

proved facilities include a drive-in to accommodate a number of trucks for faster loading and unloading of equipment; a more efficient rental check-out system; a larger staff for rental equipment maintenance; and large quantities of new equipment for rental. Available equipment includes various models of well-known cameras, lenses, lighting equipment, editing equipment, crab dollies, gear and fluid heads, hydraulic tripods and other motion-picture equipment.

A contract for research, development and production of 500 specially designed magnetic-optical sound projectors has been awarded Bell & Howell, 7100 McCormick Rd., Chicago 45, by the U.S. Air Force.

The projectors will be designed to play both magnetic and optical soundtracks and will also (a military "first") be capable of recording magnetic tracks on sound-stripped film.

A new office has been opened in Silver Spring, Maryland, by Traid Corp. of Encino, Calif. Head of the new office is Albert M. Uremovich. Edward D. O'Donnell, recently engaged in photographic instrumentation work for the U.S. Navy at Point Mugu, Calif., will be a staff member. Increased volume of business in the area east of the Mississippi has necessitated opening the new office, according to an announcement by Traid President, Fred G. Roberts, Jr.

books reviewed



Fernseh-Messtechnik

By Dr.-Ing. Wolfgang Dillenburger. Published (1960) by Fachverlag Schiele & Schön GmbH, Berlin SW 61, Markgrafenstrasse 11, Germany. 376 pp. 352 illus. and tables. 6½ by 9½ in. Price: DM 45.

The work is a compilation, by the director of the studio equipment development laboratory of Fernseh GmbH, of the large variety of measuring techniques that face the television engineer. The author notes that this variety is so great that a severe effort was needed to narrow the choices to fit within the confines of a book.

The treatment does cover a wide field, which starts basically with the elementary measures of voltage and current, d-c and then a-c, and of resistances, condensers and inductances. It continues on with the characteristics of images and transmission principles. Among these are all the various image transfer characteristics and their possible distortions, the evaluations of picture sharpness and resolution, geometrical distortions, interferences, and level adjustments. There is a discussion on test patterns, on the measurements of amplifier characteristics, video and carrier, phase angle and delay measurements, measurements on sweep circuits, and the testing of networks. A discussion is given of special measuring apparatus. The book closes with various concepts of light technique, color measurement, photography and optics, and television signal standards.

This is all a very ambitious project, but it is difficult to do in 376 pages. Thus the treatment, though covering many subjects, is extremely sketchy on each one. An extraordinary amount of condensation has been achieved, but the hard facts of space tell. As one example, the measurement of envelope delay covers two pages, that include two elementary block diagrams and two curves of results. Worse yet, the reader is given no clue as to how good or bad any given result would be, nor how accurately it need be obtained. Second, among the basic measurements, the great precautions that are needed in the various impedance measurements at television frequencies are hardly touched on. For a third example, all measurements on noise and interference are covered in 18 pages. Good use is made of this space, but it hardly permits an adequate development of the subject.

Two pages are given to color concepts, but the work is really strictly limited to monochrome television. The author gives

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more than 100 references, all but four confined to German literature.

The book will be handy as a general reference on monochrome television measurements, with the expectation that the reader who really intends to use it will do further digging on his own.—*Pierre Mertz*, Lido Beach, L.I., N.Y.

Video Tape Recording

By Julian L. Bernstein. Published (1960) John F. Rider Publisher, Inc., 116 W. 14 St. New York 11. 268 pp. incl. index illus. diagrams, tables. 6 by 9 in. Price \$8.95.

This book is the outgrowth of lecture notes on video tape recording used by the

author as an instructor at RCA Institutes. The material is presented in such a manner as to be most useful to production personnel, directors, editors, camera men and others with limited technical background who wish to expand their knowledge of how television programs are recorded on magnetic tape.

The introductory chapters deal with some fundamental information on electronic waveforms and signals which are commonly found in television circuitry; a description of how television actually works (from the basic pickup device to the final display); and a survey of the mechanics of disc, optical and magnetic recording.

Once having presented the basics, the author describes the electronics of magnetic-tape recording in general, and then delves into the specific problems of recording a video signal on magnetic tape. A very complete discussion on tape-transport mechanisms is also included.

Present-day commercially available tape recorders are described with particular emphasis on their associated servo systems (which control the speed and position of the tape as it moves through the machine) and video systems (the recording and playback circuitry necessary to process the picture information). Numerous block diagrams and photographs illustrate the discussion.

One chapter is devoted to the circuitry required for recording color television on black-and-white tape recorders. The inherent deficiencies in the recording system which must be corrected in order to obtain optimum reproductions in color are described.

To provide further understanding of video-tape recorders, the author has included two chapters on the details of servo and video circuitry used. Emphasis is placed on extraordinary circuits rather than those which can be found in the standard electronics textbook.

To complete the picture of video recording, a final chapter reports in detail the operation procedure required in using commercial video-tape recorders including tape splicing, editing and handling procedures. This, together with photographs of actual equipment, provides a firsthand knowledge of recorder operation.—*Harold L. Herz*, GPL, Div. General Precision Inc., Pleasantville, N.Y.

Proceedings, Fifth Conference: Magnetism and Magnetic Materials

Sponsored by American Institute of Electrical Engineers, with cooperation of American Physical Society, Institute of Radio Engineers, Metallurgical Society of A.I.M.E., and Office of Naval Research. Published (1960) McGraw-Hill, New York. 323 pp., 233 illus. 11 by 8 in. Price \$10.00.

The book contains 170 briefs of papers presented at the conference held in Detroit, November 1959. The papers cover the entire range of magnetism, from the classical to the latest anomalies near the absolute zero of temperature. The conference attracted most of the authors and workers in the field of magnetism from the cooperating societies, and it represented the major intellectual harvest in this field for the year 1959.

The authors supplied 20 papers from overseas — from England, France, Germany, Holland, Israel, Japan, Poland, Switzerland and U.S.S.R. North America accounted for the remaining 150 papers. In general, the authors represented universities, and research laboratories of industry and of governments. The broad scope of representation testifies to the support given to this important subject.

The papers are presented under more or less appropriate classifications, including "General Theory, Garnets, Permanent Magnets, Spin Waves and Magnetostatic Modes, Computers and Switching," plus 10 more. For economy of publication, they



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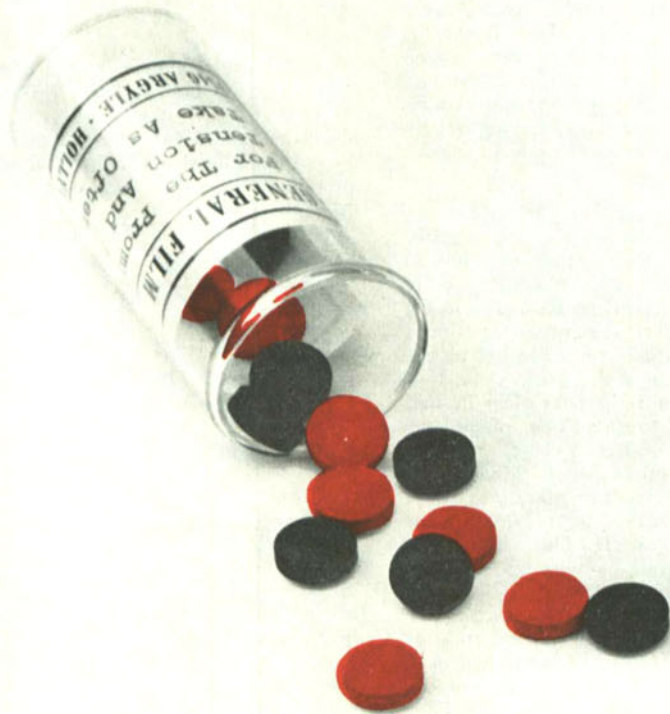
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have been compressed to a point of anguish for the authors, and perhaps of confusion for the readers. However, the major ideas are adequately presented.

The *Proceedings* appeared originally as a supplement to Vol. 31 No. 5. of the *Journal of Applied Physics*. The present volume is a well bound edition, worthy of any technical library as a record of the present state of the magnetics art.—*V. E. Legg*, Bell Telephone Laboratories, Whippany, N.J.

Obituaries



Philip A. Hunt

Philip Arthur Hunt died November 15, 1961, in an automobile accident which occurred near New York City. He was 75 years of age. He was President of the Philip A. Hunt Company, Palisades Park,

N.J., which he founded in 1909. At that time he located the company in Brooklyn. The company later expanded its activities and is now one of the leading manufacturers of photographic, graphic arts and x-ray chemicals.

Mr. Hunt was born in New York City on October 9, 1886. When he was six years old he was placed in an orphanage following the death of his mother. He left the orphanage at the age of 13 to earn his own living and only ten years later he had founded his own company. At the time of his death he was still actively carrying out his responsibilities as head of the company.

Kern Moyses died suddenly early in December while vacationing in the Canary Islands. He was 65 years of age. He had retired last August after serving 15 years as President of Peerless Film Processing Corporation. (His retirement was announced in a Biographical Note published in the August 1961 issue of the *Journal*.) At that time in discussing retirement plans he said that he planned to spend most of his time at his home in Old Lyme, Conn.

A graduate of Harvard, Mr. Moyses served in World War I as infantry machine gun officer and served in the Army again during World War II. His activities in behalf of the industry included his becoming one of the founders of the Association of Cinema Laboratories. He was also a founder of the Motion Picture Industry Group of the National Association of Credit Management and had held office in various organizations including the New York Film Council.

section reports



The Atlanta Chapter met October 10 with an attendance of 19. The program was devoted to a discussion of "Simplified Control Systems for Synchronous Recording and Effective Sound Monitoring" presented by Walter W. Winn, Lockheed Aircraft.

Color slides were used to illustrate a special electronic device developed by Mr. Winn that would give the sound engineer remote control, from the recording console, of a variable number of prerecording functions—such as interruption of telephone circuits to the recording area, energizing of studio recording warning lights—making it possible to preset and instantaneously start or stop projectors, recording dummies, and tape recorders.

It was brought out in the program that while good basic equipment is essential in monitoring sound recordings, much of the final result depends on how effectively the sound engineer is able to reproduce the original sound as it would normally be heard by the human ear.

An award-winning 16mm color film, *Operation Checkmate*, produced by Lockheed, was shown in which many of the special sound effects were dubbed-in in a post-synchronous recording. After the film presentation there was a question-and-answer session on individual sound recording problems.

A social period followed the meeting and coffee and doughnuts were served. Several members and guests took this opportunity to participate in a guided tour offered by our hosts, the Eastman Kodak Processing Laboratory.—*John C. Horne*, Secretary-Treasurer, 404 Page Ave., N.E., Atlanta 7, Ga.

The Atlanta Section met November 6 with an attendance of 19. Following an informal dinner for John W. Wentworth, manager, Educational Electronics, Broadcast and Television Div., RCA, at the Riviera Restaurant in Atlanta, the group proceeded to the studios of WSB-TV where Mr. Wentworth gave a very interesting and informative talk. He outlined the technical problems involved in establishing the standards for compatible color television as approved by the FCC for broadcast use.

The talk was well illustrated with color slides which graphically and pictorially showed the various steps involved in extending the principles used in monochrome television to include a means of controlling hue and saturation for color transmission. The individual functions of matrixing, bandshaping and two-phase modulation were explained in detail.

In concluding his talk, Mr. Wentworth gave a summary of all the major processes used in compatible color television from the camera input to the receiver output. A question-and-answer period followed.

Those in attendance expressed the opin-

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