

SCIENCE

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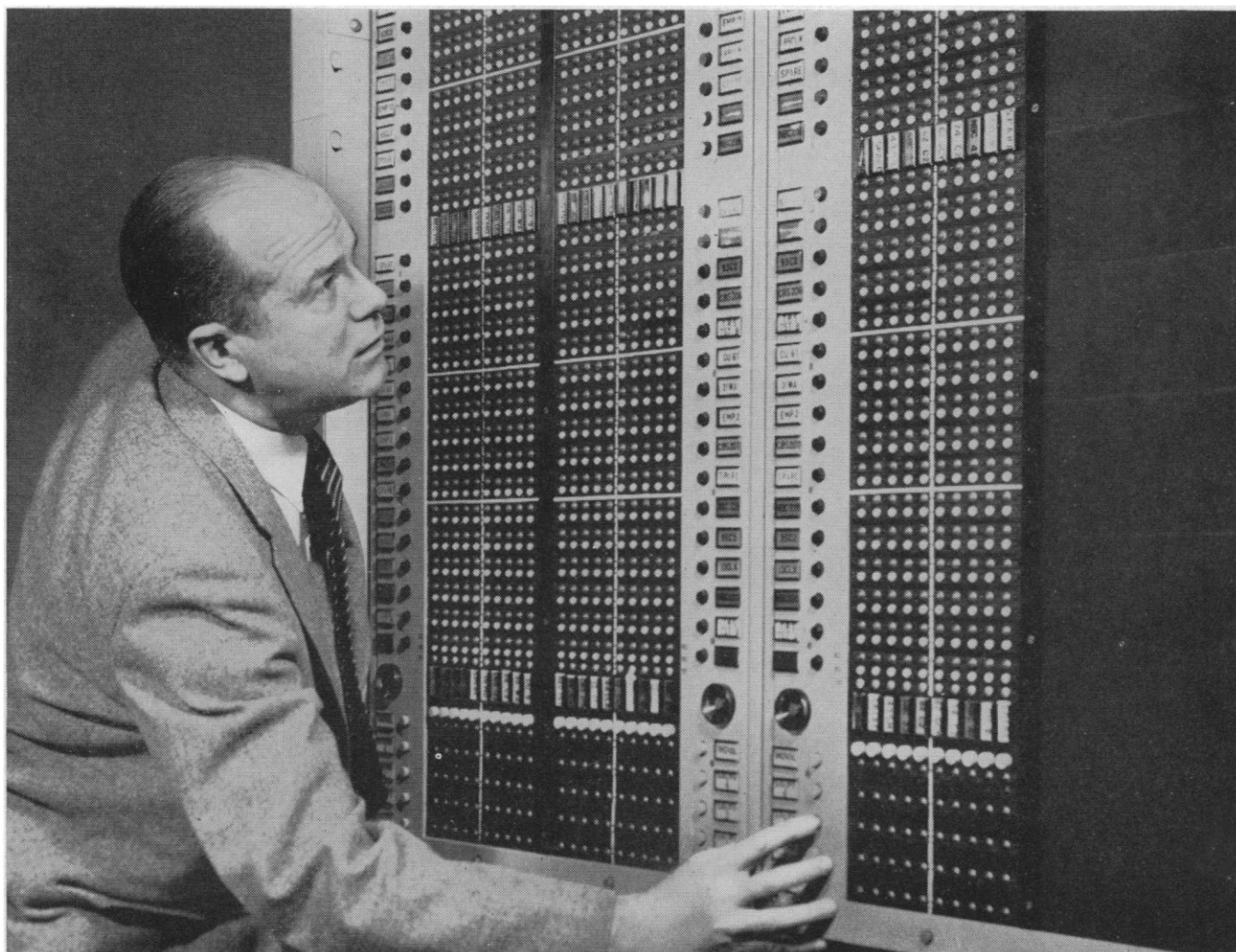
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C O R P O R A T I O N

237 WEST ERIE STREET • CHICAGO 10, ILLINOIS



Bell Laboratories engineer Cyril A. Collins, B.S. in E.E., University of Washington, demonstrates new TV switching control panel for black and white or color. Complex switching connections are set up in advance; in a split-second a master button speeds dozens of programs to their destinations all over the nation. Special constant-impedance technique permits interconnection of any number of broadband circuits without picture impairment.

Telephone science speeds TV enjoyment

Telephone science plays a crucial part in your TV entertainment. An interesting example—one of many—is the latest TV switching center developed at Bell Telephone Laboratories.

Switching centers control the transmission of programs which come to your local TV station over Bell System facilities. To be available exactly on cue, programs must be switched at high speed and with very great accuracy.

To create the new switching center Bell Laboratories engineers borrowed from the switching control art which handles your dial telephone calls. They developed a special control panel which puts complex switching patterns within the easy grasp of one man. By pushing buttons, he sets up—and double-checks—forthcoming network changes far ahead of time. On cue he presses a master button which sends the programs racing to their

respective destinations around the nation.

To connect the broadband circuits, the Laboratories engineers developed a new video switch which operates on a constant-impedance principle. The new switch permits the interconnection of any number of circuits, without the slightest impairment of transmission quality.

Thus the technology which serves your telephone also works for your TV enjoyment.

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properties. Finally, it discusses the industrial uses of chromium compounds. The volume also includes a chapter on the health hazards, which is certainly of primary importance in the protection of the workers in the chromium industries.

The book is excellent and satisfies the need for a comprehensive compilation of the data on the chemical and physical properties of chromium compounds. While it will probably not answer all the questions about the chemistry of chromium, it will, together with the books listed in the excellent bibliography, be a welcome addition on the desks of those scientists and engineers who are interested in the chemistry of chromium and its compounds.

J. T. STERLING

National Bureau of Standards

Books Reviewed in The Scientific Monthly, May

Freshwater Fishery Biology, K. F. Lagler (Brown). Reviewed by K. D. Carlander.

Die Flechtbinse (Scirpus lacustris L.), K. Seidel (Schweizerbart'sche Verlagsbuchhandlung). Reviewed by H. H. Iltis.

The Future of Arid Lands, G. F. White, Ed. (AAAS). Reviewed by A. W. Zingg.

Ceramics for the Archaeologist, A. O. Shepard (Carnegie Institution of Washington). Reviewed by P. V. Gardner.

Child Development, E. B. Hurlock (McGraw-Hill). Reviewed by P. H. Schoggen.

Microscopium, M. Rooseboom (National Museum for the History of Science, Leiden). Reviewed by R. P. Multa-hauf.

The Fighting Cheyennes, G. B. Grinnell (Univ. of Oklahoma Press). Reviewed by I. E. Wallen.

Disposal of Sewage and Other Water-Borne Wastes, K. Imhoff, W. J. Müller, D. K. B. Thistlethwayte (Butterworths). Reviewed by J. M. Dalla Valle.

The Individual Psychology of Alfred Adler, H. L. Ansbacher and R. R. Ansbacher, Eds. (Basic Books). Reviewed by E. L. Hartley.

New Books

Working with Children in Science. Clark Hubler. Houghton Mifflin, Boston, 1957. 425 pp. \$5.50.

America's Natural Resources. Edited for the Natural Resources Council of America by Charles H. Callison. Ronald Press, New York, 1957. 211 pp. \$3.75.

The Doctor, His Patient and the Illness. Michael Balint. International Universities Press, New York, 1957. 355 pp. \$7.50.

The Economic Factors in the Growth

of Russia. An economic-historical analysis. Nicholas L. Fr.-Chirovsky. Philosophical Library, New York, 1957. 178 pp. \$3.75.

The Growth of Leaves. Proceedings of the Third Easter School in Agricultural Science, University of Nottingham, 1956. F. L. Milthorpe. Butterworths, London, 1956. 223 pp. \$6.80.

Beginning Statistics. Lester Guest. Crowell, New York, 1957. 255 pp. \$4.

Womanpower. A statement by the National Manpower Council with chapters by the council staff. National Manpower Council. Columbia University Press, New York, 1957. 371 pp. \$5.

An Introduction to Astronomy. Robert H. Baker. Van Nostrand, Princeton, N.J., ed. 5, 1957. 333 pp. \$4.85.

Automation in Business and Industry. Eugene M. Grabbe. Wiley, New York; Chapman & Hall, London, 1957. 611 pp. \$10.

The Neurohypophysis. H. Heller, Ed. Proceedings of the eighth symposium of the Colston Research Society held in the University of Bristol, 9-12 April 1956. H. Heller, Ed. Academic Press, New York; Butterworths, London, 1957. 275 pp. \$9.50.

A Textbook of Plant Virus Diseases. Kenneth M. Smith. Little, Brown, Boston, ed. 2, 1957. 652 pp. \$12.

Encyclopedia of Instrumentation for Industrial Hygiene. Prepared and issued cooperatively by the University of Michigan Institute of Industrial Health and School of Public Health and the Occupational Health Program of the Public Health Service, U.S. Department of Health, Education, and Welfare. Charles D. Yaffe, Dohrman H. Byers, Andrew D. Hosey, Eds. University of Michigan, Industrial Health Program, Ann Arbor, 1956. 1243 pp. \$35.

Thermodynamic Properties of the Elements. No. 18 of the Advances in Chemistry Series. Edited by the staff of Industrial and Engineering Chemistry. American Chemical Society, 1155 16 St., NW, Washington 6, 1957. 234 pp. \$5.

Nuclear Reactor Physics. Raymond L. Murray. Prentice-Hall, Englewood Cliffs, N.J., 1957. 317 pp. \$10.

From the Closed World to the Infinite Universe. Alexandre Koyre. Johns Hopkins Press, Baltimore, Md., 1957. 313 pp. \$5.

High-Speed Flight. E. Ower and J. L. Nayler. Philosophical Library, New York, 1957. 227 pp. \$10.

Proceedings of the Third International Congress on High-Speed Photography. Held under the auspices of the Department of Scientific and Industrial Research in London 10-15 Sept. 1956. R. B. Collins, Ed. Academic Press, New York, Butterworths, London, 1957. 417 pp. \$13.

Fundamentals of Sonar. J. Warren Horton. U.S. Naval Institute, Annapolis, Md., 1957. 387 pp. \$10.

A Contribution to the Heritage of Every American. The conservation activities of John D. Rockefeller, Jr. Text by Nancy Newhall. Prolog by Fairfield Osborn. Epilog by Horace M. Albright. Knopf, New York, 1957. 179 pp.

Miscellaneous Publications

(Inquiries concerning these publications should be addressed, not to Science, but to the publisher or agency sponsoring the publication.)

Dissection Guides. I, *The Frog*, 63 pp.; II, *The Dogfish*, Rowett. 61 pp.; III, *The Rat with Notes on the Mouse*, 64 pp.; IV, *The Rabbit*, 32 pp.; V, *Invertebrates: Earthworm, Crayfish, Cockroach, Lancelet, Swan Mussel, Snail*, 56 pp. Rinehart, New York, 1957. \$0.95 each.

Administration of Maternal and Child Health Services. Second Report of the Expert Committee on Maternal and Child Health. WHO Tech. Rept. Ser. No. 115. 28 pp. \$0.30. *Expert Committee on Addiction-Producing Drugs, Seventh Report*. WHO Tech. Rept. Ser. No. 116. 15 pp. \$0.30. World Health Organization, Geneva, 1957.

Engineers' Council for Professional Development, 24th Annual Report for the Year Ending September 30, 1956. Engineers' Council for Professional Development, New York, 1957. 69 pp.

Algues et Protistes du Fleuve Congo dans le Bas-Congo et de son Estuaire. *Algues et Protistes du Fleuve Congo au Large de l'Île de Mateba*. vol. V, pt. 1, *Expédition Océanographique Belge dans les Eau Cotières Africaines de l'Atlantique Sud*. 1948-1949. Résultats scientifiques. 75 pp. *Organismes Trouvés dans les Carottes de Sondages et les Vases Prélévées au Fond du Lac Tanganika*. vol. IV, pt. 3, *Exploration Hydrobiologique du Lac Tanganika*. 1946-1947. Résultats scientifiques. 74 pp. Hubert Kaufferath. Institut Royal des Sciences Naturelles de Belgique, Bruxelles, 1956.

Trochamminidae and Certain Lituoliidae (Foraminifera) from the Recent Brackish-Water Sediments of Trinidad, British West Indies. Smithsonian Misc. Collections, vol. 134, No. 5. John B. Saunders. Smithsonian Institution, Washington, 1957. 16 pp.

Heat-Transfer—Louisville. Chemical Engineering Progress Symposium Ser., No. 18, vol. 52. F. J. Van Antwerpen, Ed. American Institute of Chemical Engineers, New York, 1956. 113 pp.

Techniques of Drawing in the Third Dimension. Paper No. 57-s-5. David Gordon. American Society of Mechanical Engineers, New York, 1957. 4 pp. \$0.50.

Joint FAO/WHO Conference on Food Additives, Geneva, 19-22 September 1955, Report. Food and Agriculture Organization of the United Nations, Rome, 1956. 14 pp. \$0.30.

The International Atomic Energy Agency. International Review Service, New York, 1957. 48 pp.

The Social Wasps of California (Vespinidae, Polistinae, Polybiinae). Bulletin of the California Insect Survey, vol. 4, No. 3. R. M. Bohart and R. C. Bechtel. University of California Press, Berkeley, 1957. 30 pp. \$0.75.

Trilinear Chart of Nuclides. William H. Sullivan. Oak Ridge National Laboratory, for U.S. Atomic Energy Commission, Washington, ed. 2, 1957. (order from GPO, Supt. of Documents, Washington 25). \$2.