

17-21. International Union of **Independent Laboratories**, 4th triennial general assembly, Leamington, England. (A. Herzka, Pressurized Packaging Consultants, Ltd., Ashbourne House, Alberon Gardens, London N.W. 11)

17-21. French Soc. of **Metallurgy**, fall mtg., Paris. (Secretariat, 25, rue de Clichy, Paris 9)

17-21. **Nuclear Data, Microscopic Cross Sections and other Data Basic for Reactors**, conf., International Atomic Energy Agency, Paris, France. (J. H. Kane, Conferences Branch, Div. of Technical Information, U.S. Atomic Energy Commission, Washington, D.C. 20545)

17-22. **Neurological Surgeons**, 16th annual mtg., San Juan, Puerto Rico. (J. M. Thompson, 1955 Blossom Way S., St. Petersburg, Fla. 33712)

17-22. **Potash**, 8th intern. congr., Brussels, Belgium. (International Potash Inst., P.O. Box 25 36 44, Bern 14, Switzerland)

18-19. **Industrial Hygiene Foundation**, 31st annual mtg., Pittsburgh, Pa. (R. T. P. deTreville, The Foundation, 4400 Fifth Ave., Pittsburgh 15213)

18-19. **Liquid Scintillation Counting**, symp., Natl. Physical Laboratory, Teddington, England. (Meetings Officer, Inst. of Physics and The Physical Soc., 47 Belgrave Sq., London S.W.1)

18-20. **Telemetry**, intern. conf., Los Angeles, Calif. (J. E. Hinde, Sandia Corp., P.O. Box 5800, Albuquerque, N.M. 87115)

18-22. **International Computation Centre**, general assembly, Rome, Italy. (Viale Civiltà del Lavoro 23, Rome)

19-21. **Design of Experiments**, 12th conf., Gaithersburg, Md. (F. G. Dressel, Army Research Office-Durham, Box CM, Duke Station, Durham, N.C. 27706)

19-21. **Nuclear Science**, symp., Boston, Mass. (J. A. Coleman, Electron Devices Sec., Natl. Bureau of Standards, Washington, D.C. 20234)

19-22. **Biochemistry of Lipids**, 10th intern. conf., Cologne, Germany. (Physiologisch-Chemisches Inst., Univ. zu Köln, Joseph-Stelzmann-str. 2, Cologne, West Germany)

19-22. **Optical Soc. of America**, annual mtg., San Francisco, Calif. (M. E. Warga, 1155 16th St., Washington, D.C.)

20-21. **Chemical Engineering in Medicine and Biology**, symp., Univ. of Cincinnati, Ohio. (D. Hershey, Dept. of Chemical Engineering, Univ. of Cincinnati, Cincinnati 45221)

20-21. **High Performance Composites**, 2nd annual symp., Washington Univ., St. Louis, Mo. (G. Esterson, Inst. for Continuing Education, Washington Univ., St. Louis 63130)

20-21. **Systems Approach to Biology**, 3rd systems symp., Case Inst. of Technology, Cleveland, Ohio. (M. Mesarovic, Systems Research Center, Case Inst. of Technology, Cleveland 44106)

21-22. **Prolonged Pharmacotherapy and the Eye**, conf., State Univ. of New York, Buffalo. (E. B. Hague, School of Medicine, State Univ. of New York at Buffalo, N.Y. 14214)

21-23. **Clinical Pathology of the Liver and Biliary Tract**, mtg., Assoc. of Clinical Scientists, Washington, D.C. (R. P. MacFate, The Association, 300 N. State St. No. 5322, Chicago, Ill. 60610)



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Saskatchewan Department of Public
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Provincial Health Building
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The Eighteenth World Health Assembly of the World Health Organization approved the establishment of an International Agency for Research on Cancer. The objectives of the Agency include the promotion of international collaboration and support of all phases of cancer research, including education and training of personnel.

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Ph.D. Microbiologist. Minors in Biochemistry and Mycology. Background of R&D in medical-industrial area. Product oriented, competent in bio-engineering, experienced as teacher and supervisor. Box 189, SCIENCE. 9/16

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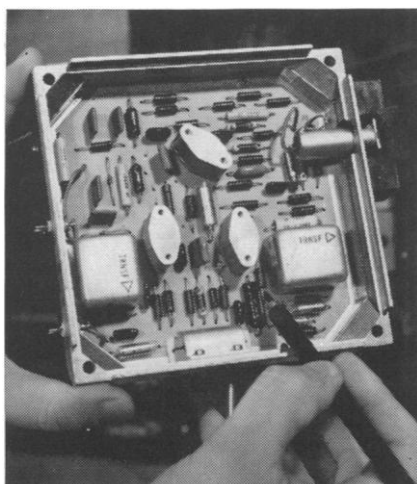
Report from

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High-performance amplifiers for coaxial transmission



Field-trial installation of the new transistor amplifiers in manhole near Dayton, Ohio. Amplifiers and associated circuits comprise repeaters; they are mounted in drawer-type boxes, then placed in gas-tight cylindrical housings. With the new system, a pair of coaxials will carry up to 3600 telephone conversations on an 0.5-MHz to 20-MHz band. A fully utilized coaxial cable could handle up to 32,400 conversations. On a coast-to-coast connection over the new system, about 2000 repeaters would be needed for each direction of transmission, with a total one-way amplification of as much as 75,000 dB.



Low-distortion, wideband transistorized amplifier developed at Bell Laboratories for a new coaxial cable system.

Every "hi-fi" enthusiast knows that faithful reproduction of music requires an amplifier with constant gain and low distortion over a wide band of frequencies. Amplifiers for such purposes are available today with 100 watts of power, gain deviation of less than 1.0 dB from 20 to over 20,000 hertz, and less than 0.4% distortion. This high level of performance has been obtained by utilizing to the fullest the best of today's electronics technology.

At Bell Telephone Laboratories, the development of modern coaxial cable systems for transmitting thousands of telephone conversations also requires amplifiers which push electronics technology to its limits. The low-frequency limit for these amplifiers need not be as low as that for hi-fi amplifiers, but the high-frequency limit must be much higher—20 megahertz. The power output can be less—on the order of 1/10 watt—but the gain deviation must be less than 0.25 dB, and the distortion must be limited to 0.0004%. These requirements arise from the large number of simultaneous voice signals which these amplifiers must transmit and the large number of amplifiers that must be connected in tandem for a coast-to-coast system.

In the past, such amplifier performance was impossible. Today it is possible because of circuit-design techniques which include close control of feedback and the use of digital computer techniques to optimize circuit parameters. And of considerable importance to the design, new transistors were developed at Bell Laboratories with properties that are constant over wide dynamic and frequency ranges.

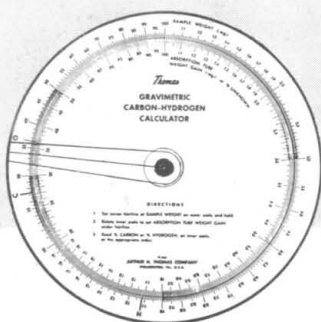


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6446-K10.



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6445-W05. Micro Carbon-Hydrogen Analyzer, Thomas, as above described, complete with supply of absorption tubes, sample capsules, absorbents, materials for packing combustion tube, calculator, etc. For 115 volts, 60 cycles, a.c.

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