A. B. Callear, Dept. of Physical Chemistry, Univ. of Cambridge, Lensfield Rd., Cambridge)

19-24. Continuous Culture, 5th intern. symp., Oxford, England. (F. J. Griffin, Soc. of Chemical Industry, 14 Belgrave Sq., London, S.W.1, England)

19-24. Mathematical Models in Hydrology, Intern. Assoc. of Scientific Hydrology, Warsaw, Poland. (Z. Kaczmarek, Warsaw Technical Univ., Plac Jednosci Robotniczej, Warsaw 1)

20-23. Mechanised Information Storage

and Retrieval Systems, 3rd annual conf., Cranfield, England. (C. Cleverdon, Cranfield Inst. of Technology, Cranfield, Bedford)

20-23. Nuclear and Space Radiation Effects, Durham, N.H. (T. M. Flanagan, Gulf Radiation Technology, P.O. Box 608, San Diego, Calif. 92112)

20-23. Physiology and Pharmacology of Cyclic AMP, intern. conf., Milan, Italy. (R. Paoletti, Inst. of Pharmacology, Univ. of Milan, via Vanvitelli, 32, 20129 Milan)

20-25. International Assoc. of Geochemistry and Cosmochemistry, Moscow, U.S.S.R. (A. P. Vinogradov, Vernadsky Inst. of Geochemistry, Moscow V-334)

21–23. Visual Performance When Using **Optical Instruments**, Munich, Germany. (Meetings Officer, Inst. of Physics and Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

21–25. International Soc. of Clinical Laboratory Technologists, New York, N.Y. (D. Birenbaum, 805 Ambassador Bldg., St. Louis, Mo. 63101)

22-30. Pacific Coast **Oto-Ophthalmological** Soc., Honolulu, Hawaii. (F. A. Sooy, Dept. of Otolaryngology, Univ. of California Medical Center, San Francisco 94122)

23–27. High-Energy Electrons and Photons, Ithaca, N.Y. (Conference Secretary, Lab. of Nuclear Studies, Cornell Univ., Ithaca 14850)

24-30. International Assoc. of Applied Psychology, 17th congr., Liège, Belgium. (Prof. Piret, 47 rue Cesar Franck, Liège)

25-30. Pure and Applied Chemistry, 23rd intern. congr., Boston, Mass. (A. T. Winstead, American Chemical Soc., 1155 16th St., NW, Washington, D.C. 20006)

25–30. Engineering Properties of Sea Floor Soils and Their Geophysical Identification, Seattle, Wash. (R. C. Bostrom, Earthquake Engineering Group, Dept. of Civil Engineering, Univ. of Washington, Seattle 98105)

25–30. **Transportation Engineering** Conf., American Soc. of Civil Engineers, Seattle, Wash. (W. H. Wisely, ASCE, 345 E. 47 St., New York 10017)

25-31. Physiological Sciences, 25th intern. congr., Munich, Germany. (K. Thurau, Theresienhoehe 15, 8000 Munich)

26-30. Automatic Cytology Conf., Henniker, N.H. (Secretary, Engineering Foundation, 345 E. 47 St., New York 10017)

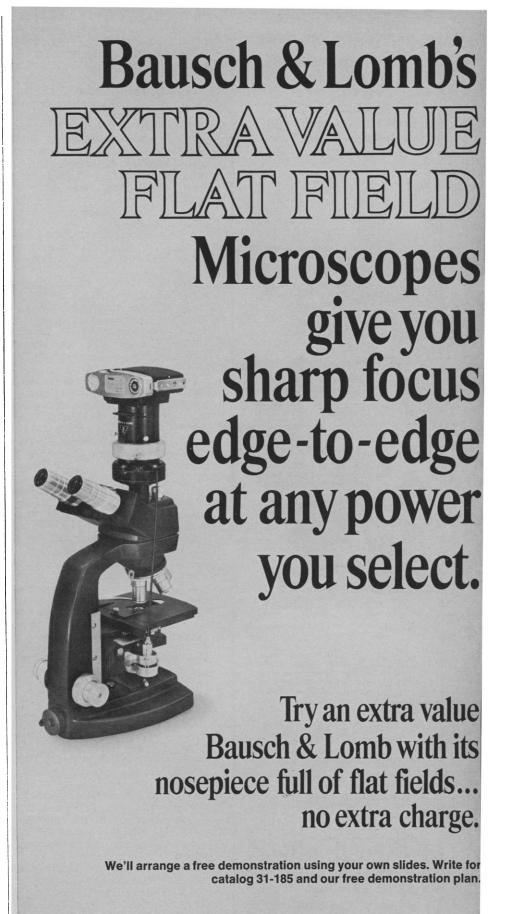
26-30. Instrumentation Science, 30th annual conf., Instrument Soc. of America, Geneva, N.Y. (S. Lees, Forsyth Dental Center, 140 Fenway, Boston, Mass., 02115)

26-30. Teaching the Handicapped Child. intern. conf., Norrkoping, Sweden. (R. Hermelin, 85/86 Newman St., London, W.1, England)

26-31. Physics of Electronics and Atomic Collisions, 7th intern. conf., Amsterdam, Netherlands. (J. Kistemaker, Inst. of Atomic and Molecular Physics FOM, Kruislaan 407, Amsterdam-O)

28-30. Montana Radiological Soc., Bozeman. (C. H. Agnew, MRS, Box 1543, Billings, Mont. 59101) 29-5. World Federation of the Deaf,

29-5. World Federation of the **Deaf**, 6th congr., Paris, France. (Organizing Committee of the 6th Congr. of the





Write for our free 24-page booklet, "STIMULATING"

The Digital Stimulator

Designed by a Neurophysiologist for Neurophysiologists



Photon-Coupled Stimulus Isolator Excellent isolation and faithful reproduction of either positive or negative input signals without switching.



Stimulus/Train Interval Module 100,000 cycle/sec crystal converted to 10,000 cycle/sec basic frequency clock. Thumbwheels select precise Stimulus Intervals and Train Intervals.



Number of Events Module Four thumbwheels select number of stimuli to be delivered. Solid-state light-emitting diodes count stimuli as delivered.



Automatic Pulse Delay/Amplitude Increment Module Allows incrementing the amplitude and/or duration of one preselected stimulus in a series, a selected number of times.



Three Channel Duration/Delay Module Delays pulses by selected increment. Allows double pulses by each of two combined channels. Provides gate which determines number of train pulses delivered.



Three Channel Duration/Amplitude Module Allows continuous adjustment of pulse duration from 0 to 100 sec., and pulse amplitude from 0 to ±100 volts.



Two Channel Ramp Generator Module Changes slope of leading and/or trailing edge of pulses, and their amplitude. Allows combination of two pulses into complex wave-forms.

Power Supply Module (not shown) Works off 115 or 230 VAC, 50-60 Hz lines and provides correct power for all modules.

Visual Stimulator (not shown) Pulses its bipolar gas discharge tube for optical stimulation in studies of vision. Intensity is continuously variable, either manually or by external input source.

FREDERICK HAER & CO

Equipment and Supplies for Electrocellular Research

P.O. Box 2138, Ann Arbor, Michigan 48106 patents applied for

Circle No. 85 on Readers' Service Card

WFD, Confederation Nationale des Sourds de France, 20, rue Therese, Paris 1°)

30-1. Linguistic Soc. of America, Buffalo, N.Y. (T. A. Sebeok, Patton House, Indiana Univ., 516 E. 6 St., Bloomington 47401)

30-8. Ophthalmological Conf., Portillo, Chile. (Resort Representation Service, 30 Rockefeller Plaza West, Rockefeller Center, New York 10020)

30-13. International Assoc. of Meteorology and Atmospheric Physics, Moscow, U.S.S.R. (W. L. Godson, Meteorology Office, Dept. of Transportation, 315 Bloor St. W., Toronto, Ont. Canada)

August

1-5. American Soc. of Animal Science, Davis, Calif. (G. P. Lofgreen, Imperial Valley Field Station, 1004 E. Holton Rd., El Centro, Calif. 92243)

1–6. International Congr. of Immunology, Washington, D.C. (H. B. Lemp, Union of Immunological Soc., 9650 Rockville Pike, Bethesda, Md. 20014)

2-4. Olfaction and Taste, 4th intern., Munich, Germany. (D. Schneider, Max-Planck-Institut fur Verhaltensphysiologie, 8131 Seewiesen, Munich)

2-4. Operations Research: Implications for Libraries, 35th annual, Chicago, Ill. (D. R. Swanson, Graduate Library School, Univ. of Chicago, 1100 E. 57 St., Chicago, 60637)

2-6. Engineering and Social Costs in Environmental Control, Deerfield, Mass. (Secretary, Engineering Foundation, 345 E. 47 St., New York 10017)

2-6. Engineering in Medicine—Biotelemetry, Henniker, N.H. (Secretary, Engineering Foundation, 345 E. 47 St., New York 10017)

2-6. Molecular Biology and Pathology, 4th annual conf., Saratoga Springs, N.Y. (K. T. Lee, Dept. of Pathology, Albany Medical College, Albany, N.Y. 12208)

2-7. European Soc. for Comparative Endocrinology, 6th congr., Montpellier, France. (I. Assenmacher, Science Faculty, Univ. of Montpellier, Place East Bataillon, 34 Montpellier, Herault, France)

2-7. International Conf. on Stochastic Point Processes, Statistic Analysis, Theory and Applications, Yorktown Heights, N.Y. (P. A. W. Lewis, Mathematical Sciences Dept., IBM Research Center, P.O. Box 218, Yorktown Heights 10598)

2-8. Electric Field of the Heart, Intern. Union of Physiological Sciences, Brussels, Belgium. (P. Rijlant, Medical Faculty, Inst. for Physiology, Univ. of Brussels, 115 Blvd. de Waterloo, Brussels, 1000)

2-14. American **Geophysical** Union, 15th general assembly, Moscow, U.S.S.R. (A. Spilhaus, Jr., AGU, 2100 Pennsylvania Ave., NW, Washington, D.C. 20037)

3-5. Association for **Computing Machinery**, Chicago, Ill. (C. L. Bradshaw, General Computer Services, Inc., P.O. Box 4163, Huntsville, Ala. 35802)

3-5. Counter Conf., Boulder, Colo. (M. A. Harrison, Dept. of Computer Science, Univ. of California, Berkeley 94720)

3-6. Crystal Structure and Chemical Bonding, Intern. Union of Crystallography, Twente, Netherlands. (A. Schuijff, Univ. of Utrecht, Utrecht, Netherlands)

3-6. Intersociety Energy Conversion

Engineering Conf., Boston, Mass. (F. A. Creswick, Battelle Memorial Inst., 505 King Ave., Columbus, Ohio 43201)

3-6. Operator, Engineer and Management Interface with the Process Control Computer, Lafayette, Ind. (Organizing Committee, Lab. for Applied Industrial Control Purdue Univ. Lafayette 47907)

Control, Purdue Univ., Lafayette 47907)
4-5. **Regulation of Coronary Blood Flow**, Intern. Union of Physiological Sciences, Antwerp, Belgium. (W. Schaper, Janssen Research Foundation, Koninklijke laan 17, 2340 Beerse, Belgium)

5-6. Association of American Feed Control Officials, 61st annual, Jackson, Wyo. (R. McDonald, Texas Feed and Fertilizer Control Services, Box 3160, College Station 77840)

5-8. Singapore-Malaysia Congr. of Medicine, 6th intern., Singapore, Malaysia. (C. Beng Keng, c/o Medical Unit 1, General Hospital, Singapore 3)

5-20. International Geographic Union, European regional conf., Budapest, Hungary. (G. Bora, IGU Hungarian Natl. Committee, Nepkoztarsasag utja 62, Budapest VI)

8-12. Clay Minerals Soc., 8th annual, and Clay Minerals Conf., 20th annual, Rapid City, S.D. (W. F. Bradley, Dept. of Chemical Engineering, Univ. of Texas, Austin 78712)

8-12. National **Medical** Assoc., Philadelphia, Pa. (R. D. Watkins, NMA, P.O. Box 29050, Washington, D.C. 20017)

8-13. Amorphous and Liquid Semiconductors, 4th intern. conf., Ann Arbor, Mich. (J. C. Thompson, Dept. of Physics, Univ. of Texas, Austin 78712)

8-13. American Assoc. of Clinical Chemists, Seattle, Wash. (D. A. H. Roethel, AACC, 1155 16th St., NW, Washington, D.C. 20006)

8-14. North American Acad. of Manipulative Medicine, Honolulu, Hawaii. (A. Bobb, P.O. Box 2071, Sante Fe, N.M. 87501)

9-10. Rocky Mountain Spectroscopy Conf., Denver, Colo. (G. M. Pachelo, Dow Chemical Co., Bldg. 559, P.O. Box 888, Golden, Colo. 80401)

9-11. Weightlessness and Artificial Gravity, Williamsburg, Va. (American Inst. of Aeronautics and Astronautics, 1290 Ave. of the Americas, New York 10019)

9-13. Electron Microscopy Soc. of America, Boston, Mass. (G. G. Cocks, Olin Hall, Cornell Univ., Ithaca, N.Y. 14850)

9-13. Engineering Foundation Conf. on **Enzyme Engineering**, Henniker, N.H. (L. B. Wingard, Jr., Dept. of Pharmaceutics, Health Sciences Bldg., State Univ. at Buffalo, Buffalo, N.Y. 14214)

9-13. Mixing Operations, 3rd annual conf., Andover, N.H. (Secretary, Engineering Foundation, 345 E. 47 St., New York 10017)

9-13. International Soc. for **Photogrammetry**, London, England. (D. W. Proctor, Dept. of Photogrammetry and Surveying, University College, Gower St., London, W.C.1)

10-20. International **Statistical** Inst., Washington, D.C. (Secretariat, ISI, 2 Oostduinlaan, The Hague, Netherlands)

11-13. Applications of X-Ray Analysis, 20th annual, Denver, Colo. (C. O. Ruud, Dept. of Metallurgy and Materials Science, Univ. of Denver, Denver 80210)